PLANNING COMMISSION STAFF REPORT

APPLICATION:	**Arroyo at Monrovia Station Specific Plan ZA2019-0005, SP2019-0004, TTM 82517, CUP2019-0016, and GPC2019-0004**	**AGENDA ITEM:**	**PH-1**
PREPARED BY:	**Sheri Bermejo Planning Division Manager**	**MEETING DATE:**	**February 12, 2020**

SUBJECT: Arroyo at Monrovia Station Specific Plan, Zoning Amendment ZA2019-0005/Ordinance No. 2019-11 (Planning Commission Resolution PCR2019-0016), Specific Plan SP2019-0016 (Planning Commission Resolution PCR2019-0017), Vesting Tentative Tract Map 82517; Conditional Use Permit CUP2019-0016; General Plan Conformity GPC2019-0004; Environmental Impact Report; Planning Commission Resolution PCR2019-0015

202, 206, 210, 212, 216, 220, 224, 228, 234, AND 238 West Evergreen Avenue, and 1551 South Primrose Avenue and 1610 South Magnolia Avenue (Assessor's Parcel Numbers [APN] 8507-002-011, -012, -014, -015, -017, -018, -019, -020, -022, -023, -036, -037)

REQUEST: Develop a 2.90-acre site with a transit-oriented, infill, mixed-use residential/commercial development to include: 302 residential units, including three live/work units and 15 affordable units for very low-income households, 7,080 square feet of ground floor commercial space, a parking structure containing 500 parking spaces, a leasing office, residential amenities including two courtyards and a roof deck, and public open space in the form of four plazas along the street frontage of West Pomona Avenue. This property is located in the PD-12 (Planned Development Area 12 – Station Square Transit Village) zone.

The development application includes an amendment to the City's Official Zoning Map changing the PD (Planned Development) Zone designation to the SP (Specific Plan) Zone and a request to amend the text of the Zoning Ordinance to add Arroyo at Monrovia Station Specific Plan to Section 17.04.035 of Title 17 (Zoning) of the Monrovia Municipal Code for the subject property, the adoption of the Arroyo at Monrovia Station Specific Plan, and the approval of a vesting tentative tract map for the consolidation of twelve lots into one, and the approval of a conditional use permit to construct the development (collectively, the "proposed project").

APPLICANT: Evergreen Investment Partners, LLC C/O MW Investments Group, LLC
Matt Waken
27702 Crown Valley Pkwy, D4-197
Ladera Ranch, CA 92694

ENVIRONMENTAL DETERMINATION: Environmental Impact Report
State Clearinghouse (SHC) No. 2019050016

BACKGROUND: On November 13, 2019, the Planning Commission reviewed the land use entitlement applications for the adoption of the Arroyo at Monrovia Station Specific Plan and associated mixed-use development. In addition to receiving a presentation on the entitlement requests, the Planning Commission also heard and received comments on the project's Draft Environmental Impact Report (DEIR) and formally closed the 45-day public review period.

A total of five comment letters were presented to the Commission regarding the DEIR. Those letters were from State of California Department of Transportation (Caltrans), County of Los Angeles Fire Department, Los Angeles County Metropolitan Transportation Authority (Metro), and Sanitation Districts of Los Angeles County (LACSD), and Supporters Alliance for Environmental Responsibility (SAFER). In addition to the comment letters, the following four individuals provided public input during the November 13, 2019 public hearing:

1. Brian Flynn, an attorney of Lozeau Drury representing the Supporters Alliance for Environmental Responsibility (SAFER), spoke with concerns about the DEIR and requested that the item be continued.

2. Matt Waken, applicant, thanked staff and spoke in regards to responding accordingly to correspondence from SAFER.

3. Juan Banuellos, resident, spoke in favor of the project.

4. Brad Ratliff, father of a resident, spoke in favor of the project.

In order to provide ample time for staff and the project applicant's team to review and prepare responses to comments, the Planning Commission voted unanimously to continue the public hearing on the project to its regular meeting on December 11, 2019. At the meeting of December 11, 2019, the Commission voted unanimously to continue the hearing again to the meeting of January 15, 2020 in order to provide staff ample time to ensure the comments on DEIR were adequately addressed.

On January 15, 2020, the Planning Commission proceeded with their review of the land use entitlement applications for the project, as well as reviewed the project's Final Environmental Impact Report (FEIR), which was submitted in draft format. The FEIR document included a list of all the commenters on the DEIR, copies of the five comment letters that were submitted to the Commission at their November meeting, responses to those comments, and required revisions to the DEIR in response to the comments received. At the meeting, staff presented the report and answered questions of the Planning Commission regarding the analysis of traffic and circulation impacts and the Statement of Overriding Considerations in relation to short-term construction noise impacts. In addition, the following individuals provided public input during the public hearing:

1. Matt Waken, Evergreen Investment Partners, LLC (Applicant), thanked staff and spoke favorably about the responses to comments contained in the FEIR.

2. Juan Banuelos, resident, spoke in favor of the project.

3. Shane Traster, resident, spoke in favor of the project.

4. Joanne Cerchio, daughter-in-law of resident, spoke in favor of the project.

5. Ricardo Paniahua, resident, spoke in favor of the project.

6. Brad Ratliff, father of a resident, spoke in favor of the project.

7. Roberta Shaffer, resident, spoke in favor of the project and had a general question regarding the City's development policy in Station Square. She asked if the City was making compromises on traffic impacts and density in order to fulfill State mandates for housing production.

8. Brian Flynn, an attorney of Lozeau Drury representing the Supporters Alliance for Environmental Responsibility (SAFER), spoke with concerns about the DEIR and FEIR, and requested that the item be continued. Mr. Flynn indicated that although only one letter was submitted in hard copy format, two letters were sent electronically to the City on behalf of SAFER. The second letter, which was not addressed in the FEIR, pertained to traffic impacts and indoor air quality impacts resulting from formaldehyde emissions.

In order to provide ample time for staff and the project applicant's team to review and prepare responses to comments on SAFER's second comment letter, the Planning Commission voted unanimously to continue the public hearing on the project to its regular meeting on February 12, 2020.

In coordination with the applicant's CEQA and land use consultant (MIG, Inc.), the City's traffic engineering consultant (Gibson Transportation Consulting, Inc.), City staff and the City Attorney, a revised FEIR has been prepared for the Arroyo at Monrovia Station Specific Plan and associated development. The responses to comments on SAFER's second letter have been incorporated into the FEIR and these additional comments are included in (Attachment "A"). The staff reports from the Planning Commission meetings on November 13, 2019 and January 15, 2020 are attached as Attachments "B" and "C" respectively. Copies of the entitlement documents (Architectural Plans, Civil Drawings, and Specific Plan) and environmental clearance documents (DEIR and FEIR) can be found online on the City's website at the following link:

https://www.cityofmonrovia.org/your-government/community-development/planning/zoning/specific-plans/arroyo-at-monrovia-station-specific-plan.

DISCUSSION/ANALYSIS: The entitlement applications for the Arroyo at Monrovia Station Specific Plan and mixed-use development require the approval of the City Council. Both the Planning Commission and the Development Review Committee serve as advisory bodies to the City Council. The actions of the Commission will be in the form of recommendations. As the Commission recalls, the requested entitlements for the project are as follows:

1. **Zoning Text and Map Amendment** to add "Arroyo at Monrovia Station Specific Plan" to Section 17.04.035 of the Monrovia Municipal Code and amend the official Zoning Map by changing the existing PD (Planning Development) zone designation to SP (Specific Plan). (PCR2019-0016/Ordinance No. 2019-11)

2. **Arroyo at Monrovia Station Specific Plan** to establish development standards, design guidelines and land use restrictions for the 2.9-acre project site. (PCR2019-0016)

3. **General Plan Conformity Finding** that the proposed dedications of public right-of-way and easements conform to the provisions of the City's General Plan. (GPC2019-0004)

4. **Vesting Tentative Tract Map** to consolidate twelve parcels into one 2.90 (gross) acre parcel. (Vesting TTM 82517).

5. **Conditional Use Permit** to allow construction of a 5-story (6-level), 302-unit apartment complex and a 7-story, 8-level, 500 space parking structure. (CUP2019-0016)

Prior to making its recommendation on the entitlement requests listed above, the Commission must first consider and provide its recommendation on the **Environmental Impact Report and Mitigation Monitoring and Reporting Program** for the proposed project pursuant to the California Environmental Quality Act (CEQA). (PCR2019-0015)

Ultimately, the City Council will need to review and certify the Final Environmental Impact Report (FEIR), affirming that the EIR has been completed in compliance with CEQA; that the Council reviewed and considered the information contained in the Final EIR prior to approving the project; and that it reflects the City Council's independent judgment and analysis. Lastly, because the DEIR identified one unavoidable significant environmental impact related to short term construction noise, the City Council will also need to consider the adoption of a Statement of Overriding Considerations.

Response to Second Comment Letter submitted by Lozeau Drury on behalf of SAFER

At the January 15, 2020 Planning Commission meeting, Brian Flynn of Lozeau Drury reported that their firm's second letter, which was submitted on behalf of SAFER, was not addressed in the draft FEIR. This second letter referenced by Mr. Flynn is dated November 12, 2019, and states that it supplements the first letter also dated November 12, 2019. SAFER's first letter was delivered to the Commission in hard copy format and was included in the first draft as Letter #5.

In response to this information, a revised FEIR has been prepared to address the second letter that expresses concerns related to traffic impacts and indoor air quality impacts resulting from formaldehyde emissions. Specifically, the comments included in the second letter were prepared by a traffic engineer who claims that the DEIR understated traffic generated by the retail component of the project, understated the project's impacts on the studied intersections, did not account for intersection approaches or departures that were blocked by rail crossing gates, and did not consider the effects of ridesharing programs like Uber and Lyft on traffic congestion. The letter also included correspondence from an industrial hygienist who expressed concerns that the DEIR did not address, disclose, analyze, and mitigate indoor air quality impacts resulting from formaldehyde emissions.

The responses to SAFER's comments are provided in Attachment "A." In summary, the responses support and defend the trip generation rate and methodologies used to calculate the trips associated with the retail space component of the project. The response to comments also explain how the use trip reduction credits (internal capture reduction, pass-by reduction, and transit use reduction) are appropriately applied to this project. In response to the comment

regarding the evaluation of study intersections, the FEIR confirms that the DEIR accounted for rail crossing delays at one of the study intersections (Myrtle Avenue/Duarte Road). Nevertheless, to supplement the analysis in the DEIR Linscott, Law & Greenspan, Engineers (LLG) prepared an additional analysis for the intersections of Myrtle Avenue/Pomona Avenue and Magnolia Avenue/Duarte Road. Based on this supplemental analysis, it can still be concluded that no significant impacts at any of these intersections are expected to occur based on the City's adopted significance threshold criteria. The responses to comments also note that Metro received and reviewed the DEIR for the project, and did not issue specific comments relating to Gold Line light-rail transit crossings. Lastly, the FEIR confirms that ridesharing programs were factored into the traffic impact analysis. Therefore, none of the revisions to the DEIR presented in the FEIR represents a substantial increase in the severity of an identified significant traffic impact or the identification of a new significant impact, mitigation measure, or alternative different from those already considered and analyzed in preparing the DEIR.

The comments pertaining to indoor formaldehyde emission impacts make no mention of the adequacy of the project's DEIR. Instead, the comments reference a 2009 study (California New Homes Study), as well as a follow-up study by Chan et al. 2018, which pre-dates several California Air Resources Board (CARB) and 2019 California Building Code regulations that are currently in place requiring composite wood products to comply with emission performance standards. Although the commenter believes that these standards are not enough, the commenter provides no risk calculations, exposure assessment, evaluation of toxicity, nor a description of the studies' details, such as measurement methods and locations, to substantiate the claim. CARB's standards for formaldehyde have been developed to be adequately protective to residents and employees. The project will comply with the adopted standards for formaldehyde. Therefore, the City has determined that no further analysis is required or warranted; no new mitigation measures are required, and the findings of the DEIR remain valid.

Cultural Resources and Tribal Cultural Resources

During preparation of the DEIR, no substantial evidence was discovered to indicate the presence of sensitive cultural resources, including tribal cultural resources in or around the Arroyo at Monrovia Station project site. The applicant's environmental consultant, MIG Inc., georeferenced a sensitive cultural sites map that had been provided by the Gabrieleño Band of Mission Indians-Kizh Nation (the "Kizh Nation"), and these sites appear to be greater than one mile away from the project site. Nevertheless, the EIR acknowledges the potential to discover cultural resources during grading that were unanticipated, and includes mitigation measures MM CUL-1 through MM CUL-5 to adequately protect such resources.

The City recently received a comment letter from the Kizh Nation regarding another project's cultural resource mitigation measures. Specifically, the Kizh Nation was concerned that the mitigation measures did not contain sufficient protection of any unanticipated discovery of tribal resources during site grading. For this reason, staff has added revisions to the cultural resource mitigation measures that apply to the Arroyo at Monrovia Station project to clarify the protection of tribal resources should any unanticipated discovery occur during grading. The revised mitigation now calls out that archeological resources include tribal cultural resources.

Conclusion

The proposed project implements the City of Monrovia vision that was established several decades ago to attract vibrant transit-oriented development adjacent to the Metro Gold Line Station. Significant public amenities in the form of affordable housing, public parking, and open space provisions are included to make the project premiere. The design of the buildings, placement of structures, and the architecture have been carefully thought through to relate visually to adjacent neighborhoods and structures. Only minor infrastructure improvements are needed to support the proposed development.

Although the DEIR identified one potential unavoidable significant environmental impact relating to short term construction noise impacts on the single-family residential property at 230 West Evergreen Avenue, staff and the Development Review Committee believe that the project's benefits outweigh these impacts and warrant the adoption of a Statement of Overriding Considerations, because the proposed project will:

a) Help the City attain a balanced mix of land uses within the City, thereby providing residents with ready access to housing, employment, and commercial services that will be close to public transit;

b) Contribute to attaining regional jobs/housing balance goals;

c) Encourage private investment and redevelopment of property in the City;

d) Ensure that residents from all income levels, including very low income households, will have access to decent, affordable housing;

e) Revitalize and improve this area of the City;

f) Create a City environment which makes Monrovia a pleasant place to live, work, shop, and do business;

g) Encourage pedestrian activity, provide public open space and enhance landscaping;

h) Provide public automobile parking and bicycle parking for the public and for residents; and

i) Comply with mandates from the State of California to increase the supply of housing adjacent to public transit because the project is a transit-oriented mixed-use residential and commercial development that implements the use of public transportation, including light rail transit, to provide mobility to all City residents and encourages the use of public transportation as an alternative to automobile travel. The project provides 31 short-term bicycle storage spaces and 151 long-term bicycle storage spaces dispersed throughout the site. The project will provide continuous sidewalks around the development, including wheelchair ramps. The parking structure provides 500 vehicle parking spaces, some of which will be available for public parking.

RECOMMENDATION: Staff recommends approval of the application as presented in the Staff Reports, dated November 13, 2019, January 15, 2020, and February 12, 2020. If the Planning Commission concurs with Staff's recommendation then, following the public hearing, the appropriate actions would be to adopt Planning Commission Resolution Nos. PCR2019-0015, PCR2019-0016, PCR2019-0017 and approval of Tentative Tract Map No. 82517, Conditional Use Permit CUP2019-0016, and General Plan Conformity GPC2019-0004:

The Planning Commission of the City of Monrovia hereby finds as follows:

1. The Planning Commission has independently reviewed and considered the Draft and Final Environmental Impact Report, including the responses to the comments set forth in the second letter from SAFER, and the Mitigation Monitoring and Reporting Program that were prepared pursuant to the California Environmental Quality Act ("CEQA") and the City's local CEQA Guidelines and hereby finds, for the reasons set forth in the staff reports, that the benefits of adoption and implementation of the Arroyo at Monrovia Station Specific Plan outweigh the one significant unavoidable environmental impact related to short term construction noise, and further makes a finding of adequacy of the Environmental Impact Report (EIR) and Mitigation Monitoring Program as the environmental clearance for the project (Zoning Amendment ZA2019-0005, Specific Plan SP2019-0004, Vesting TTM 82517, Conditional Use Permit CUP2019-0016, and General Plan Conformity GPC2019-0004), and therefore recommends that the City Council find that the EIR complies with CEQA and that the City Council certify the EIR and adopt the Mitigation Monitoring and Reporting Program, which is included in PCR2019-0015 Exhibit A, to mitigate or avoid significant effects of the Project on the environment to the extent feasible and to ensure compliance during project construction and implementation, and recommends that the City Council adopt a statement of overriding considerations as to the one potential significant environmental impact relating to construction noise that cannot be mitigated to a level of insignificance as set forth in Planning Commission Resolution No. 2019-0015.

2. The Planning Commission finds that the custodian of records for all other materials that constitute the record of proceedings upon which this decision is based is the Planning Division Manager. Those documents are available for public review in the Planning Division located at 415 South Ivy Avenue, Monrovia, California, 91016.

3. The Planning Commission hereby finds that the proposed dedication of public right-of-way and easements as discussed in the Staff Report is in conformity with the City of Monrovia General Plan. This finding shall be reported to the City Council.

4. The Planning Commission in the exercise of its independent judgment hereby makes the findings listed on attached Data Sheet No. 3 for Vesting TTM 82517 and CUP2019-0016, which are incorporated herein by this reference.

5. The Planning Commission hereby recommends approval to the City Council of Zoning Amendment ZA2019-0005, Specific Plan SP2019-0004, General Plan Conformity GPC 2019-0004, Vesting TTM 82517, and CUP2019-0016 subject to the attached Planning Conditions on Data Sheet No. 1, Public Works Conditions on Data Sheet No. 2, and recommendations in the Staff Report, all of which are incorporated herein by this reference.

MOTIONS:

A. Close the public hearing and adopt Planning Commission Resolution No. PCR2019-0015 (Attachment D) recommending that the City Council find that the Final Environmental Impact Report (EIR)complies with CEQA and that the City Council certify the EIR and adopt the Mitigation Monitoring and Reporting Program, which are included in PCR2019-0015 Exhibits “A” – “C”, to mitigate or avoid significant effects of the Project on the environment to the extent feasible and to ensure compliance during project implementation, and recommend that the City Council adopt a statement of overriding considerations as to the one potential significant environmental impact relating to construction noise that cannot be mitigated to a level of insignificance.

B. Find that the proposed dedications of public right-of-way and public access easements are in conformity with the General Plan as presented in the Staff Report.

C. Adopt Planning Commission Resolution No. PCR2019-0016 (Attachment E) recommending approval to the City Council of Zoning Amendment Ordinance No. 2019-11.

D. Adopt Planning Commission Resolution No. PCR2019-0017 (Attachment F) recommending approval to City Council of “Arroyo at Monrovia Station Specific Plan.”

E. Recommend to the City Council the approval of Vesting TTM 82517 and CUP2019-0016 as presented in the Staff Report and Data Sheet 3.

1. INTRODUCTION

The Final Environmental Impact Report (Final EIR) for the proposed Arroyo at Monrovia Station Specific Plan has been prepared by the City of Monrovia (City), the Lead Agency, in keeping with the California Environmental Quality Act (CEQA). The City has prepared the Final EIR pursuant to the CEQA Guidelines, including Sections 15086 (Consultation Concerning Draft EIR), 15088 (Evaluation of and Responses to Comments), and 15132 (Contents of Final Environmental Impact Report). In conformance with these guidelines, the Final EIR consists of the following volumes:

1. The Draft EIR (DEIR) which was circulated for a 45-day public comment period beginning September 26, 2019 and ending on November 13, 2019; and

2. The FEIR document, which includes a list of all commenters on the DEIR during the public comment period, copies of all written comment letters on the DEIR, responses to all comments received on the DEIR, and required revisions to the DEIR in response to comments.

None of the revisions to the Draft EIR represent a substantial increase in the severity of an identified significant impact or the identification of a new significant impact, mitigation measure, or alternative different from those already considered in preparing the Draft EIR.

The Draft EIR, Final EIR, and administrative record for the Arroyo at Monrovia Station Specific Plan are available for review upon request at:

City of Monrovia
415 S. Ivy Avenue
Monrovia, CA 91016

Certification of this Final EIR by the Monrovia City Council must occur prior to approval of the Arroyo at Monrovia Station Specific Plan, the Zoning Amendment, Vesting Tentative Tract Map, Conditional Use Permit, and General Plan Conformity for the Arroyo at Monrovia Station Specific Plan.

1.2 ADEQUACY OF FINAL EIR

Under CEQA, the responses to comments on a Draft EIR must include good faith, well-reasoned responses to all comments received on the Draft EIR that raise significant environmental issues related to the project under review. If a comment does not relate to the Draft EIR or does not raise a significant environmental issue related to the project, there is no need for a response under CEQA.

In responding to comments, CEQA does not require the EIR authors to conduct every test or perform all research or study suggested by commenters. Rather, the EIR authors need only respond to significant environmental issues and need not provide all of the information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR (CEQA Guidelines Sections 15088, 15132, and 15204).

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BY E-MAIL AND OVERNIGHT MAIL

November 12, 2019

Gary Schaeffler, Chair
Honorable Members of the Planning Commission
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Director of Community Development
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Re: The Arroyo at Monrovia Specific Plan (SCH 2019050016)

Dear Ms. Bermejo, Mr. Jimenez, and Ms. Atkins:

I am writing on behalf of Supporters Alliance For Environmental Responsibility ("SAFER"), regarding The Arroyo at Monrovia Specific Plan (SCH 2019050016). This letter supplements the letter submitted by our office earlier today by including two additional comment letter. The letter from traffic engineer Daniel Smith, PE, documents inaccuracies in the Draft EIR's traffic analysis. The letter from industrial hygenist Francis Offermann, PE, documents significant indoor air quality impacts created by the Project. Please include the attached documents in the administrative record for this matter. Thank you.

Sincerely,

Richard Drury

SMITH ENGINEERING & MANAGEMENT

November 12, 2019

Mr. Richard Drury
Lozeau Drury
1939 Harrison Street, Suite 150
Oakland, CA 94612

Subject: Arroyo at Monrovia Station Specific Plan DEIR (SCH No. 2019050016) P19044

Dear Mr. Drury:

At your request, I have reviewed the Draft Environmental Impact Report (hereinafter the "DEIR") for the Arroyo at Monrovia Station Specific Plan Project (the "Project") in the City of Monrovia (the "City"). My review is specific to the Transportation section of that document and related appendices.

My qualifications to perform this review include registration as a Civil and Traffic Engineer in California and over 50 years professional consulting engineering practice in the traffic and transportation industry. I have both prepared and performed adequacy reviews of numerous transportation and circulation sections of environmental impact reports prepared under the California Environmental Quality Act (CEQA) including residential and mixed use projects. My professional resume is attached. Findings of my review are summarized below.

The DEIR Understates Traffic Generated by the Project's Retail Component

The DEIR estimates gross trip generation of the Project's retail component relying on the Institute of Transportation Engineers publication *Trip Generation, 10th Edition*, an authoritative source. It estimates the trips at *average rates* for Land Use Category 820, Shopping Center. The problem with this is that shopping centers do not generate trips at the same rate per unit floor area (usually expressed in trips per thousand square feet). A shopping center of

L6.1

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about 429,000 generates trips at a rate of 37.7 daily trips per thousand square feet. Larger shopping centers generate trips at rates lower rates than this average; smaller centers generate trips at higher rates per unit floor area and very small retail spaces generate trips at much higher rates per unit floor area than the average. This is why *Trip Generation, 10th Edition* relating trip generation rate to shopping center floor area for daily and AM and PM peak traffic. To comply with CEQA's demand of a good faith effort to disclose impact, given the vast disparity between the Project's 7,080 square feet of retail and the 429,000 square feet size center that generates trips at an average rate, the preparers of the traffic study should have used the fitted curves. Had they done so, they would have found that the retail component's gross trip generation (before discounts) to be 933 daily trips instead of 267, the gross trip generation in the AM peak hour of street traffic to be 181 instead of 87 and the gross trip generation in the PM peak hour of street traffic to be 149 instead of 116.

But there is a further reality that has not been taken into account in the DEIR. Tucking some 7,080 square feet of retail into a large residential building does not create a "shopping center". More than likely this tiny spot of retail space becomes a combination of a convenience market and one or more fast food outlets (*Trip Generation, 10th Edition* categories 851 and 933 respectively. If one assumed the retail space is about evenly divided between convenience market and fast food outlets, the gross trip generation of the retail space becomes 3883 daily trips instead of the 267 assumed in the DEIR, 307 in the AM peak instead of 87 and 271 in the PM peak instead of 116.

L6.1 (cont.)

The DEIR Excessively Discounts Traffic Generated by the Project's Residential and Retail Components

The DEIR assumes that 25 percent of the Project's residential vehicle trip generation and 15 percent of its retail vehicle trip generation will be offset through transit use. The reason given for these assumptions is the proximity to the Metro Gold Line Monrovia Station which is about a 850-foot walk from the proposed building's main entrance. But these percentage values seem to be picked out of the air. There has been no attempt at statistical substantiation such as, say, what percentage of people living within a quarter mile of the station now use the Gold Line for their peak period trips, or what percentage of the peak period trips people living in the area of the station now make could be reasonably accessed from the Gold Line in its currently developed state. The retail transit percentage assumption is similarly unreasonable an speculative. It is preposterous to presume that a tiny 7,080 square foot retail space could attract 15 percent of its business from people who specifically travel to and from it via transit. Certainly, it will attract transit users who pass by or close to it in their ordinary travels. But these are already accounted-for in the 25 percent passer-by deduction.

L6.2

In summary, the above discussed discounts are unsubstantiated assumptions that are unreasonably favorable to the Project and hence inconsistent with the good faith effort to disclose impact that CEQA demands

L6.2 (cont.)

The DEIR Traffic Study Does Not Appear To Have Adjusted Intersection Capacity Utilization Procedures to Account for the Portion of Time Study Intersection Approaches or Departures Are Blocked by Rail Crossing Gates to Allow Gold Line Train Passage

Study intersections near the Gold Line will have their lane capacities reduced on the approaches and departures that cross the tracks because the grade crossing gates are down before, during and after train passage. If the gates are down just 6 minutes in the peak hour, that is a 10 percent reduction in lane capacity. There is no evidence that the DEIR traffic analysis has made any adjustment to take into account the time when the grade crossing gates block movements. This may be critical at the intersections of Myrtle with Duarte, Myrtle with Pomona and Magnolia with Duarte.

L6.3

Because of the above Trip Generation and Rail Crossing Considerations the DEIR Has Understated the Project's Impacts on Study Intersections

Because the necessary adjustments to trip generation, trip discounting and ICU computation inherent in the above discussions are large enough to cause intersections previously disclosed to be in LOS D or E to become in E or F respectively and the Project's share would rise beyond significance thresholds, the entire analysis must be redone and the Project's impacts disclosed in good faith.

L6.4

The DEIR Only Analyzed Queuing at Study Intersections Involving Freeway Ramp Junctions. Analysis of Queues At Intersections Nearest the Rail Crossings Is Critical.

The queuing analysis only considers the intersections of Myrtle with Evergreen and Myrtle with Central and the related narrative only considers whether the queuing extends excessively onto the freeway ramps. However, the fact that queuing at intersections near the rail crossings may be critical indicates that queues at these intersections should be analyzed as well, also reflecting the trip generation, trip discounting and capacity adjustments due to rail gate down time discussed above.

L6.5

Lack of Consideration of Transportation Network Companies (Ridesharing) Effects on Tripmaking and Mode Choice

The rise of Transportation Network Companies (ridesharing operations like Uber and Lyft) has dramatically changed the way people travel in urban areas in

L6.6

recent years. Recent studies have found that TNCs have cut into transit, walk and bike shares of trip-making and caused induced trips (trips that would not otherwise be made) and, due to the recirculation to access new rides and careless loading and unloading, caused an approximate doubling in congestion and vehicle miles traveled (VMT) over that which would be ordinarily be accounted for by land use development in dense urban areas.[1] Also, each individual trip made by TNC causes generation of an extra trip due to the approach trip of the driver. The DEIR has made no effort to estimate traffic due to TNC use due to the Project. This is a critical flaw.

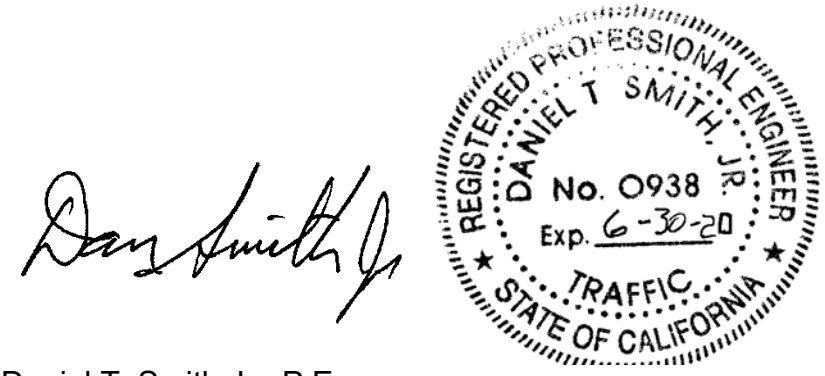
L6.6 (cont.)

Conclusion

This concludes my comments on the Arroyo at Monrovia Station Specific Plan DEIR transportation element. Given the foregoing, I conclude that the DEIR transportation analysis must be revised and recirculated in draft status.

Sincerely,

Smith Engineering & Management
A California Corporation



Daniel T. Smith Jr., P.E.
President

Attachment 1
Resume of Daniel T. Smith Jr., P.E.

[1] *TNCs & Congestion*, San Francisco County Transportation Authority, October, 2018

SMITH ENGINEERING & MANAGEMENT

DANIEL T. SMITH, Jr.
President

EDUCATION

Bachelor of Science, Engineering and Applied Science, Yale University, 1967
Master of Science, Transportation Planning, University of California, Berkeley, 1968

PROFESSIONAL REGISTRATION

California No. 21913 (Civil)
California No. 938 (Traffic)
Nevada No. 7969 (Civil)
Washington No. 29337 (Civil)
Arizona No. 22131 (Civil)

PROFESSIONAL EXPERIENCE

Smith Engineering & Management, 1993 to present. President.
DKS Associates, 1979 to 1993. Founder, Vice President, Principal Transportation Engineer.
De Leuw, Cather & Company, 1968 to 1979. Senior Transportation Planner.
Personal specialties and project experience include:

Litigation Consulting. Provides consultation, investigations and expert witness testimony in highway design, transit design and traffic engineering matters including condemnations involving transportation access issues; traffic accidents involving highway design or traffic engineering factors; land use and development matters involving access and transportation impacts; parking and other traffic and transportation matters.

Urban Corridor Studies/Alternatives Analysis. Principal-in-charge for State Route (SR) 102 Feasibility Study, a 35-mile freeway alignment study north of Sacramento. Consultant on I-280 Interstate Transfer Concept Program, San Francisco, an AA/EIS for completion of I-280, demolition of Embarcadero freeway, substitute light rail and commuter rail projects. Principal-in-charge, SR 238 corridor freeway/expressway design/environmental study, Hayward (Calif.) Project manager, Sacramento Northeast Area multi-modal transportation corridor study. Transportation planner for I-80N West Terminal Study, and Harbor Drive Traffic Study, Portland, Oregon. Project manager for design of surface segment of Woodward Corridor LRT, Detroit, Michigan. Directed staff on I-80 National Strategic Corridor Study (Sacramento-San Francisco), US 101-Sonoma freeway operations study, SR 92 freeway operations study, I-880 freeway operations study, SR 152 alignment studies, Sacramento RTD light rail systems study, Tasman Corridor LRT AA/EIS, Fremont-Warm Springs BART extension plan/EIR, SRs 70/99 freeway alternatives study, and Richmond Parkway (SR 93) design study.

Area Transportation Plans. Principal-in charge for transportation element of City of Los Angeles General Plan Framework, shaping nations largest city two decades into 21'st century. Project manager for the transportation element of 300-acre Mission Bay development in downtown San Francisco. Mission Bay involves 7 million gsf office/commercial space, 8,500 dwelling units, and community facilities. Transportation features include relocation of commuter rail station; extension of MUNI-Metro LRT; a multi-modal terminal for LRT, commuter rail and local bus; removal of a quarter mile elevated freeway; replacement by new ramps and a boulevard; an internal roadway network overcoming constraints imposed by an internal tidal basin; freeway structures and rail facilities; and concept plans for 20,000 structured parking spaces. Principal-in-charge for circulation plan to accommodate 9 million gsf of office/commercial growth in downtown Bellevue (Wash.). Principal-in-charge for 64 acre, 2 million gsf multi-use complex for FMC adjacent to San Jose International Airport. Project manager for transportation element of Sacramento Capitol Area Plan for the state governmental complex, and for Downtown Sacramento Redevelopment Plan. Project manager for Napa (Calif.) General Plan Circulation Element and Downtown Riverfront Redevelopment Plan, on parking program for downtown Walnut Creek, on downtown transportation plan for San Mateo and redevelopment plan for downtown Mountain View (Calif.), for traffic circulation and safety plans for California cities of Davis, Pleasant Hill and Hayward, and for Salem, Oregon.

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Transportation Centers. Project manager for Daly City Intermodal Study which developed a $7 million surface bus terminal, traffic access, parking and pedestrian circulation improvements at the Daly City BART station plus development of functional plans for a new BART station at Colma. Project manager for design of multi-modal terminal (commuter rail, light rail, bus) at Mission Bay, San Francisco. In Santa Clarita Long Range Transit Development Program, responsible for plan to relocate system's existing timed-transfer hub and development of three satellite transfer hubs. Performed airport ground transportation system evaluations for San Francisco International, Oakland International, Sea-Tac International, Oakland International, Los Angeles International, and San Diego Lindberg.

Campus Transportation. Campus transportation planning assignments for UC Davis, UC Berkeley, UC Santa Cruz and UC San Francisco Medical Center campuses; San Francisco State University; University of San Francisco; and the University of Alaska and others. Also developed master plans for institutional campuses including medical centers, headquarters complexes and research & development facilities.

Special Event Facilities. Evaluations and design studies for football/baseball stadiums, indoor sports arenas, horse and motor racing facilities, theme parks, fairgrounds and convention centers, ski complexes and destination resorts throughout western United States.

Parking. Parking programs and facilities for large area plans and individual sites including downtowns, special event facilities, university and institutional campuses and other large site developments; numerous parking feasibility and operations studies for parking structures and surface facilities; also, resident preferential parking .

Transportation System Management & Traffic Restraint. Project manager on FHWA program to develop techniques and guidelines for neighborhood street traffic limitation. Project manager for Berkeley, (Calif.), Neighborhood Traffic Study, pioneered application of traffic restraint techniques in the U.S. Developed residential traffic plans for Menlo Park, Santa Monica, Santa Cruz, Mill Valley, Oakland, Palo Alto, Piedmont, San Mateo County, Pasadena, Santa Ana and others. Participated in development of photo/radar speed enforcement device and experimented with speed humps. Co-author of Institute of Transportation Engineers reference publication on neighborhood traffic control.

Bicycle Facilities. Project manager to develop an FHWA manual for bicycle facility design and planning, on bikeway plans for Del Mar, (Calif.), the UC Davis and the City of Davis. Consultant to bikeway plans for Eugene, Oregon, Washington, D.C., Buffalo, New York, and Skokie, Illinois. Consultant to U.S. Bureau of Reclamation for development of hydraulically efficient, bicycle safe drainage inlets. Consultant on FHWA research on effective retrofits of undercrossing and overcrossing structures for bicyclists, pedestrians, and handicapped.

MEMBERSHIPS

Institute of Transportation Engineers Transportation Research Board

PUBLICATIONS AND AWARDS

Residential Street Design and Traffic Control, with W. Homburger *et al*. Prentice Hall, 1989.

Co-recipient, Progressive Architecture Citation, *Mission Bay Master Plan*, with I.M. Pei WRT Associated, 1984.

Residential Traffic Management, State of the Art Report, U.S. Department of Transportation, 1979.

Improving The Residential Street Environment, with Donald Appleyard et al., U.S. Department of Transportation, 1979.

Strategic Concepts in Residential Neighborhood Traffic Control, International Symposium on Traffic Control Systems, Berkeley, California, 1979.

Planning and Design of Bicycle Facilities: Pitfalls and New Directions, Transportation Research Board, Research Record 570, 1976.

Co-recipient, Progressive Architecture Award, *Livable Urban Streets, San Francisco Bay Area and London*, with Donald Appleyard, 1979.

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Date: November 12, 2019

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From: Francis J. Offermann PE CIH

Subject: Indoor Air Quality: Arroyo at Monrovia Station – Monrovia, CA
(IEE File Reference: P-4309)

Pages: 15

Indoor Air Quality Impacts

Indoor air quality (IAQ) directly impacts the comfort and health of building occupants, and the achievement of acceptable IAQ in newly constructed and renovated buildings is a well-recognized design objective. For example, IAQ is addressed by major high-performance building rating systems and building codes (California Building Standards Commission, 2014; USGBC, 2014). Indoor air quality in homes is particularly important because occupants, on average, spend approximately ninety percent of their time indoors with the majority of this time spent at home (EPA, 2011). Some segments of the population that are most susceptible to the effects of poor IAQ, such as the very young and the elderly, occupy their homes almost continuously. Additionally, an increasing number of adults are working from home at least some of the time during the workweek. Indoor air quality also is a serious concern for workers in hotels, offices and other business establishments.

The concentrations of many air pollutants often are elevated in homes and other buildings relative to outdoor air because many of the materials and products used indoors contain and release a variety of pollutants to air (Hodgson et al., 2002; Offermann and Hodgson,

2011). With respect to indoor air contaminants for which inhalation is the primary route of exposure, the critical design and construction parameters are the provision of adequate ventilation and the reduction of indoor sources of the contaminants.

L6.8 (cont.)

Indoor Formaldehyde Concentrations Impact. In the California New Home Study (CNHS) of 108 new homes in California (Offermann, 2009), 25 air contaminants were measured, and formaldehyde was identified as the indoor air contaminant with the highest cancer risk as determined by the California Proposition 65 Safe Harbor Levels (OEHHA, 2017a), No Significant Risk Levels (NSRL) for carcinogens. The NSRL is the daily intake level calculated to result in one excess case of cancer in an exposed population of 100,000 (i.e., ten in one million cancer risk) and for formaldehyde is 40 µg/day. The NSRL concentration of formaldehyde that represents a daily dose of 40 µg is 2 µg/m^3, assuming a continuous 24-hour exposure, a total daily inhaled air volume of 20 m^3, and 100% absorption by the respiratory system. All of the CNHS homes exceeded this NSRL concentration of 2 µg/m^3. The median indoor formaldehyde concentration was 36 µg/m^3, and ranged from 4.8 to 136 µg/m^3, which corresponds to a median exceedance of the 2 µg/m^3 NSRL concentration of 18 and a range of 2.3 to 68.

L6.9

Therefore, the cancer risk of a resident living in a California home with the median indoor formaldehyde concentration of 36 µg/m^3, is 180 per million as a result of formaldehyde alone. The CEQA significance threshold for airborne cancer risk is 10 per million, as established by the South Coast Air Quality Management District (SCAQMD, 2015).

Besides being a human carcinogen, formaldehyde is also a potent eye and respiratory irritant. In the CNHS, many homes exceeded the non-cancer reference exposure levels (RELs) prescribed by California Office of Environmental Health Hazard Assessment (OEHHA, 2017b). The percentage of homes exceeding the RELs ranged from 98% for the Chronic REL of 9 µg/m^3 to 28% for the Acute REL of 55 µg/m^3.

L6.10

The primary source of formaldehyde indoors is composite wood products manufactured with urea-formaldehyde resins, such as plywood, medium density fiberboard, and

L6.11

particleboard. These materials are commonly used in building construction for flooring, cabinetry, baseboards, window shades, interior doors, and window and door trims.

L6.11 (cont.)

In January 2009, the California Air Resources Board (CARB) adopted an airborne toxics control measure (ATCM) to reduce formaldehyde emissions from composite wood products, including hardwood plywood, particleboard, medium density fiberboard, and also furniture and other finished products made with these wood products (California Air Resources Board 2009). While this formaldehyde ATCM has resulted in reduced emissions from composite wood products sold in California, they do not preclude that homes built with composite wood products meeting the CARB ATCM will have indoor formaldehyde concentrations that are below cancer and non-cancer exposure guidelines.

L6.12

A follow up study to the California New Home Study (CNHS) was conducted in 2016-2018 (Chan et. al., 2018), and found that the median indoor formaldehyde in new homes built after the 2009 CARB formaldehyde ATCM had lower indoor formaldehyde concentrations, with a median indoor concentrations of 25 $\mu g/m^3$ as compared to a median of 36 $\mu g/m^3$ found in the 2007 CNHS.

Thus, while new homes built after the 2009 CARB formaldehyde ATCM have a 30% lower median indoor formaldehyde concentration and cancer risk, the median lifetime cancer risk is still 125 per million for homes built with CARB compliant composite wood products, which is more than 12 times the OEHHA 10 in a million cancer risk threshold (OEHHA, 2017a).

L6.13

With respect to this project, the buildings at the Arroyo at Monrovia Station project in Monrovia, CA include residential and commercial spaces.

The residential occupants will potentially have continuous exposure (e.g. 24 hours per day, 52 weeks per year). These exposures are anticipated to result in significant cancer risks resulting from exposures to formaldehyde released by the building materials and furnishing commonly found in residential construction.

L6.14

Because these residences will be constructed with CARB Phase 2 Formaldehyde ATCM materials, and be ventilated with the minimum code required amount of outdoor air, the indoor residential formaldehyde concentrations are likely similar to those concentrations observed in residences built with CARB Phase 2 Formaldehyde ATCM materials, which is a median of 25 µg/m^3.

L6.14 (cont.)

Assuming that the residential occupants inhale 20 m^3 of air per day, the average 70-year lifetime formaldehyde daily dose is 500 µg/day for continuous exposure in the residences. This exposure represents a cancer risk of 125 per million, which is more than 12 times the South Coast Air Quality Management District CEQA cancer risk of 10 per million (SCAQMD, 2007). For occupants that do not have continuous exposure, the cancer risk will be proportionally less but still substantially over the SCAQMD CEQA cancer risk of 10 per million (e.g. for 12/hour/day occupancy, more than 6 times the SCAQMD CEQA cancer risk of 10 per million).

L6.15

The employees of the commercial spaces are expected to experience significant indoor exposures (e.g., 40 hours per week, 50 weeks per year). These exposures for employees are anticipated to result in significant cancer risks resulting from exposures to formaldehyde released by the building materials and furnishing commonly found in offices, warehouses, residences and hotels.

Because these commercial will be constructed with CARB Phase 2 Formaldehyde ATCM materials, and be ventilated with the minimum code required amount of outdoor air, the indoor warehouse formaldehyde concentrations are likely similar to those concentrations observed in residences built with CARB Phase 2 Formaldehyde ATCM materials, which is a median of 25 µg/m^3.

L6.16

Assuming that the commercial space employees work 8 hours per day and inhale 20 m^3 of air per day, the formaldehyde dose per work-day at the offices is 167 µg/day.

Assuming that the commercial space employees work 5 days per week and 50 weeks per year for 45 years (start at age 20 and retire at age 65) the average 70-year lifetime

formaldehyde daily dose is 73.6 µg/day.

This is 1.84 times the NSRL (OEHHA, 2017a) of 40 µg/day and represents a cancer risk of 18.4 per million, which exceeds the CEQA cancer risk of 10 per million. This impact should be analyzed in an environmental impact report ("EIR"), and the agency should impose all feasible mitigation measures to reduce this impact. Several feasible mitigation measures are discussed below and these and other measures should be analyzed in an EIR.

L6.16 (cont.)

While measurements of the indoor concentrations of formaldehyde in residences built with CARB Phase 2 Formaldehyde ATCM materials (Chan et. al., 2018), indicate that indoor formaldehyde concentrations in buildings built with similar materials (e.g. hotels, residences, offices, warehouses, schools) will pose cancer risks in excess of the CEQA cancer risk of 10 per million, a determination of the cancer risk that is specific to this project and the materials used to construct these buildings can and should be conducted prior to completion of the environmental review.

L6.17

The following describes a method that should be used prior to construction in the environmental review under CEQA, for determining whether the indoor concentrations resulting from the formaldehyde emissions of the specific building materials/furnishings selected for the building exceed cancer and non-cancer guidelines. Such a design analyses can be used to identify those materials/furnishings prior to the completion of the City's CEQA review and project approval, that have formaldehyde emission rates that contribute to indoor concentrations that exceed cancer and non-cancer guidelines, so that alternative lower emitting materials/furnishings may be selected and/or higher minimum outdoor air ventilation rates can be increased to achieve acceptable indoor concentrations and incorporated as mitigation measures for this project.

L6.18

Pre-Construction Building Material/Furnishing Formaldehyde Emissions Assessment.

This formaldehyde emissions assessment should be used in the environmental review under CEQA to assess the indoor formaldehyde concentrations from the proposed loading of building materials/furnishings, the area-specific formaldehyde emission rate data for

building materials/furnishings, and the design minimum outdoor air ventilation rates. This assessment allows the applicant (and the City) to determine before the conclusion of the environmental review process and the building materials/furnishings are specified, purchased, and installed if the total chemical emissions will exceed cancer and non-cancer guidelines, and if so, allow for changes in the selection of specific material/furnishings and/or the design minimum outdoor air ventilations rates such that cancer and non-cancer guidelines are not exceeded.

L6.18 (cont.)

1.) Define Indoor Air Quality Zones. Divide the building into separate indoor air quality zones, (IAQ Zones). IAQ Zones are defined as areas of well-mixed air. Thus, each ventilation system with recirculating air is considered a single zone, and each room or group of rooms where air is not recirculated (e.g. 100% outdoor air) is considered a separate zone. For IAQ Zones with the same construction material/furnishings and design minimum outdoor air ventilation rates. (e.g. hotel rooms, apartments, condominiums, etc.) the formaldehyde emission rates need only be assessed for a single IAQ Zone of that type.

2.) Calculate Material/Furnishing Loading. For each IAQ Zone, determine the building material and furnishing loadings (e.g., m^2 of material/m^2 floor area, units of furnishings/m^2 floor area) from an inventory of all potential indoor formaldehyde sources, including flooring, ceiling tiles, furnishings, finishes, insulation, sealants, adhesives, and any products constructed with composite wood products containing urea-formaldehyde resins (e.g., plywood, medium density fiberboard, particleboard).

3.) Calculate the Formaldehyde Emission Rate. For each building material, calculate the formaldehyde emission rate (µg/h) from the product of the area-specific formaldehyde emission rate (µg/m^2-h) and the area (m^2) of material in the IAQ Zone, and from each furnishing (e.g. chairs, desks, etc.) from the unit-specific formaldehyde emission rate (µg/unit-h) and the number of units in the IAQ Zone.

NOTE: As a result of the high-performance building rating systems and building codes (California Building Standards Commission, 2014; USGBC, 2014), most manufacturers of building materials furnishings sold in the United States conduct chemical emission rate tests using the California Department of Health “Standard Method for the Testing and

Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers", (CDPH, 2017), or other equivalent chemical emission rate testing methods. Most manufacturers of building furnishings sold in the United States conduct chemical emission rate tests using ANSI/BIFMA M7.1 Standard Test Method for Determining VOC Emissions (BIFMA, 2018), or other equivalent chemical emission rate testing methods.

CDPH, BIFMA, and other chemical emission rate testing programs, typically certify that a material or furnishing does not create indoor chemical concentrations in excess of the maximum concentrations permitted by their certification. For instance, the CDPH emission rate testing requires that the measured emission rates when input into an office, school, or residential model do not exceed one-half of the OEHHA Chronic Exposure Guidelines (OEHHA, 2017b) for the 35 specific VOCs, including formaldehyde, listed in Table 4-1 of the CDPH test method (CDPH, 2017). These certifications themselves do not provide the actual area-specific formaldehyde emission rate (i.e., $\mu g/m^2$-h) of the product, but rather provide data that the formaldehyde emission rates do not exceed the maximum rate allowed for the certification. Thus for example, the data for a certification of a specific type of flooring may be used to calculate that the area-specific emission rate of formaldehyde is less than 31 $\mu g/m^2$-h, but not the actual measured specific emission rate, which may be 3, 18, or 30 $\mu g/m^2$-h. These area-specific emission rates determined from the product certifications of CDPH, BIFA, and other certification programs can be used as an initial estimate of the formaldehyde emission rate.

L6.18 (cont.)

If the actual area-specific emission rates of a building material or furnishing is needed (i.e. the initial emission rates estimates from the product certifications are higher than desired), then that data can be acquired by requesting from the manufacturer the complete chemical emission rate test report. For instance if the complete CDPH emission test report is requested for a CDHP certified product, that report will provide the actual area-specific emission rates for not only the 35 specific VOCs, including formaldehyde, listed in Table 4-1 of the CDPH test method (CDPH, 2017), but also all of the cancer and reproductive/developmental chemicals listed in the California Proposition 65 Safe Harbor Levels (OEHHA, 2017a), all of the toxic air contaminants (TACs) in the California Air

Resources Board Toxic Air Contamination List (CARB, 2011), and the 10 chemicals with the greatest emission rates.

Alternatively, a sample of the building material or furnishing can be submitted to a chemical emission rate testing laboratory, such as Berkeley Analytical Laboratory (https://berkeleyanalytical.com), to measure the formaldehyde emission rate.

4.) Calculate the Total Formaldehyde Emission Rate. For each IAQ Zone, calculate the total formaldehyde emission rate (i.e. µg/h) from the individual formaldehyde emission rates from each of the building material/furnishings as determined in Step 3.

L6.18 (cont.)

5.) Calculate the Indoor Formaldehyde Concentration. For each IAQ Zone, calculate the indoor formaldehyde concentration (µg/m^3) from Equation 1 by dividing the total formaldehyde emission rates (i.e. µg/h) as determined in Step 4, by the design minimum outdoor air ventilation rate (m^3/h) for the IAQ Zone.

$$C_{in} = \frac{E_{total}}{Q_{oa}} \quad \text{(Equation 1)}$$

where:

C_{in} = indoor formaldehyde concentration (µg/m^3)

E_{total} = total formaldehyde emission rate (µg/h) into the IAQ Zone.

Q_{oa} = design minimum outdoor air ventilation rate to the IAQ Zone (m^3/h)

The above Equation 1 is based upon mass balance theory, and is referenced in Section 3.10.2 "Calculation of Estimated Building Concentrations" of the California Department of Health "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers", (CDPH, 2017).

6.) Calculate the Indoor Exposure Cancer and Non-Cancer Health Risks. For each IAQ Zone, calculate the cancer and non-cancer health risks from the indoor formaldehyde concentrations determined in Step 5 and as described in the OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines; Guidance Manual for Preparation of Health Risk Assessments (OEHHA, 2015).

7.) Mitigate Indoor Formaldehyde Exposures of exceeding the CEQA Cancer and/or Non-Cancer Health Risks. In each IAQ Zone, provide mitigation for any formaldehyde exposure risk as determined in Step 6, that exceeds the CEQA cancer risk of 10 per million or the CEQA non-cancer Hazard Quotient of 1.0.

L6.18 (cont.)

Provide the source and/or ventilation mitigation required in all IAQ Zones to reduce the health risks of the chemical exposures below the CEQA cancer and non-cancer health risks.

Source mitigation for formaldehyde may include:

1.) reducing the amount materials and/or furnishings that emit formaldehyde
2.) substituting a different material with a lower area-specific emission rate of formaldehyde

Ventilation mitigation for formaldehyde emitted from building materials and/or furnishings may include:

1.) increasing the design minimum outdoor air ventilation rate to the IAQ Zone.

L6.19

NOTE: Mitigating the formaldehyde emissions through use of less material/furnishings, or use of lower emitting materials/furnishings, is the preferred mitigation option, as mitigation with increased outdoor air ventilation increases initial and operating costs associated with the heating/cooling systems.

Outdoor Air Ventilation Impact. Another important finding of the CNHS, was that the outdoor air ventilation rates in the homes were very low. Outdoor air ventilation is a very important factor influencing the indoor concentrations of air contaminants, as it is the primary removal mechanism of all indoor air generated air contaminants. Lower outdoor air exchange rates cause indoor generated air contaminants to accumulate to higher indoor air concentrations. Many homeowners rarely open their windows or doors for ventilation as a result of their concerns for security/safety, noise, dust, and odor concerns (Price, 2007). In the CNHS field study, 32% of the homes did not use their windows during the 24-hour Test Day, and 15% of the homes did not use their windows during the entire preceding week.

L6.20

Most of the homes with no window usage were homes in the winter field session. Thus, a substantial percentage of homeowners never open their windows, especially in the winter season. The median 24-hour measurement was 0.26 ach, with a range of 0.09 ach to 5.3 ach. A total of 67% of the homes had outdoor air exchange rates below the minimum California Building Code (2001) requirement of 0.35 ach. Thus, the relatively tight envelope construction, combined with the fact that many people never open their windows for ventilation, results in homes with low outdoor air exchange rates and higher indoor air contaminant concentrations.

L6.20 (cont.)

The Arroyo at Monrovia Station project in Monrovia, CA includes residential and commercial spaces, and is located close to roads with moderate to high traffic (e.g. Interstate 210, S. Magnolia Avenue, W. Evegreen Avenue, W. Pomona Avenue) and the Metro Gold Line. As a result of these outdoor sources of noise, this area as been determined by the Draft Environmental Impact Report (City of Monrovia, 2019) to be a sound impacted area, with noise levels reported in Table 16-2 ranging from 73.5 to 75.1 dBA CNEL.

As a result of the high outdoor noise levels, the current project will require the need for mechanical supply of outdoor air ventilation air to allow for a habitable interior environment with closed windows and doors. Such a ventilation system would allow windows and doors to be kept closed at the occupant's discretion to control exterior noise within residential interiors.

L6.21

$PM_{2.5}$ Outdoor Concentrations Impact. An additional impact of the nearby motor vehicle traffic associated with this project, are the outdoor concentrations of $PM_{2.5}$. The Draft Environmental Impact Report (City of Monrovia, 2019) has determined that the South Coast Air Basin, where this project is located, is a non-attainment area for $PM_{2.5}$.

L6.22

An air quality analyses should to be conducted to determine the concentrations of $PM_{2.5}$ in the outdoor and indoor air that people inhale each day. This air quality analyses needs to consider the cumulative impacts of the project related emissions, existing and projected future emissions from local $PM_{2.5}$ sources (e.g. stationary sources, motor vehicles, and airport traffic) upon the outdoor air concentrations at the project site. If the outdoor

L6.23

concentrations are determined to exceed the California and National annual average $PM_{2.5}$ exceedence concentration of 12 $\mu g/m^3$, or the National 24-hour average exceedence concentration of 35 $\mu g/m^3$, then the buildings need to have a mechanical supply of outdoor air that has air filtration with sufficient $PM_{2.5}$ removal efficiency, such that the indoor concentrations of outdoor $PM_{2.5}$ particles is less than the California and National $PM_{2.5}$ annual and 24-hour standards.

L6.23 (cont.)

It is my experience that based on the projected combination of high traffic and airport noise levels, the annual average concentration of $PM_{2.5}$ will exceed the California and National $PM_{2.5}$ annual and 24-hour standards and warrant installation of high efficiency air filters (i.e. MERV 13 or higher) in all mechanically supplied outdoor air ventilation systems.

Indoor Air Quality Impact Mitigation Measures

The following are recommended mitigation measures to minimize the impacts upon indoor quality:

- indoor formaldehyde concentrations
- outdoor air ventilation
- $PM_{2.5}$ outdoor air concentrations

Indoor Formaldehyde Concentrations Mitigation. Use only composite wood materials (e.g. hardwood plywood, medium density fiberboard, particleboard) for all interior finish systems that are made with CARB approved no-added formaldehyde (NAF) resins or ultra-low emitting formaldehyde (ULEF) resins (CARB, 2009). Other projects such as the AC by Marriott Hotel – West San Jose Project (Asset Gas SC Inc.) and 2525 North Main Street, Santa Ana (AC 2525 Main LLC, 2019) have entered into settlement agreements stipulating the use of composite wood materials only containing NAF or ULEF resins.

L6.24

Alternatively, conduct the previously described Pre-Construction Building Material/Furnishing Chemical Emissions Assessment, to determine that the combination of

formaldehyde emissions from building materials and furnishings do not create indoor formaldehyde concentrations that exceed the CEQA cancer and non-cancer health risks.

It is important to note that we are not asking that the builder to "speculate" on what and how much composite materials be used, but rather at the design stage to select composite wood materials based on the formaldehyde emission rates that manufacturers routinely conduct using the California Department of Health "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers", (CDPH, 2017), and use the procedure described earlier (i.e. Pre-Construction Building Material/Furnishing Formaldehyde Emissions Assessment) to insure that the materials selected achieve acceptable cancer risks from material off gassing of formaldehyde.

Outdoor Air Ventilation Mitigation. Provide each habitable room with a continuous mechanical supply of outdoor air that meets or exceeds the California 2016 Building Energy Efficiency Standards (California Energy Commission, 2015) requirements of the greater of 15 cfm/occupant or 0.15 cfm/ft^2 of floor area. Following installation of the system conduct testing and balancing to insure that required amount of outdoor air is entering each habitable room and provide a written report documenting the outdoor airflow rates. Do not use exhaust only mechanical outdoor air systems, use only balanced outdoor air supply and exhaust systems or outdoor air supply only systems. Provide a manual for the occupants or maintenance personnel, that describes the purpose of the mechanical outdoor air system and the operation and maintenance requirements of the system.

L6.25 (cont.)

$PM_{2.5}$ Outdoor Air Concentration Mitigation. Install air filtration with sufficient $PM_{2.5}$ removal efficiency (e.g. MERV 13 or higher) to filter the outdoor air entering the mechanical outdoor air supply systems, such that the indoor concentrations of outdoor $PM_{2.5}$ particles are less than the California and National $PM_{2.5}$ annual and 24-hour standards. Install the air filters in the system such that they are accessible for replacement by the occupants or maintenance personnel. Include in the mechanical outdoor air ventilation system manual instructions on how to replace the air filters and the estimated frequency of replacement.

References

AC 2525 Main LLC. 2019. Environmental Settlement Agreement with Laborers' International Union of North America Local 652.

Asset Gas SC. Inc. 2019. Settlement Agreement and Release with Jose Mexicano, Alejandro Martinez, and Laborers' International Union of North America Local 652.

BIFA. 2018. BIFMA Product Safety and Performance Standards and Guidelines. www.bifma.org/page/standardsoverview

California Air Resources Board. 2009. Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products. California Environmental Protection Agency, Sacramento, CA. https://www.arb.ca.gov/regact/2007/compwood07/fro-final.pdf

California Air Resources Board. 2011. Toxic Air Contaminant Identification List. California Environmental Protection Agency, Sacramento, CA. https://www.arb.ca.gov/toxics/id/taclist.htm

California Building Code. 2001. California Code of Regulations, Title 24, Part 2 Volume 1, Appendix Chapter 12, Interior Environment, Division 1, Ventilation, Section 1207: 2001 California Building Code, California Building Standards Commission. Sacramento, CA.

California Building Standards Commission (2014). 2013 California Green Building Standards Code. California Code of Regulations, Title 24, Part 11. California Building Standards Commission, Sacramento, CA http://www.bsc.ca.gov/Home/CALGreen.aspx.

California Energy Commission, 2015. 2016 Building Energy Efficiency Standards for Residential and Nonresidential Buildings, California Code of Regulations, Title 24, Part 6.

http://www.energy.ca.gov/2015publications/CEC-400-2015-037/CEC-400-2015-037-CMF.pdf

CDPH. 2017. *Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers, Version 1.1*. California Department of Public Health, Richmond, CA. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

Chan, W., Kim, Y., and Singer, B. 2018. Indoor Air Quality in New California Homes with Mechanical Ventilation, Proceedings of Indoor Air 2018, Philadelphia, PA.

City of Monrovia. 2019. Arroyo at Monrovia Station Specific Plan, Draft Environmental Impact Report. SCH No. 2019050016

EPA. 2011. Exposure Factors Handbook: 2011 Edition, Chapter 16 – Activity Factors. Report EPA/600/R-09/052F, September 2011. U.S. Environmental Protection Agency, Washington, D.C.

Hodgson, A. T., D. Beal, J.E.R. McIlvaine. 2002. Sources of formaldehyde, other aldehydes and terpenes in a new manufactured house. Indoor Air 12: 235–242.

OEHHA (Office of Environmental Health Hazard Assessment). 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines; Guidance Manual for Preparation of Health Risk Assessments.

OEHHA (Office of Environmental Health Hazard Assessment). 2017a. Proposition 65 Safe Harbor Levels. No Significant Risk Levels for Carcinogens and Maximum Allowable Dose Levels for Chemicals Causing Reproductive Toxicity. Available at: http://www.oehha.ca.gov/prop65/pdf/safeharbor081513.pdf

OEHHA - Office of Environmental Health Hazard Assessment. 2017b. All OEHHA Acute, 8-hour and Chronic Reference Exposure Levels. Available at: http://oehha.ca.gov/air/allrels.html

Offermann, F. J. 2009. Ventilation and Indoor Air Quality in New Homes. California Air Resources Board and California Energy Commission, PIER Energy-Related Environmental Research Program. Collaborative Report. CEC-500-2009-085. https://www.arb.ca.gov/research/apr/past/04-310.pdf

Offermann, F. J. and A. T. Hodgson (2011). Emission Rates of Volatile Organic Compounds in New Homes. Proceedings Indoor Air 2011 (12th International Conference on Indoor Air Quality and Climate 2011). June 5-10, 2011, Austin, TX USA.

Price, Phillip P., Max Sherman, Robert H. Lee, and Thomas Piazza. 2007. Study of Ventilation Practices and Household Characteristics in New California Homes. California Energy Commission, PIER Program. CEC-500-2007-033. Final Report, ARB Contract 03-326. Available at: www.arb.ca.gov/research/apr/past/03-326.pdf.

South Coast Air Quality Management District (SCAQMD). 2015. California Environmental Quality Act Air Quality Handbook. South Coast Air Quality Management District, Diamond Bar, CA,http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook

USGBC. 2014. LEED BD+C Homes v4. U.S. Green Building Council, Washington, D.C. http://www.usgbc.org/credits/homes/v4

2.2.6 Supporters Alliance for Environmental Responsibility (SAFER) Submittal #2 (L6) (22 pages)

L6.1 The letter submitted by Lozeau Drury on behalf of the Supporters Alliance for Environmental Responsibility (SAFER), dated November 12, 2019, is a second letter submitted on the Project that, as stated, supplements the first letter submitted by Lozeau Drury, also dated November 12, 2019 and listed as Letter #5 above. Responses to comments presented in the first letter are contained above. The second letter dated November 12, 2019 contains two letters as attachments, (1) by a traffic engineer, and (2) the other by an industrial hygenist.

Response: The City acknowledges the letter. The main body of the letter submitted by Lozeau Drury refers to two attached letters and does not contain any comments on the project. The letter with attachments will be included as part of the record and made available to the decision makers prior to a final decision on the Project. No further response is required.

L6.2 The DEIR Understates Traffic Generated by the Project's Retail Component. The DEIR estimates gross trip generation of the Project's retail component relying on the Institute of Transportation Engineers publication *Trip Generation, 10th Edition,* an authoritative source. It estimates the trips at *average rates* for Land Use Category 820, Shopping Center. The problem with this is that shopping centers do not generate trips at the same rate per unit floor area (usually expressed in trips per thousand square feet). A shopping center of about 429,000 generates trips at a rate of 37.7 daily trips per thousand square feet. Larger shopping centers generate trips at rates lower rates than this average; smaller centers generate trips at higher rates per unit floor area and very small retail spaces generate trips at much higher rates per unit floor area than the average. This is why *Trip Generation, 10th Edition* relating trip generation rate to shopping center floor area for daily and AM and PM peak traffic. To comply with CEQA's demand of a good faith effort to disclose impact, given the vast disparity between the Project's 7,080 square feet of retail and the 429,000 square feet size center that generates trips at an average rate, the preparers of the traffic study should have used the fitted curves. Had they done so, they would have found that the retail component's gross trip generation (before discounts) to be 933 daily trips instead of 267, the gross trip generation in the AM peak hour of street traffic to be 181 instead of 87 and the gross trip generation in the PM peak hour of street traffic to be 149 instead of 116. But there is a further reality that has not been taken into account in the DEIR. Tucking some 7,080 square feet of retail into a large residential building does not create a "shopping center". More than likely this tiny spot of retail space becomes a combination of a convenience market and one or more fast food outlets (*Trip Generation, 10th Edition* categories 851 and 933 respectively. If one assumed the retail space is about evenly divided between convenience market and fast food outlets, the gross trip generation of the retail space becomes 3883 daily trips instead of the 267 assumed in the DEIR, 307 in the AM peak instead of 87 and 271 in the PM peak instead of 116.

Response. (a) The commenter does not challenge the trip generation calculation or traffic analysis associated with the residential component of the Project. The commenter challenges the use of Land Use Code 820 (Shopping Center), to calculate trips associated with the retail space planned to be provided within the Project and instead suggests the use of Land Use Categories 851 and 933, for Convenience Markets and Fast Food Restaurants.

The traffic impact analysis for the Project is contained in Chapter 19 of the EIR. The actual tenants that will use the Project's retail space is currently unknown. However, given the size of the retail area and its location in one of the multi-family residential buildings associated with the Project, the Land Use Code 820 (Shopping Center), was selected as the most appropriate land use category for the Project's retail space since it covers an array of potential future commercial

tenants. For this Specific Plan, retail is defined as "Retail (indoor) including theme shopping use and specialty food store."

The ITE *Trip Generation Manual,* 10th Edition*,* defines the Shopping Center land use category as the following:

> "A shopping center is an **integrated group of commercial establishments that is planned, developed, owned, and managed as a unit**. A shopping center's composition is related to market area in terms of size, location, and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own demands…Some of these centers contained non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs, and recreational facilities (for example ice skating rinks, or indoor miniature golf courses). Many shopping centers, **in addition to the integrated unit of shops in one building** or enclosed around a mall, include outparcels (peripheral buildings or pads located on the perimeter of the center adjacent to the streets and major access points). These buildings are typically drive-in banks, retail stores, restaurants, or small offices. Although the data herein do not indicate which of the centers studied included peripheral buildings, it can be assumed that some of the data show their effect."

Use of the entire proposed 7,080 sf of retail space solely as a fast-food restaurant, or solely as a convenience market/store, is speculative since the actual tenancy is unknown at this time. A shopping center best describes how the space will be used "as an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit." Further, the retail space is integrated into one building. Finally, trip generation rates for shopping centers account for the sale of food and goods similar to convenience stores and restaurants but is not limited to only those uses. Therefore, the City has identified Land Use Code 820 (Shopping Center) as the most appropriate land use category to forecast trips from the proposed new retail space since an actual tenant is unknown at this time and the category is more inclusive of a wider range of future tenants.

Use of the Shopping Center land use category trip generation rate is also conservative since the Project's proposed retail space would be contained within a multi-family residential development in an urban setting, which would tend to attract a large portion of its patronage from Project residents onsite. The proposed retail space is located within a transit-oriented district, one block from Los Angeles County's Metropolitan Transportation Authority's (Metro's) Gold Line Light Rail Station, and is expected to obtain patronage from on-site residents, residents of nearby residential developments that have recently opened and are operational (e.g., the MODA residential project located directly across Pomona Avenue), other planned adjacent residential developments, as well as current Metro riders.

Finally, the Project's retail component is designed as a retail flex space. As indicated in Chapter 3 of the Draft EIR, a "flex unit" is a space intended for a non-residential, neighborhood-serving use, but may be repurposed into a live/work unit..Six of the proposed 302 units under the Project are flex units. The traffic analysis is conservative as the square footage of the retail flex space (i.e., 7,080 square feet) was both utilized to estimate the potential retail trips for the Project and the potential residential use that the space could be utilized for. Thus, the Draft EIR "double-counts" vehicle trips anticipated to be generated from the retail portion of the 7,080 sf space as well as trips generated from the residential component of that same space. Traffic generated from the Project therefore, is overestimated in the EIR because trips for the same space are double-counted.

(b) The commenter recommends using fitted curve equations to calculate trips associated with the proposed retail space as opposed to a weighted average rate which was utilized in the EIR.

The following definitions from the ITE *Trip Generation Handbook*, 3rd Edition*,* are provided regarding the two different types of ITE trip generation rates:

> (Weighted) Average Trip Rates
> The weighted average trip generation rate (simplified to "average trip rate") is defined as the number of weighted trips per unit of the independent variable (in this case, the number of vehicle trips per 1,000 gross leasable square feet of retail space). The rate assumes a simple linear relationship between vehicle trips and the square footage of retail space.
>
> Fitted Curve Regression Equation Rates
> Regression analysis provides a tool for developing an equation that defines the line that "best fits" the data. The specific mathematical relationship between vehicle trips and the related independent variable (i.e., vehicle trips and retail square footage) is defined using a "fitted curve" equation. Unlike the weighted average rate, the plotted fitted curve equation is not necessarily a linear relationship.

While the commenter suggests use of the fitted curve equations for ITE Land Use Code 820, the trips mentioned by the commenter are incorrect (i.e., 933 daily trips, 181 AM peak hour trips, 149 PM peak hour trips). The ITE *Trip Generation Manual*, 10th Edition, fitted curve equations and weighted average rates for Land Use Code 820 (Shopping Center) , are summarized below (with "X" = per 1,000 of square feet = 7.080 and "T" = vehicle trips), along with the calculated retail Project trips when the fitted curve equation or weighted average trip rates are applied:

Fitted Curve Equations for ITE Land Use Code 820

- Weekday Daily: Ln(T) = 0.68 Ln(X) + 5.57 = 993 trips
- Weekday AM Peak Hour of Adjacent Street Traffic: T = 0.50(X) + 151.78 = 155 trips
- Weekday PM Peak Hour of Adjacent Street Traffic: Ln(T) = 0.74 Ln(X) + 2.89 = 77 trips

Weighted Average Rates for ITE Land Use Code 820

- Weekday Daily: T = 37.75 (X) = 267 trips
- Weekday AM Peak Hour of Adjacent Street Traffic: T = 0.94 (X) = 7 trips
- Weekday PM Peak Hour of Adjacent Street Traffic: T = 3.81 (X) = 27 trips

The *Trip Generation Manual* contains data plot scatter diagrams which illustrate each survey site's trip generation result by land use category and survey time periods. The x-axis of the data plot represents the size (i.e., "X" expressed as per 1,000 square feet) and the y-axis represents the forecast vehicle trips (i.e., "T"). The data plot scatter diagrams also graphically show the fitted curve equation and the weighted average rate lines. The *Trip Generation Handbook,* 3rd Edition cautions that there are instances where the "fitted curve equation has a significantly large or negative y-intercept. For an independent variable with a low value, the fitted curve equation might produce a generated trips estimate that is unreasonable…" In this instance, given the small size of the independent variable (i.e., the size of the 7,080 square feet of retail space) when compared to average size of the independent variable of sites surveyed for ITE Land Use Code 820, the y-intercept for the fitted curve equation for the weekday AM peak hour is significantly large such that use of the fitted curve equation as shown above would overstate the trips for a retail use of this size.

In addition, the *Trip Generation Handbook* also provides further guidance when selecting whether the fitted curve equation or weighted average rates should be utilized in forecasting trip generation for a specific use. Various factors are considered, including the data plot size, the coefficient of determination (R^2), and the weighted standard deviation.

The coefficient of determination (i.e., R^2) is the measure of correlation between the two variables which is expressed on a scale of 0 to 1, such that the closer this value is to 1, the better the correlation between the two variables. As indicated in the *Trip Generation Handbook*, "[t]he standard deviation estimates the difference among the trip generation rates in all studies for a land use and independent variable." The *Trip Generation Handbook* contains the following specific guidance:

"Use Fitted Curve Equation when:

- A fitted curve equation is provided and the data plot has at least 20 data points; or
- A fitted curve equation is provided, the curve has an R^2 of at least 0.75, the fitted curve falls within data cluster, and the weighted standard deviation is more than 55 percent of the weighted average rate.

Use Weighted Average Rate when:

- The data plot has at least three data points (and preferably, six or more);
- The R^2 value for the fitted curve is less than 0.75 or no fitted curve equation is provided;
- The weighted standard deviation for the average rate is less than 55 percent of the weighted average rate; and
- The weighted average rate is within data cluster in plot."

The data points provided for the Shopping Center land use category exceed the minimum data points indicated above for use of either the fitted curve equation or weighted average rate. The number of data points surveyed for the Shopping Center land use category for the weekday daily, weekday AM peak hour and weekday PM peak hour are 147, 84 and 261, respectively. For the Shopping Center land use category, the R^2 value for the weekday AM peak hour is 0.50, which is below the 0.75 value that is recommended for the use of the fitted curve equation. In fact, for instances where the R^2 value is less than 0.50, a fitted curve equation would not be provided. For ITE Land Use Code 820 (Shopping Center), the weighted standard deviation is determined to be less than 55 percent of the weighted average rate for both the weekday daily and weekday PM peak hour (i.e., weekday daily at 43 percent and weekday PM peak hour at 54 percent), as shown below:

- Weekday Daily: Standard Deviation 16.41 / Average Rate 37.75 = 43%
- Weekday AM Peak Hour of Adjacent Street Traffic: Standard Deviation 0.87 / Average Rate 0.94 = 93%
- Weekday PM Peak Hour of Adjacent Street Traffic: Standard Deviation 2.04 / Average Rate 3.81 = 54%

Again, when the weighted standard deviation for the average rate is less than 55 percent of the weighted average rate, ITE recommends using a weighted average rather than a fitted curve equation.

Based on the various factors mentioned above, it was determined that use of the weighted average rate is more appropriate than the fitted curve equation in determining the forecast of the retail-related project vehicle trips.

L6.3 The DEIR Excessively Discounts Traffic Generated by the Project's Residential and Retail Components. The DEIR assumes that 25 percent of the Project's residential vehicle trip generation and 15 percent of its retail vehicle trip generation will be offset through transit use. The reason given for these assumptions is the proximity to the Metro Gold Line Monrovia Station which is about a 850-foot walk from the proposed building's main entrance. But these percentage values seem to be picked out of the air. There has been no attempt at statistical substantiation such as, say, what percentage of people living within a quarter mile of the station now use the Gold Line for their peak period trips, or what percentage of the peak period trips people living in the area of the station now make could be reasonably accessed from the Gold Line in its currently developed state. The retail transit percentage assumption is similarly unreasonable and speculative. It is preposterous to presume that a tiny 7,080 square foot retail space could attract 15 percent of its business from people who specifically travel to and from it via transit. Certainly, it will attract transit users who pass by or close to it in their ordinary travels. But these are already accounted-for in the 25 percent passer-by deduction. In summary, the above discussed discounts are unsubstantiated assumptions that are unreasonably favorable to the Project and hence inconsistent with the good faith effort to disclose impact that CEQA demands.

Response. The commenter is unclear where the 25% trip reduction for residential trips and 15% trip reduction for retail trips due to transit use were derived, stating that they appear unreasonable and speculative. The commenter challenges the use of a 15% reduction in retail trips due to transit use stating that any reductions "are already accounted for in the 25% passer-by deduction." First, there are three types of reductions applied to retail trips: (1) an "internal capture" reduction is applied because the project is a mixed-use project, (2) a "pass-by" reduction is applied to account for traffic passing by the site, and (3) a "transit use" reduction is applied because the project is in close proximity to a transit station and bus transit service. Specifically, Section 7.1, page 31 of *Appendix J, Transportation Impact Study,* of the Draft EIR defines internal capture trips and pass-by trips as follows*:*

> "Internal capture trips are those trips made internal to the site between land uses in a mixed or multi-use development. When combined within a mixed or multi-use development, land uses tend to interact, and thus attract a portion of each other's trip generation. In addition to internal capture trips, pass-by trips are made as intermediate stops on the way from an origin to a primary destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the site."

Internal capture and pass-by trip reductions have no relation to the proximity to transit. Internal capture and pass-by trip reductions are only applied to retail trips.

Transit use reductions are recommended for projects within ¼ mile of a transit stop, to account for transit ridership by residents and retail patrons. Therefore, the 15% transit use reduction applied to retail trips is separate and distinct from trip reductions applied for internal capture and pass-by trips.

As stated above in Response to Comment L6.2, the ITE *Trip Generation Manual* contains trip rates for a variety of land uses (including office buildings, shopping centers, condominiums, etc.), which have been derived based on traffic counts conducted at existing sites. However, some traffic count data submitted to ITE is for free-standing sites (i.e., either stand-alone sites with only one land use or residential uses that are not mixed with other commercial uses) generally located in suburban locations, which likely do not reflect the trip generation characteristics for projects located in urban areas such as the City of Monrovia's transit oriented district (TOD) area. Thus, the trip rates provided in the ITE *Trip Generation Manual* (derived from traffic counts at suburban

projects) would be expected to overstate the trip generation potential of projects located within the Station Square area, including the proposed Project. The area adjacent to the Project site provides public transportation service, as well as enhanced pedestrian and bicycle trip-making opportunities. Accordingly, as encouraged by ITE, additional trip generation data was reviewed at existing development sites in urban areas similar to Monrovia.

Two recent research efforts by the Transportation Research Board[26] (the "TRB" report) and California Department of Transportation[27] (the "Caltrans report") have been conducted for the purposes of evaluating the trip generation characteristics at development sites located in urban areas in close proximity to transit stations/hubs.

The TRB report evaluated trip generation at 17 TOD sites in four urbanized areas of the country: Philadelphia/Northeast New Jersey; Portland, Oregon; metropolitan Washington, D.C.; and the San Francisco East Bay area. The 17 TOD sites studied are residential developments. Driveway traffic counts conducted at the TOD sites were compared to the forecast trip generation that would be calculated using applicable and unadjusted trip rates from the ITE *Trip Generation Manual*. Based on the traffic count data collected at the TODs, the TRB report concludes the following:

- Weekday Daily (24-hour): 44% fewer vehicle trips at TODs compared with forecast trip generation using unadjusted ITE trip rates

- Weekday AM peak hour: 49% fewer vehicle trips at TODs compared with forecast trip generation using unadjusted ITE trip rates

- Weekday PM peak hour: 48% fewer vehicle trips at TODs compared with forecast trip generation using unadjusted ITE trip rates

The Caltrans report evaluated trip generation at eight urban infill sites located in close proximity to transit stations and/or transit hubs in the Berkeley and San Diego areas (thus considered as TOD sites for purposes of this analysis). The eight TOD sites studied are residential developments. Driveway traffic counts conducted at the TOD sites were compared to the forecast trip generation that would be calculated using applicable and unadjusted trip rates from the ITE *Trip Generation Manual*. Based on the traffic count data collected at the TOD sites, the Caltrans report concludes the following:

- Weekday AM peak hour: 61% fewer vehicle trips at TODs compared with forecast trip generation using unadjusted ITE trip rates

- Weekday PM peak hour: 60% fewer vehicle trips at TODs compared with forecast trip generation using unadjusted ITE trip rates

It is therefore demonstrated in the TRB and Caltrans reports that vehicular trip generation is substantially reduced at TOD sites as compared to what would otherwise be forecast through use of the ITE trip rates. Further, it is reasonable to conclude that travel related to the sites studied in the TRB and Caltrans reports comprised a mixture of trips by walking, bicycling and taking public transit, with reduced emphasis on travel by the automobile. Also, as the sites studied by TRB and Caltrans were residential projects, it is reasonable to assume that the sites studied in the TRB and Caltrans reports were passively managed from a traffic management standpoint.

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[26] *TCRP* [Transit Cooperative Research Program] *Report 128 – Effects of TOD on Housing, Parking, and Travel* published by the Transportation Research Board.

[27] *Trip-Generation Rates for Urban Infill Land Uses in California* prepared for Caltrans by the Association of Bay Area Governments.

That is; travelers used travel modes other than the automobile based on convenience and/or cost savings.

For The Arroyo at Monrovia Station Project, it is reasonable to conclude that its design and location in the City of Monrovia near multimodal corridors and the Metro Gold Line light rail transit station would result in a significant reduction in vehicle trips as compared to the trip forecasts that would otherwise be calculated using the applicable and unadjusted ITE trip rates in a passively managed traffic management condition. An actively managed site could be expected to yield additional trip reductions. Therefore, based on consultation with the City's Traffic Engineer and review of the above TRB and Caltrans reports, conservative adjustments were made to the Project trip generation forecasts to account for transit usage, walkability and internal capture as follows:

- Residential Component - 25 percent (25%) transit adjustment

- Retail Component - 15 percent (15%) transit adjustment and 25 percent (25%) combined internal capture and pass-by adjustment

The 15% transit reduction for the retail component of the project is based on data contained in the *Trip Generation Handbook*, 3rd Edition which summarizes the results of surveys of retail use transit shares of the motorized commute trips at three specific California sites near transit stations. The surveyed transit shares of the motorized commute trips were 13%, 17%, and 36%, respectively. Thus, 15% was employed and is conservative.

L6.4 The DEIR Traffic Study Does Not Appear To Have Adjusted Intersection Capacity Utilization Procedures to Account for the Portion of Time Study Intersection Approaches or Departures Are Blocked by Rail Crossing Gates to Allow Gold Line Train Passage. Study intersections near the Gold Line will have their lane capacities reduced on the approaches and departures that cross the tracks because the grade crossing gates are down before, during and after train passage. If the gates are down just 6 minutes in the peak hour, that is a 10 percent reduction in lane capacity. There is no evidence that the DEIR traffic analysis has made any adjustment to take into account the time when the grade crossing gates block movements. This may be critical at the intersections of Myrtle with Duarte, Myrtle with Pomona and Magnolia with Duarte.

Response. The commenter states that the evaluation of Project impacts on study intersections did not account for delays at Metro's at-grade light rail crossings and the potential for the Project to exacerbate impacts of rail crossing delays on intersection capacity. The Transportation Impact Study contained in Appendix J of the EIR does account for rail crossing delays at one of the study intersections (Intersection No. 8: Myrtle Avenue/Duarte Road) nearest to the light rail crossing.

The Transportation Impact Study contained in Appendix J of the EIR applies an additional 20 percent capacity reduction by adjusting the yellow clearance interval of Intersection No. 8: Myrtle Avenue/Duarte Road in recognition of observed vehicle queuing and congestion which occurs at times of rail crossings. Yellow clearance interval (or yellow allowance) is an interval starting at the end of the green-light indication (in which the traffic signal displays a yellow-light indication) and lasting until the red-light indication appears. Typically, the yellow clearance interval lasts approximately three to six seconds for each and every signal phase. The intent of the yellow clearance is to warn drivers of the impending change in right-of-way assignment. It allows drivers the time needed to clear the intersection if they determine that it is not possible to safely stop. The time assigned to the yellow clearance interval affects (i.e., reduces) the overall intersection

capacity. In the Intersection Capacity Utilization (ICU) methodology, a value of 0.100 is typically applied to the signalized intersection calculations to account for the delay or loss time due to the yellow clearance interval. As mentioned in Footnote No. 3 on the Intersection Capacity Utilization (ICU) calculation worksheets for Intersection No. 8: Myrtle Avenue/Duarte Road in *Appendix B of Appendix J* of the Draft EIR, a 0.300 yellow allowance was incorporated into the calculations (i.e., three times the typical clearance of 0.100) in order to account for the additional delay/loss time due to the proximity of the Metro Gold Line light rail crossing at the north leg of this intersection. Thus, the reduced capacity employed in the analysis ensures that the volume to capacity (*v/c*) ratio and Level of Service (LOS) is not understated.

The other two study intersections (i.e., Intersection No. 4: Magnolia Avenue/Duarte Road and Intersection No. 7: Myrtle Avenue/Pomona Avenue) raised by the commenter were determined to be a sufficient distance away from the at-grade light rail crossings such that their capacity would not be affected by signal delays on the light rail system. However, in response to the comment, Linscott, Law & Greenspan, Engineers (LLG) prepared a supplemental analysis that incorporated an additional 0.200 (i.e., 20 percent) as part of the yellow clearance interval (i.e., as compared to 10 percent as suggested by the commenter) for a total yellow clearance of 0.300 (i.e., 30 percent), similar to what was adjusted previously for Intersection No. 8: Myrtle Avenue/Duarte Road in the Transportation Impact Study. Based on this supplemental analysis provided for these two study intersections (i.e., Intersection No. 4: Magnolia Avenue/Duarte Road and Intersection No. 7: Myrtle Avenue/Pomona Avenue) along with the previous adjustment included in the Transportation Impact Study for Intersection No. 8: Myrtle Avenue/Duarte Road, it can still be concluded that no significant impacts at any of these study intersections are expected to occur based on the City's adopted significance threshold criteria. Please refer to the *Supplemental Table A* and associated (ICU) worksheets for Intersection Nos. 4, 7, and 8 below for this supporting documentation.

Finally, Metro did receive and review a copy of the Draft EIR for the Project as evidenced by their comment letter dated November 13, 2019 (i.e., attached within the Final EIR as Letter L3), and Metro did not provide any specific comments regarding the existing Gold Line light-rail transit crossings and existing or future vehicle queuing concerns.

SUPPLEMENTAL TABLE A
SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2018 EXISTING V/C	[1] YEAR 2018 EXISTING LOS [a]	[2] YEAR 2018 EXISTING W/ PROJECT V/C	[2] YEAR 2018 EXISTING W/ PROJECT LOS [a]	[2] CHANGE V/C [(2)-(1)]	[2] SIGNIF. IMPACT [b]	[3] YEAR 2022 FUTURE PRE-PROJECT V/C	[3] YEAR 2022 FUTURE PRE-PROJECT LOS [a]	[4] YEAR 2022 FUTURE W/ PROJECT V/C	[4] YEAR 2022 FUTURE W/ PROJECT LOS [a]	[4] CHANGE V/C [(4)-(3)]	[4] SIGNIF. IMPACT [b]
4	Magnolia Avenue/	AM	0.824	D	0.826	D	0.002	No	0.885	D	0.887	D	0.002	No
	Duarte Road	PM	0.790	C	0.794	C	0.004	No	0.858	D	0.863	D	0.005	No
7	Myrtle Avenue/	AM	0.624	B	0.626	B	0.002	No	0.710	C	0.718	C	0.008	No
	Pomona Avenue	PM	0.734	C	0.752	C	0.018	No	0.869	D	0.888	D	0.019	No
8	Myrtle Avenue/	AM	0.768	C	0.771	C	0.003	No	0.848	D	0.851	D	0.003	No
	Duarte Road	PM	0.875	D	0.876	D	0.001	No	0.959	E	0.960	E	0.001	No

[a] Level of Service (LOS) is based on the reported ICU value for signalized intersections.

[b] The City of Monrovia intersection impact threshold criteria for signalized and unsignalized intersections are as follows:
For signalized intersections, an impact is considered significant if the project-related increase in the volume-to-capacity ratio (v/c) equals or exceeds the thresholds shown the following table:

Level of Service	Pre-Project V/C	Project-Related Increase in V/C
C	> 0.710 - 0.800	equal to or greater than 0.040
D	> 0.810 - 0.900	equal to or greater than 0.030
E	> 0.910 - 1.000	equal to or greater than 0.020
F	> 1.00	equal to or greater than 0.010

[c] For unsignalized intersections:
- Traffic signal warrants analysis to be prepared for unsignalized intersections operating at LOS E or F for future with project conditions.

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INTERSECTION CAPACITY UTILIZATION

Magnolia Avenue @ Duarte Road

N-S St: Magnolia Avenue
E-W St: Duarte Road
Project: The Arroyo at Monrovia Station Project/1-18-4307-1
File: ICU4

Peak hr: AM
Annual Growth: 0.82%

Date: 1/21/2020
Date of Count: 2018
Projection Year: 2022

	2018 EXISTING TRAFFIC			2018 EXISTING WITH PROJECT				2018 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	2	0	0.001	0	2	0	0.001	0	2	0	0.001	0	0	2	0	0.001	0	2	0	0.001
NB Thru	2	1600	0.004	0	2	1600	0.004	0	2	1600	0.004	0	0	2	1600	0.004	0	2	1600	0.004
NB Right	3	0	0.000	0	3	0	0.000	0	3	0	0.000	0	0	3	0	0.000	0	3	0	0.000
SB Left	194	0	0.121	0	194	0	0.121	0	194	0	0.121	6	13	213	0	0.133	0	213	0	0.133
SB Thru	5	1600	0.124	0	5	1600	0.124	0	5	1600	0.124	0	0	5	1600	0.136	0	5	1600	0.136
SB Right	115	1600	0.072	0	115	1600	0.072	0	115	1600	0.072	4	6	125	1600	0.078	0	125	1600	0.078
EB Left	175	1600	0.109 *	0	175	1600	0.109 *	0	175	1600	0.109 *	6	11	192	1600	0.120 *	0	192	1600	0.120 *
EB Thru	434	3200	0.137	0	434	3200	0.137	0	434	3200	0.137	14	66	514	3200	0.162	0	514	3200	0.162
EB Right	3	0	0.000	0	3	0	0.000	0	3	0	0.000	0	0	3	0	0.000	0	3	0	0.000
WB Left	6	1600	0.004	0	6	1600	0.004	0	6	1600	0.004	0	0	6	1600	0.004	0	6	1600	0.004
WB Thru	714	3200	0.289 *	5	719	3200	0.291 *	0	719	3200	0.291 *	24	90	828	3200	0.328 *	5	833	3200	0.329 *
WB Right	212	0	0.000	0	212	0	0.000	0	212	0	0.000	7	1	220	0	0.000	0	220	0	0.000
Yellow Allowance [3]			0.300 *				0.300 *				0.300 *					0.300 *				0.300 *
ICU			0.824				0.826				0.826					0.885				0.887
LOS			D				D				D					D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: NDS
2 Capacity expressed in veh/hour of green
3 Accounts for the additional delay/loss time due to the Metro Gold Line train.

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INTERSECTION CAPACITY UTILIZATION

Magnolia Avenue @ Duarte Road

N-S St: Magnolia Avenue
E-W St: Duarte Road
Project: The Arroyo at Monrovia Station Project/1-18-4307-1
File: ICU4

Peak hr: PM
Annual Growth: 0.82%

Date: 1/21/2020
Date of Count: 2018
Projection Year: 2022

	2018 EXISTING TRAFFIC			2018 EXISTING WITH PROJECT				2018 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	6	0	0.004	0	6	0	0.004	0	6	0	0.004	0	0	6	0	0.004	0	6	0	0.004
NB Thru	4	1600	0.009 *	0	4	1600	0.009 *	0	4	1600	0.009 *	0	0	4	1600	0.009 *	0	4	1600	0.009 *
NB Right	4	0	0.000	0	4	0	0.000	0	4	0	0.000	0	0	4	0	0.000	0	4	0	0.000
SB Left	192	0	0.120 *	0	192	0	0.120 *	0	192	0	0.120 *	6	6	204	0	0.128 *	0	204	0	0.128 *
SB Thru	1	1600	0.121	0	1	1600	0.121	0	1	1600	0.121	0	0	1	1600	0.128	0	1	1600	0.128
SB Right	186	1600	0.116	0	186	1600	0.116	0	186	1600	0.116	6	2	194	1600	0.121	0	194	1600	0.121
EB Left	249	1600	0.156 *	6	255	1600	0.159 *	0	255	1600	0.159 *	8	23	280	1600	0.175 *	6	286	1600	0.179 *
EB Thru	710	3200	0.222	0	710	3200	0.222	0	710	3200	0.222	24	87	821	3200	0.257	0	821	3200	0.257
EB Right	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
WB Left	2	1600	0.001	0	2	1600	0.001	0	2	1600	0.001	0	0	2	1600	0.001	0	2	1600	0.001
WB Thru	522	3200	0.206 *	2	524	3200	0.206 *	0	524	3200	0.206 *	17	98	637	3200	0.247 *	2	639	3200	0.248 *
WB Right	136	0	0.000	0	136	0	0.000	0	136	0	0.000	5	13	154	0	0.000	0	154	0	0.000
Yellow Allowance			0.300 *				0.300 *				0.300 *					0.300 *				0.300 *
ICU			0.790				0.794				0.794					0.858				0.863
LOS			C				C				C					D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: NDS
2 Capacity expressed in veh/hour of green
3 Accounts for the additional delay/loss time due to the Metro Gold Line train.

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INTERSECTION CAPACITY UTILIZATION

Myrtle Avenue @ Pomona Avenue

N-S St: Myrtle Avenue
E-W St: Pomona Avenue
Project: The Arroyo at Monrovia Station Project/1-18-4307-1
File: ICU7

Peak hr: AM
Annual Growth: 0.82%

Date: 1/21/2020
Date of Count: 2018
Projection Year: 2022

	2018 EXISTING TRAFFIC			2018 EXISTING WITH PROJECT				2018 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	32	1600	0.020 *	0	32	1600	0.020 *	0	32	1600	0.020 *	1	19	52	1600	0.033 *	0	52	1600	0.033 *
NB Thru	452	3200	0.145	0	452	3200	0.145	0	452	3200	0.145	15	53	520	3200	0.166	0	520	3200	0.166
NB Right	12	0	0.000	0	12	0	0.000	0	12	0	0.000	0	0	12	0	0.000	0	12	0	0.000
SB Left	38	1600	0.024	0	38	1600	0.024	0	38	1600	0.024	1	0	39	1600	0.024	0	39	1600	0.024
SB Thru	646	3200	0.221 *	0	646	3200	0.219 *	0	646	3200	0.219 *	21	23	690	3200	0.247 *	0	690	3200	0.246 *
SB Right	60	0	0.000	-4	56	0	0.000	0	56	0	0.000	2	39	101	0	0.000	-4	97	0	0.000
EB Left	40	0	0.025 *	0	40	0	0.025	0	40	0	0.025	1	8	49	0	0.031	0	49	0	0.031
EB Thru	28	1600	0.068	4	32	1600	0.078 *	0	32	1600	0.078 *	1	17	46	1600	0.121 *	4	50	1600	0.131 *
EB Right	40	0	0.000	12	52	0	0.000	0	52	0	0.000	1	58	99	0	0.000	12	111	0	0.000
WB Left	14	0	0.009	0	14	0	0.009 *	0	14	0	0.009 *	0	0	14	0	0.009 *	0	14	0	0.009 *
WB Thru	47	1600	0.058 *	0	47	1600	0.058	0	47	1600	0.058	2	6	55	1600	0.064	0	55	1600	0.064
WB Right	32	0	0.000	0	32	0	0.000	0	32	0	0.000	1	0	33	0	0.000	0	33	0	0.000
Yellow Allowance [3]			0.300 *				0.300 *				0.300 *					0.300 *				0.300 *
ICU			0.624				0.626				0.626					0.710				0.718
LOS			B				B				B					C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: The Traffic Solution
2 Capacity expressed in veh/hour of green
3 Accounts for the additional delay/loss time due to the Metro Gold Line train.

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INTERSECTION CAPACITY UTILIZATION

Myrtle Avenue @ Pomona Avenue

N-S St: Myrtle Avenue
E-W St: Pomona Avenue
Project: The Arroyo at Monrovia Station Project/1-18-4307-1
File: ICU7

Peak hr: PM
Annual Growth: 0.82%

Date: 1/21/2020
Date of Count: 2018
Projection Year: 2022

	2018 EXISTING TRAFFIC			2018 EXISTING WITH PROJECT				2018 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	37	1600	0.023 *	8	45	1600	0.028 *	0	45	1600	0.028 *	1	43	81	1600	0.051 *	8	89	1600	0.056 *
NB Thru	615	3200	0.199	0	615	3200	0.199	0	615	3200	0.199	20	33	668	3200	0.216	0	668	3200	0.216
NB Right	22	0	0.000	0	22	0	0.000	0	22	0	0.000	1	0	23	0	0.000	0	23	0	0.000
SB Left	50	1600	0.031	0	50	1600	0.031	0	50	1600	0.031	2	0	52	1600	0.033	0	52	1600	0.033
SB Thru	745	3200	0.248 *	0	745	3200	0.258 *	0	745	3200	0.258 *	25	50	820	3200	0.313 *	0	820	3200	0.323 *
SB Right	50	0	0.000	30	80	0	0.000	0	80	0	0.000	2	130	182	0	0.000	30	212	0	0.000
EB Left	75	0	0.047	0	75	0	0.047	0	75	0	0.047	2	9	86	0	0.054	0	86	0	0.054
EB Thru	88	1600	0.144 *	1	89	1600	0.148 *	0	89	1600	0.148 *	3	12	103	1600	0.186 *	1	104	1600	0.190 *
EB Right	67	0	0.000	5	72	0	0.000	0	72	0	0.000	2	40	109	0	0.000	5	114	0	0.000
WB Left	30	0	0.019 *	0	30	0	0.019 *	0	30	0	0.019 *	1	0	31	0	0.019 *	0	31	0	0.019 *
WB Thru	36	1600	0.060	4	40	1600	0.063	0	40	1600	0.063	1	19	56	1600	0.074	4	60	1600	0.076
WB Right	30	0	0.000	0	30	0	0.000	0	30	0	0.000	1	0	31	0	0.000	0	31	0	0.000
Yellow Allowance			0.300 *				0.300 *				0.300 *					0.300 *				0.300 *
ICU			0.734				0.752				0.752					0.869				0.888
LOS			C				C				C					D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: The Traffic Solution
2 Capacity expressed in veh/hour of green
3 Accounts for the additional delay/loss time due to the Metro Gold Line train.

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INTERSECTION CAPACITY UTILIZATION

Myrtle Avenue @ Duarte Road

N-S St: Myrtle Avenue
E-W St: Duarte Road
Project: The Arroyo at Monrovia Station Project/1-18-4307-1
File: ICU8

Peak hr: AM
Annual Growth: 0.82%

Date: 1/21/2020
Date of Count: 2018
Projection Year: 2022

	2018 EXISTING TRAFFIC			2018 EXISTING WITH PROJECT				2018 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	130	1600	0.081 *	0	130	1600	0.081 *	0	130	1600	0.081 *	4	7	141	1600	0.088 *	0	141	1600	0.088 *
NB Thru	451	3200	0.156	0	451	3200	0.156	0	451	3200	0.156	15	16	482	3200	0.170	0	482	3200	0.170
NB Right	48	0	0.000	0	48	0	0.000	0	48	0	0.000	2	11	61	0	0.000	0	61	0	0.000
SB Left	32	1600	0.020	3	35	1600	0.022	0	35	1600	0.022	1	17	50	1600	0.031	3	53	1600	0.033
SB Thru	523	3200	0.212 *	4	527	3200	0.215 *	0	527	3200	0.215 *	17	32	572	3200	0.240 *	4	576	3200	0.243 *
SB Right	156	0	0.000	5	161	0	0.000	0	161	0	0.000	5	34	195	0	0.000	5	200	0	0.000
EB Left	122	1600	0.076 *	0	122	1600	0.076 *	0	122	1600	0.076 *	4	48	174	1600	0.109 *	0	174	1600	0.109 *
EB Thru	288	3200	0.126	0	288	3200	0.126	0	288	3200	0.126	10	63	361	3200	0.157	0	361	3200	0.157
EB Right	115	0	0.000	0	115	0	0.000	0	115	0	0.000	4	23	142	0	0.000	0	142	0	0.000
WB Left	55	1600	0.034	0	55	1600	0.034	0	55	1600	0.034	2	4	61	1600	0.038	0	61	1600	0.038
WB Thru	286	3200	0.098 *	0	286	3200	0.098 *	0	286	3200	0.098 *	9	26	321	3200	0.112 *	0	321	3200	0.112 *
WB Right	28	0	0.000	0	28	0	0.000	0	28	0	0.000	1	8	37	0	0.000	0	37	0	0.000
Yellow Allowance [3]			0.300 *				0.300 *				0.300 *					0.300 *				0.300 *
ICU			0.768				0.771				0.771					0.848				0.851
LOS			C				C				C					D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: The Traffic Solution
2 Capacity expressed in veh/hour of green
3 Accounts for the additional delay/loss time due to the Metro Gold Line train which crosses at the north leg of the intersection as cited in the Traffic Impact Analysis for 1625 Magnolia Avenue, prepared by LSA, May 2018.

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INTERSECTION CAPACITY UTILIZATION

Myrtle Avenue @ Duarte Road

N-S St: Myrtle Avenue
E-W St: Duarte Road
Project: The Arroyo at Monrovia Station Project/1-18-4307-1
File: ICU8

Peak hr: PM
Annual Growth: 0.82%

Date: 1/21/2020
Date of Count: 2018
Projection Year: 2022

	2018 EXISTING TRAFFIC			2018 EXISTING WITH PROJECT				2018 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	94	1600	0.059 *	0	94	1600	0.059 *	0	94	1600	0.059 *	3	24	121	1600	0.076 *	0	121	1600	0.076 *
NB Thru	434	3200	0.150	5	439	3200	0.152	0	439	3200	0.152	14	31	479	3200	0.166	5	484	3200	0.168
NB Right	46	0	0.000	0	46	0	0.000	0	46	0	0.000	2	5	53	0	0.000	0	53	0	0.000
SB Left	44	1600	0.028	1	45	1600	0.028	0	45	1600	0.028	1	12	57	1600	0.036	1	58	1600	0.036
SB Thru	618	3200	0.244 *	2	620	3200	0.246 *	0	620	3200	0.246 *	21	20	659	3200	0.277 *	2	661	3200	0.278 *
SB Right	164	0	0.000	2	166	0	0.000	0	166	0	0.000	5	59	228	0	0.000	2	230	0	0.000
EB Left	145	1600	0.091	0	145	1600	0.091	0	145	1600	0.091	5	26	176	1600	0.110	0	176	1600	0.110
EB Thru	471	3200	0.231 *	0	471	3200	0.231 *	0	471	3200	0.231 *	16	45	532	3200	0.257 *	0	532	3200	0.257 *
EB Right	267	0	0.000	0	267	0	0.000	0	267	0	0.000	9	14	290	0	0.000	0	290	0	0.000
WB Left	66	1600	0.041 *	0	66	1600	0.041 *	0	66	1600	0.041 *	2	11	79	1600	0.049 *	0	79	1600	0.049 *
WB Thru	313	3200	0.107	0	313	3200	0.108	0	313	3200	0.108	10	72	395	3200	0.138	0	395	3200	0.139
WB Right	28	0	0.000	3	31	0	0.000	0	31	0	0.000	1	18	47	0	0.000	3	50	0	0.000
Yellow Allowance [3]			0.300 *				0.300 *				0.300 *					0.300 *				0.300 *
ICU			0.875				0.876				0.876					0.959				0.960
LOS			D				D				D					E				E

** Key conflicting movement as a part of ICU*
1 Counts conducted by: The Traffic Solution
2 Capacity expressed in veh/hour of green
3 Accounts for the additional delay/loss time due to the Metro Gold Line train which crosses at the north leg of the intersection as cited in the Traffic Impact Analysis for 1625 Magnolia Avenue, prepared by LSA, May 2018.

L6.5 Because of the above Trip Generation and Rail Crossing Considerations the DEIR Has Understated the Project's Impacts on Study Intersections. Because the necessary adjustments to trip generation, trip discounting and ICU computation inherent in the above discussions are large enough to cause intersections previously disclosed to be in LOS D or E to become in E or F respectively and the Project's share would rise beyond significance thresholds, the entire analysis must be redone and the Project's impacts disclosed in good faith.

Response. The commenter asserts that study intersections that are reported as LOS D or E should be categorized as LOS E or F under the Project, if the traffic impact analysis was redone following the recommendations by the commenter regarding trip generation rates, trip reductions, and revised ICU computations to account for rail crossing delays.

The commenter does not recalculate traffic impacts on intersection capacity using the commenter's assumptions and does not refer to any particular study intersections in the comment. Therefore, the commenter provides no substantial evidence that study intersections should be LOS E or F.

In addition, pursuant to Response to Comments L6.2 through L6.4 above, the City based the input parameters and methodology for conducting the traffic impact analysis for the proposed Project on substantial evidence. As discussed in Response to Comment L6.4, LLG and the City also conservatively conducted a supplemental analysis showing the effects of delays at intersections near rail crossings at Intersection No. 4: Magnolia Avenue/Duarte Road and Intersection No. 7: Myrtle Avenue/Pomona Avenue (albeit they are at a farther distance away from rail crossings than Intersection No. 8: Myrtle Avenue/Duarte Road); and while the LOS was forecast to degrade to LOS D operations during certain peak hours as a result of this supplemental and conservative analysis, the City's established significance threshold at LOS D (i.e., a project-related increase in the volume-to-capacity ratio of 0.030 or greater) was not met. Therefore, the City has determined that no further analysis is required or warranted and the findings of the Draft EIR remain valid.

L6.6 The DEIR Only Analyzed Queuing at Study Intersections Involving Freeway Ramp Junctions. Analysis of Queues At Intersections Nearest the Rail Crossings Is Critical. The queuing analysis only considers the intersections of Myrtle with Evergreen and Myrtle with Central and the related narrative only considers whether the queuing extends excessively onto the freeway ramps. However, the fact that queuing at intersections near the rail crossings may be critical indicates that queues at these intersections should be analyzed as well, also reflecting the trip generation, trip discounting and capacity adjustments due to rail gate down time discussed above.

Response. The commenter states that rail crossings have the potential to adversely affect queuing at freeway on-ramps and off-ramps as well, and this impact was not accounted for in the EIR. The Transportation Impact Study for the EIR, contained in Appendix J of the EIR, does factor in potential delays associated with rail crossings into the impact analysis. Specifically, the delay is factored into the yellow clearance interval at Intersection No. 8 (Myrtle Avenue/Duarte Road).

As discussed in Responses to Comments L6.4 and L6.5, the Transportation Impact Study (contained as *Appendix J* of the Draft EIR) accounts for delays at rail crossings for intersections nearest to rail crossings. In addition, a supplemental analysis is provided in the Response to Comment L6.4 to evaluate the impacts of delays at the rail crossings for intersections that are farther away from the rail crossings. Therefore, as discussed under Responses to Comments L6.4 and L6.5, the City has determined that no further analysis is required or warranted and the findings of the Draft EIR remain valid.

L6.7 Lack of Consideration of Transportation Network Companies (Ridesharing) Effects on Tripmaking and Mode Choice. The rise of Transportation Network Companies (ridesharing operations like Uber and Lyft) has dramatically changed the way people travel in urban areas in recent years. Recent studies have found that TNCs have cut into transit, walk and bike shares of trip-making and caused induced trips (trips that would not otherwise be made) and, due to the recirculation to access new rides and careless loading and unloading, caused an approximate doubling in congestion and vehicle miles traveled (VMT) over that which would be ordinarily be accounted for by land use development in dense urban areas. Also, each individual trip made by TNC causes generation of an extra trip due to the approach trip of the driver. The DEIR has made no effort to estimate traffic due to TNC use due to the Project. This is a critical flaw.

Response. The commenter states that trips associated with possible usage of Transportation Network Companies (TNCs) (i.e., Uber and Lyft) by new residents were not accounted for in evaluating traffic impacts associated with the Project.

ITE's 10th Edition of the *Trip Generation Manual* now has published trip generation rates that apply to land uses within urban areas, similar to the City of Monrovia, where TNC vehicle use is prevalent. The ITE *Trip Generation Manual* and the corresponding trip generation rates utilized for the traffic impact analysis for the Project (see Appendix J of the EIR) were derived based on actual driveway traffic counts conducted at similar sites and the driveway counts included all vehicle types, including TNC and/or taxis.

The City of Monrovia's Metro Gold Line light rail transit station was constructed and operational by Spring of 2016 (March 2016), well in advance of the baseline traffic counts incorporated into the Draft EIR Transportation Impact Study (refer to page 19 of *Appendix J* of the Draft EIR). The light rail station was constructed with a major/large cul-de-sac at the southerly terminus of Primrose Avenue and is utilized as a TNC drop-off/pick-up zone. Baseline intersection traffic counts used for the traffic impact analysis for the Project were obtained in Fall 2016 at three locations, in early-mid 2017 at three locations, and in Spring and Fall 2018 at two locations; all non-2018 manual traffic counts were also adjusted upwards to reflect 2018 conditions. Thus, the Draft EIR Transportation Impact Study already includes counts of TNC and/or taxis that are generated during peak hours to/from the existing light rail station and other nearby uses, as well as those TNC trips that are circulating the City's street system waiting for a call.

Use of TNCs is already factored into ITE's trip generation rates used to calculate trips associated with the Project. In addition, TNC use in the area is already factored into baseline traffic counts. Therefore, TNC use is already factored into the traffic impact analysis. The City has determined that this issue has already been addressed in the Transportation Impact Study contained in Appendix J of the EIR and that no further analysis is required or warranted and the findings of the Draft EIR remain valid.

L6.8 Indoor air quality (IAQ) directly impacts the comfort and health of building occupants, and the achievement of acceptable IAQ in newly constructed and renovated buildings is a well recognized design objective. For example, IAQ is addressed by major high-performance building rating systems and building codes (California Building Standards Commission, 2014; USGBC, 2014). Indoor air quality in homes is particularly important because occupants, on average, spend approximately ninety percent of their time indoors with the majority of this time spent at home (EPA, 2011). Some segments of the population that are most susceptible to the effects of poor IAQ, such as the very young and the elderly, occupy their homes almost continuously. Additionally, an increasing number of adults are working from home at least some of the time

during the workweek. Indoor air quality also is a serious concern for workers in hotels, offices and other business establishments.

The concentrations of many air pollutants often are elevated in homes and other buildings relative to outdoor air because many of the materials and products used indoors contain and release a variety of pollutants to air (Hodgson et al., 2002; Offermann and Hodgson, 2011). With respect to indoor air contaminants for which inhalation is the primary route of exposure, the critical design and construction parameters are the provision of adequate ventilation and the reduction of indoor sources of the contaminants.

Response. The City acknowledges the information provided by the commenter. This information does not contain any comments on the Project, nor does it comment on the adequacy of the EIR. The information will be included as part of the record and made available to the decision makers prior to a final decision on the Project. No further response is required

L6.9 Indoor Formaldehyde Concentrations Impact. In the California New Home Study (CNHS) of 108 new homes in California (Offermann, 2009), 25 air contaminants were measured, and formaldehyde was identified as the indoor air contaminant with the highest cancer risk as determined by the California Proposition 65 Safe Harbor Levels (OEHHA, 2017a), No Significant Risk Levels (NSRL) for carcinogens. The NSRL is the daily intake level calculated to result in one excess case of cancer in an exposed population of 100,000 (i.e., ten in one million cancer risk) and for formaldehyde is 40 µg/day. The NSRL concentration of formaldehyde that represents a daily dose of 40 µg is 2 µg/m^3, assuming a continuous 24-hour exposure, a total daily inhaled air volume of 20 m^3, and 100% absorption by the respiratory system. All of the CNHS homes exceeded this NSRL concentration of 2 µg/m^3. The median indoor formaldehyde concentration was 36 µg/m^3, and ranged from 4.8 to 136 µg/m^3, which corresponds to a median exceedance of the 2 µg/m^3 NSRL concentration of 18 and a range of 2.3 to 68.

Therefore, the cancer risk of a resident living in a California home with the median indoor formaldehyde concentration of 36 µg/m^3, is 180 per million as a result of formaldehyde alone. The CEQA significance threshold for airborne cancer risk is 10 per million, as established by the South Coast Air Quality Management District (SCAQMD, 2015).

Response. The commenter makes no specific comments on the Project, not does commenter make any comment on the adequacy of the EIR. The commenter summarizes a study (the California New Homes Study published in 2009) that measured indoor air quality in 108 homes constructed between 2002 and 2004, and found that measured formaldehyde concentrations in these homes ranged from 4.8 to 136 micrograms per cubic meter (µg/m^3), with a median concentration of 36 (µg/m^3).

Formaldehyde is a colorless, volatile, flammable gas at room temperature and pressure. It has a pungent, highly irritating, suffocating odor and may cause a burning sensation to the eyes, nose, and lungs at high concentrations. In 1988, the State listed formaldehyde as a human carcinogen pursuant to the Safe Drinking Water and Toxic Enforcement Act of 1986 (i.e., Proposition 65). In 1992, the California Air Resources Board designated formaldehyde as a toxic air contaminant (TAC). Composite wood products used in building construction, such as hardwood plywood, particle board, and medium density fiberboard, often contain formaldehyde resins or glues used to bond wood materials together (CARB, 2007 pg 15).[28] Over time, the resins in composite wood

[28] CARB 2007. *Proposed Airborne Toxic Control Measure to Reduce Formaldehyde from Composite Wood Products Staff Report: Initial Statement of Reasons for Proposed Rulemaking.* Sacramento, CA. March 2007.

products may off-gas (i.e., emit) or degrade, releasing formaldehyde into the indoor environments until air circulation occurs and emissions are vented to outside, ambient air (CARB, 2007 pp. 16-17).

The commenter equates the median concentration of formaldehyde detected in the study to a carcinogenic risk value of 180 excess cancer cases per million population for all residents in California homes where median concentrations of 36 µg/m^3 exist, which exceeds health risk significance thresholds recommended for use by the South Coast Air Quality Management District (SCAQMD). However, the commenter provided no supporting calculations for this risk estimate, including an exposure assessment nor an evaluation of the toxicity of formaldehyde. The commenter provides no discussion of the methods or locations of measurement of formaldehyde in the study and provides no discussion of the uncertainty in the assumptions or calculations of a human health risk assessment.

According to CARB, formaldehyde emissions from composite wood products are affected by initial product-specific formaldehyde emission rates, the number and total surface area of formaldehyde-emitting products, the rate of decrease in product-specific formaldehyde emissions, and dwelling-specific air exchange rates (CARB, 2007 pg. 155). The risk estimates provided in the comment appear to be generic risk estimates, based on outdated formaldehyde emission rates, air turnover requirements, and generic exposure assumptions, and are not Project specific.

Moreover, the study cited in this comment assesses homes that were construction prior to the California Air Resources Board's (CARB's) adoption of the Airborne Toxic Control Measure (ATCM) to Reduce Formaldehyde Emissions from Composite Wood Products (17 CCR Section 93120 *et. seq.*), commonly known as the "Composite Wood Products Regulation," which establishes stringent emission performance standards on a variety of construction products collectively known as composite wood products, including hardwood plywood, particleboard, and medium-density fiberboard. Implementation of this regulation reduces public exposure to formaldehyde emissions associated with new home construction by limiting off-gassing and the release of formaldehyde into the environment. The Composite Wood Products Regulation was adopted by CARB in 2007 and established two phases of emissions standards, an initial Phase 1 and a stricter Phase 2 that requires that all finished composite wood products made available for sale in California comply with ATCM emissions standards. Regulated products that complied with the Phase 1 standards were available for sale in California until December 31, 2013. As of January 1, 2014, however, all composite wood products available for sale in California must comply with the ATCM's stricter Phase 2 standards. In addition, effective March 2019,[29] the U.S. EPA also now requires all composite wood products to meet emissions standards that are nearly identical to California's Phase 2 standards. The cited study also predates the California Energy Commission's adoption of the 2019 California Building Code's ASHRAE 62.2 ventilation and air filtration requirements, which went into effect on January 1, 2020, apply to all multi-family residential structures regardless of building height, and are intended to protect public health by providing a high level of indoor air quality (IAQ). The Project will be required to comply with all of these regulations.

In short, the cited study is not substantial evidence that the Project will cause an overall health risk of 180 excess cancer cases per million associated with 36 µg/m^3 of formaldehyde, as this comment implies. Moreover, neither this comment or the citied study provide substantial evidence supporting this comment's implied claim that results from the 2009 study can be extrapolated to all California homes, much less California homes constructed after January 2020.

[29] CARB 2019. *Comparison of Key Requirements of CARB and U.S. EPA TSCA Title VI Regulations to Reduce Formaldehyde Emissions from Composite Wood Products.* May 2019.

L6.10 Besides being a human carcinogen, formaldehyde is also a potent eye and respiratory irritant. In the CNHS, many homes exceeded the non-cancer reference exposure levels (RELs) prescribed by California Office of Environmental Health Hazard Assessment (OEHHA, 2017b). The percentage of homes exceeding the RELs ranged from 98% for the Chronic REL of 9 µg/m3 to 28% for the Acute REL of 55 µg/m3.

Response. The commenter makes no specific comments on the Project or provide any comments regarding the adequacy of the EIR. This comment implies that the CNHS demonstrates that the Project's residential units would exceed the non-cancer reference exposure levels (RELs) prescribed by California Office of Environmental Health Hazard Assessment. However, the CNHS is not substantial evidence for such claim for the reasons explained in response to comment L6.9. Moreover, this comment provides no risk calculations for non-carcinogenic health risk including an exposure assessment or evaluation of the toxicity of formaldehyde, nor does it calculate a hazard index for non-carcinogenic health risk. In addition, the commenter provides no discussion of the methods or locations of measurement of formaldehyde in the study and provides no discussion of the uncertainty in the assumptions or calculations of a human health risk assessment. There is no substantial evidence to extrapolate the results from the 2009 study to all California homes, much less the residential units proposed by the Project.

L6.11 The primary source of formaldehyde indoors is composite wood products manufactured with urea-formaldehyde resins, such as plywood, medium density fiberboard, and particleboard. These materials are commonly used in building construction for flooring, cabinetry, baseboards, window shades, interior doors, and window and door trims.

Response. The commenter makes no specific comments on the Project, nor does this comment question the adequacy of the EIR. The commenter provides information on the potential source of formaldehyde in buildings. The City concurs with this general information regarding formaldehyde.

L6.12 In January 2009, the California Air Resources Board (CARB) adopted an airborne toxics control measure (ATCM) to reduce formaldehyde emissions from composite wood products, including hardwood plywood, particleboard, medium density fiberboard, and also furniture and other finished products made with these wood products (California Air Resources Board 2009). While this formaldehyde ATCM has resulted in reduced emissions from composite wood products sold in California, they do not preclude that homes built with composite wood products meeting the CARB ATCM will have indoor formaldehyde concentrations that are below cancer and non-cancer exposure guidelines.

Response. The commenter makes no specific comments on the Project, nor does this comment question the adequacy of the EIR. The ATCM cited in this comment is a reference to the Composite Wood Products Regulation described in response to comment L6.9. The commenter concedes that the formaldehyde ATCM has resulted in reduced emissions from composite wood products sold in California but claims that the ATCM is not protective enough and could result in excess human health risks above SCAQMD health risk thresholds. However, the commenter does not provide any substantial evidence in support of this claim. It is presumed that the commenter is referring to the 2009 California New Homes Study discussed in comment L6.9. However, as discussed in response to comment L6.9, that study is outdated and does not constitute substantial evidence that support this comment's claim.

L6.13 A follow up study to the California New Home Study (CNHS) was conducted in 2016-2018 (Chan et. al., 2018), and found that the median indoor formaldehyde in new homes built after the

2009 CARB formaldehyde ATCM had lower indoor formaldehyde concentrations, with a median indoor concentrations of 25 µg/m^3 as compared to a median of 36 µg/m^3 found in the 2007 CNHS.

Thus, while new homes built after the 2009 CARB formaldehyde ATCM have a 30% lower median indoor formaldehyde concentration and cancer risk, the median lifetime cancer risk is still 125 per million for homes built with CARB compliant composite wood products, which is more than 12 times the OEHHA 10 in a million cancer risk threshold (OEHHA, 2017a).

Response. The commenter makes no specific comments on the Project, nor does this comment concern the adequacy of the EIR. The commenter refers to a follow-up study to the 2009 California New Home Study, conducted between 2016 and 2018, and attributes lower median indoor concentrations of formaldehyde detected in the follow-up study, to CARB's 2009 ATCM for formaldehyde.

The second study, conducted from 2016 to 2018, evaluated homes constructed after 2009 and found median formaldehyde concentrations reduced by 30% compared to the first study. While attempting to confirm the information in these reports, the City's CEQA consultant, MIG, Inc., searched for, but could not obtain, the second study referenced by the commenter (Chan et. al., 2018); however, a similar paper by Chan et. al. (2019) comparing the results of the 2009 California New Homes Study against more recent home construction (built between 2011 and 2017) found formaldehyde concentrations in newer homes approximately 38% lower than the 2009 California New Homes Study (Chan et. al., 2019 pp. 69-70).[30] Mean concentrations were even less – 45% lower than the 2009 study (Chan et al., 2019 pp. 69 – 70). The basis for the reduction in formaldehyde concentrations is likely due to the CARB's Airborne Toxic Control Measure (ATCM) to Reduce Formaldehyde Emissions from Composite Wood Products (17 CCR Section 93120 ***et. seq.***). Further, in the 2019 study, only 70% of the houses were constructed in 2014 or later and thus after the Phase 2 requirements became law. Thus, emissions from homes built under the Project would be expected to be even lower as they will all be built with CARB Phase 2 compliant materials.
Moreover, the commenter provides no discussion of the methods or locations for sampling of formaldehyde in the follow-up study, nor discusses details of the homes sampled or sample size. There is no statistical comparison of the results of the 2009 study versus the follow-up study. Therefore, the commenter's conclusions are speculative whether CARB's 2009 ATCM for formaldehyde was the cause the reduced median formaldehyde concentration.

In addition, the commenter concludes that the median indoor formaldehyde concentration of 25 µg/m^3 results in a median lifetime cancer risk of 125 cancer cases per million in all homes built with CARB compliant wood products. Similar to comment L6.9, the commenter provided no supporting calculations for this risk estimate, including an exposure assessment nor an evaluation of the toxicity of formaldehyde. The commenter provides no discussion of the methods or locations of measurement of formaldehyde in the study and provides no discussion of the uncertainty in the assumptions or calculations of a human health risk assessment. Nor does the commenter take into account the public health benefits associated with the 2019 California Building Code's ASHRAE 62.2 ventilation and air filtration requirements that will apply to the Project. Therefore, no substantial evidence is presented to justify the commenter's estimate of an overall health risk of 120 excess cancer cases per million associated with 25 µg/m^3 of formaldehyde. Again, there is no substantial evidence to support the commenter's claims.

[30] Chan et. al. 2019. Lawrence Berkeley National Laboratory. *Ventilation and Indoor Air Quality in New California Homes with Gas Appliances and Mechanical Ventilation.* Energy Technologies Area. Livermore, CA. February 2019 < https://escholarship.org/uc/item/44g399sb>

Finally, it is probable that most composite wood products evaluated in the Chan et al. study were subject only to Phase 1 limits under CARB's ATCM for formaldehyde, rather than Phase 2 limits which are now in effect, because of the timing of the study. Specifically, the study started in 2016 while Phase 2 standards had just recently coming into effect (2014). Therefore, it is likelythat some of the houses in the study were not in compliance with Phase 2 standards yet. The commenter does not discuss the likelihood of this scenario.

L6.14 With respect to this project, the buildings at the Arroyo at Monrovia Station project in Monrovia, CA include residential and commercial spaces.

The residential occupants will potentially have continuous exposure (e.g. 24 hours per day, 52 weeks per year). These exposures are anticipated to result in significant cancer risks resulting from exposures to formaldehyde released by the building materials and furnishing commonly found in residential construction.

Because these residences will be constructed with CARB Phase 2 Formaldehyde ATCM materials, and be ventilated with the minimum code required amount of outdoor air, the indoor residential formaldehyde concentrations are likely similar to those concentrations observed in residences built with CARB Phase 2 Formaldehyde ATCM materials, which is a median of 25 $\mu g/m^3$.

Response. The commenter claims the following regarding the Project:

a) Residents of the Project will have continuous exposure (24 hours per day, 52 weeks per year) to formaldehyde emitted from wood products in the new buildings;
b) Formaldehyde concentrations in the new buildings constructed under the Project are likely similar to 25 $\mu g/m^3$ detected in the Chan et al. study; and
c) Resident exposure to formaldehyde from wood products in new buildings under the Project will result in a significant cancer risk.

a) The assumption of continuous, or near continuous, exposure to constant formaldehyde emissions does not represent actual conditions, nor recommended State guidance for performing health risk assessments. For example, the Office of Environmental Health Hazard Assessment's Air Toxic's Hot Spots Guidance Manual for the Preparation of Health Risk Assessments (OEHHA, 2015) recommends a yearly exposure frequency value of 0.96 (to represent two weeks spent away from home each year) and a fraction of time at home (FAH) value (to account for time spent away from home each day) that is at most 0.85.[31] Thus, OEHHA's current risk assessment guidelines do not assume continuous exposure to air pollutants. Nor are formaldehyde emission rates constant. Rather, as composite wood products age, formaldehyde emissions decrease over time (CARB, 2007 pg. 18). This means that exposure to formaldehyde emissions would be reduced over time. The commenters claim of continuous exposure to formaldehyde is not accurate and inconsistent with State guidance for performing health risk assessments.

b) As discussed in response to comment L6.13 above, the commenter provides no discussion of the methods or locations for sampling of formaldehyde in the Chan et al. follow-up study referenced by the commenter, nor discusses details of the homes sampled or sample size. Also, it is probable that most composite wood products evaluated in the Chan et al. study were subject only to Phase 1 limits under CARB's ATCM for formaldehyde, rather than Phase 2 limits which are now in effect. Therefore, it is likely that wood products used today would result in lower

[31] OEHHA 2015. *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Sacramento, CA. February 2015.

concentrations of formaldehyde than what were detected during the Chan et al. study. Therefore, the commenter's conclusions are speculative whether all new California homes would have formaldehyde concentrations of 25 µg/m^3. Moreover, this comment fails to account for the public health benefits associated wtih the 2019 California Building Code's ASHRAE 62.2 ventilation and air filtration requirements that will apply to the Project, instead dismissing them as "minimum code" requirements with no analyiss. There is no substantial evidence to support extrapolation of the results of this study to the new buildings constructed under the Project.

c) Finally, the commenter concludes that the median indoor formaldehyde concentration of 25 µg/m^3 results in a median lifetime cancer risk of 125 cancer cases per million in all homes built with CARB compliant wood products. Similar to comment L6.9, the commenter provides no supporting calculations for this risk estimate, including an exposure assessment nor an evaluation of the toxicity of formaldehyde. The commenter provides no discussion of the methods or locations of measurement of formaldehyde in the study and provides no discussion of the uncertainty in the assumptions or calculations of a human health risk assessment. Again, there is no substantial evidence to support the conclusion that CARB compliant wood products would result in excess cancer risk (or non-carcinogenic risk) in excess of SCAQMD thresholds. There also is no substantial evidence that results of the Chan et al. study could be extrapolated to conditions under the proposed Project.

L6.15 Assuming that the residential occupants inhale 20 m^3 of air per day, the average 70-year lifetime formaldehyde daily dose is 500 µg/day for continuous exposure in the residences. This exposure represents a cancer risk of 125 per million, which is more than 12 times the South Coast Air Quality Management District CEQA cancer risk of 10 per million (SCAQMD, 2007). For occupants that do not have continuous exposure, the cancer risk will be proportionally less but still substantially over the SCAQMD CEQA cancer risk of 10 per million (e.g. for 12/hour/day occupancy, more than 6 times the SCAQMD CEQA cancer risk of 10 per million).

Response. The commenter insinuates that residents from the Project would be exposed to a daily dose of 500 µg/day of formaldehyde which would result in a cancer risk of 125 per million. The commenter claims that even if exposure was limited to 12 hours per day, cancer risk would remain at 10 per million, which is the SCAQMD threshold.

Again, the commenter provides no risk calculations, including an exposure assessment and evaluation of toxicity, or discussion of uncertainty in health risk assessments, to substantiate the conclusions regarding the potential dose of formaldehyde (i.e., 500 µg/day) in the new buildings as well as risk. Finally, the commenter conducts a qualitative evaluation of the effects of reducing exposure durations, incorrectly assuming that there is a linear relationship between exposure duration and risk. For example, in a health risk assessment, the proportion of time spent in a house is different between children versus adults. This is one of the parameters in a health risk assessment not accounted for by the commenter. Therefore, no substantial evidence is presented to support the conclusion that the Project would involve elevated health risk due to exposure to formaldehyde.

In addition, CARB set both the Phase 1 and Phase 2 ATCM standards to ensure adequate protection of human health and conducted a detailed assessment and calculations to establish this standard (CARB's Initial Statement of Reasons for Proposed Rulemaking, 2007, https://ww2.arb.ca.gov/resources/documents/atcm-rulemaking-documents, page ES-6). In CARB's Initial Statement of Reasons for Proposed Rulemaking regarding formaldehyde (CARB 2007), they state "To estimate the reduction in cancer risk resulting from the implementation of the proposed Phase 1 and Phase 2 standards, CARB calculated the potential cancer risk from total formaldehyde exposures to current-average and current-elevated formaldehyde

concentrations. In the two scenarios, average or elevated outdoor, indoor, and in-vehicle formaldehyde concentrations were obtained from the literature to estimate daily time-weighted average and elevated exposures, respectively. Based on projected decreases in daily average or elevated formaldehyde exposure, formaldehyde-related cancer risk in adults would be reduced by 35 to 97 excess cancers per million, over a 70-year lifetime exposure. In children, it would result in a reduction of 9 to 26 excess cancers per million, based on a 9-year childhood exposure. Risk reductions would be far greater for those living in new or nearly new homes, where formaldehyde levels can be significantly higher."

Furthermore, on December 12, 2016, the United States Environmental Protection Agency (EPA) published in the Federal Register a final rule to reduce exposure to formaldehyde emissions from certain wood products produced domestically or imported into the United States (40 Code of Federal Regulations [CFR] Part 770). Specifically, EPA issued a final rule to implement the Formaldehyde Standards for Composite Wood Products Act, which added Title VI to the Toxic Substances Control Act (TSCA). The purpose of TSCA Title VI is to reduce formaldehyde emissions from composite wood products, which will reduce exposures to formaldehyde and result in benefits from avoided adverse health effects. EPA worked with the California Air Resources Board (CARB) to help ensure the final national rule was consistent with California's requirements for similar composite wood products. EPA's Rule Summary can be found here:

https://www.epa.gov/formaldehyde/formaldehyde-emission-standards-composite-wood-products

In summary, EPA states "The Formaldehyde Standards for Composite Wood Products Act of 2010 established emission standards for formaldehyde from composite wood products and directed EPA to finalize a rule on implementing and enforcing a number of provisions covering composite wood products.

As of June 1, 2018, and until March 22, 2019, composite wood products sold, supplied, offered for sale, manufactured, or imported in the United States were required to be labeled as CARB ATCM Phase II or TSCA Title VI compliant. After March 22, 2019, composite wood products must be labeled as TSCA Title VI compliant. These products include: hardwood plywood, medium-density fiberboard, and particleboard, as well as household and other finished goods containing these products.

By including provisions for laminated products, product-testing requirements, labeling, recordkeeping, and import certification, the final rule ensures that hardwood plywood, medium-density fiberboard, and particleboard products sold, supplied, offered for sale, imported to, or manufactured in the United States are in compliance with the emission standards.

The final rule also established a third-party certification program for laboratory testing and oversight of formaldehyde emissions from manufactured and/or imported composite wood products."

The rule also states "The requirements in this final rule are consistent, to the extent EPA deemed appropriate and practical considering TSCA Title VI, with the requirements currently in effect in California under the California Air Resources Board's (CARB) Air Toxics Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products (ATCM)."

The proposed Project would be constructed beginning in 2020 at the earliest, meaning that all building construction materials would be fully compliant with CARB's Phase 2 regulations for

formaldehyde, which further reduce formaldehyde emissions below Phase 1 requirements by approximately 37% to 50%, depending on the material. The proposed Project would also be subject to 2019 building code requirements for indoor air ventilation, which exceed the 2008 building requirements that applied to homes in the studies referenced by the commenter. The 2019 building code requirements improve ventilation, indoor air quality, and air filtration systems, and the 2019 Cal Green Building Standards Code sets forth volatile organic compound (VOC) limits for paints, coatings, etc. and standards for carpets and composite wood products. These requirements are specifically intended to promote healthy places to live and work.

L6.16 The employees of the commercial spaces are expected to experience significant indoor exposures (e.g., 40 hours per week, 50 weeks per year). These exposures for employees are anticipated to result in significant cancer risks resulting from exposures to formaldehyde released by the building materials and furnishing commonly found in offices, warehouses, residences and hotels.

Because these commercial will be constructed with CARB Phase 2 Formaldehyde ATCM materials, and be ventilated with the minimum code required amount of outdoor air, the indoor warehouse formaldehyde concentrations are likely similar to those concentrations observed in residences built with CARB Phase 2 Formaldehyde ATCM materials, which is a median of 25 $\mu g/m^3$.

Assuming that the commercial space employees work 8 hours per day and inhale 20 m^3 of air per day, the formaldehyde dose per work-day at the offices is 167 µg/day.

Assuming that the commercial space employees work 5 days per week and 50 weeks per year for 45 years (start at age 20 and retire at age 65) the average 70-year lifetime formaldehyde daily dose is 73.6 µg/day.

This is 1.84 times the NSRL (OEHHA, 2017a) of 40 µg/day and represents a cancer risk of 18.4 per million, which exceeds the CEQA cancer risk of 10 per million. This impact should be analyzed in an environmental impact report ("EIR"), and the agency should impose all feasible mitigation measures to reduce this impact. Several feasible mitigation measures are discussed below and these and other measures should be analyzed in an EIR.

Response. The commenter claims the following regarding the Project:

a) Formaldehyde concentrations in the new buildings constructed under the Project are likely similar to 25 $\mu g/m^3$ detected in the Chan et al. study;
b) Employees would experience a dose of formaldehyde at 167 µg/day, based upon a breathing rate and hours of exposure per day; and
c) Exposure to formaldehyde for employees would exceed OEHHA's No Significant Risk Levels (NSRL) of 40 µg/day and result in a cancer risk of 18.4 per million.

a) As discussed in response to comment L6.13 and L6.15 above, the commenter provides no discussion of the methods or locations for sampling of formaldehyde in the Chan et al. follow-up study referenced by the commenter, nor discusses details of the homes sampled or sample size. Also, it is probable that most composite wood products evaluated in the Chan et al. study were subject only to Phase 1 limits under CARB's ATCM for formaldehyde, rather than Phase 2 limits which are now in effect. Therefore, it is likely that wood products used today would result in lower concentrations of formaldehyde than what were detected during the Chan et al. study. Therefore, the commenter's conclusions are speculative whether all new California homes would have

formaldehyde concentrations of 25 µg/m^3. There is no substantial evidence to support extrapolation of the results of this study to the new buildings constructed under the Project.

b) The commenter extrapolates a dose of formaldehyde based upon a breathing rate and exposure duration. However, the commenter does not factor in the effects of ventilation and does not provide substantial evidence for the exposure concentration of formaldehyde (as discussed above in part a of the response). The commenter provides no calculation to support the reported dose. Therefore, there is no substantial evidence that employees would be exposed to the dose reported by the commenter.

c) The commenter claims that formaldehyde in new buildings under the Project would result in an exceedance of OEHHA's NSRL. However, the commenter provides no calculations to provide substantial evidence for the reported exposure concentration and dose, as discussed in parts a and b of the response above. In addition, the NSRL is applicable to receptors experience lifetime exposures. Therefore, comparison with this threshold would be most applicable for residents potentially exposed throughout their entire life; it is unlikely that an employee would work their entire life at the Project site. Finally, the commenter provides no risk calculations to substantiate a cancer risk of 18.4 per million for employees, including an exposure assessment and evaluation of toxicity. The commenter provides no summary of the uncertainty in health risk assessments.

Therefore, the commenter provides no substantial evidence that formaldehyde in wood products associated with new buildings under the Project would pose a significant health risk in excess of SCAQMD standards for employees. CARB's Phase 2 standards for formaldehyde in wood products have been developed to be adequately protective of residents and employees. New buildings under the Project will comply with Phase 2 standards for formaldehyde. New buildings would also be ventilated pursuant to California Building Code requirements. Therefore, the City has determined that no further analysis is required or warranted, no new mitigation measures are required, and the findings of the Draft EIR remain valid.

L6.17 While measurements of the indoor concentrations of formaldehyde in residences built with CARB Phase 2 Formaldehyde ATCM materials (Chan et. al., 2018), indicate that indoor formaldehyde concentrations in buildings built with similar materials (e.g. hotels, residences, offices, warehouses, schools) will pose cancer risks in excess of the CEQA cancer risk of 10 per million, a determination of the cancer risk that is specific to this project and the materials used to construct these buildings can and should be conducted prior to completion of the environmental review.

Response. The commenter cites two past studies in 2009 and a follow-up study by Chan et al. in 2018 claiming that wood products in new buildings constructed in accordance with CARB's Phase 2 ATCM standards for formaldehyde are not protective enough of human health and continue to result in cancer risk in excess of the SCAQMD's threshold of 10 cancer cases per million. However, as discussed in responses to comments L6.8 through L6.16, the commenter provides no risk calculations, no exposure assessment, no evaluation of toxicity, and no description of the studies' details, such as measurement methods and locations, to substantiate this claim. The commenter fails to account for ventilation, exposure duration, the dissipation of formaldehyde emissions off wood products over time, the potency of formaldehyde in gaseous form, and the uncertainty of health risk assessment calculations in determining the effects on human health populations.

CARB's Phase 2 standards for formaldehyde in wood products have been developed to be adequately protective of residents and employees. New buildings under the Project will comply with Phase 2 standards for formaldehyde. New buildings would also be ventilated pursuant to

California Building Code requirements. Therefore, the City has determined that no further analysis is required or warranted, no new mitigation measures are required, and the findings of the Draft EIR remain valid.

L6.18 The following describes a method that should be used prior to construction in the environmental review under CEQA, for determining whether the indoor concentrations resulting from the formaldehyde emissions of the specific building materials/furnishings selected for the building exceed cancer and non-cancer guidelines. Such a design analyses can be used to identify those materials/furnishings prior to the completion of the City's CEQA review and project approval, that have formaldehyde emission rates that contribute to indoor concentrations that exceed cancer and non-cancer guidelines, so that alternative lower emitting materials/furnishings may be selected and/or higher minimum outdoor air ventilation rates can be increased to achieve acceptable indoor concentrations and incorporated as mitigation measures for this project.

Pre-Construction Building Material/Furnishing Formaldehyde Emissions Assessment.

This formaldehyde emissions assessment should be used in the environmental review under CEQA to assess the indoor formaldehyde concentrations from the proposed loading of building materials/furnishings, the area-specific formaldehyde emission rate data for building materials/furnishings, and the design minimum outdoor air ventilation rates. This assessment allows the applicant (and the City) to determine before the conclusion of the environmental review process and the building materials/furnishings are specified, purchased, and installed if the total chemical emissions will exceed cancer and non-cancer guidelines, and if so, allow for changes in the selection of specific material/furnishings and/or the design minimum outdoor air ventilations rates such that cancer and non-cancer guidelines are not exceeded.

1.) Define Indoor Air Quality Zones. Divide the building into separate indoor air quality zones, (IAQ Zones). IAQ Zones are defined as areas of well-mixed air. Thus, each ventilation system with recirculating air is considered a single zone, and each room or group of rooms where air is not recirculated (e.g. 100% outdoor air) is considered a separate zone. For IAQ Zones with the same construction material/furnishings and design minimum outdoor air ventilation rates. (e.g. hotel rooms, apartments, condominiums, etc.) the formaldehyde emission rates need only be assessed for a single IAQ Zone of that type.

2.) Calculate Material/Furnishing Loading. For each IAQ Zone, determine the building material and furnishing loadings (e.g., m^2 of material/m^2 floor area, units of furnishings/m^2 floor area) from an inventory of all potential indoor formaldehyde sources, including flooring, ceiling tiles, furnishings, finishes, insulation, sealants, adhesives, and any products constructed with composite wood products containing urea-formaldehyde resins (e.g., plywood, medium density fiberboard, particleboard).

3.) Calculate the Formaldehyde Emission Rate. For each building material, calculate the formaldehyde emission rate (µg/h) from the product of the area-specific formaldehyde emission rate (µg/m^2-h) and the area (m^2) of material in the IAQ Zone, and from each furnishing (e.g. chairs, desks, etc.) from the unit-specific formaldehyde emission rate (µg/unit-h) and the number of units in the IAQ Zone.

NOTE: As a result of the high-performance building rating systems and building codes (California Building Standards Commission, 2014; USGBC, 2014), most manufacturers of building materials furnishings sold in the United States conduct chemical emission rate tests using the California Department of Health "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers", (CDPH, 2017), or other

equivalent chemical emission rate testing methods. Most manufacturers of building furnishings sold in the United States conduct chemical emission rate tests using ANSI/BIFMA M7.1 Standard Test Method for Determining VOC Emissions (BIFMA, 2018), or other equivalent chemical emission rate testing methods.

CDPH, BIFMA, and other chemical emission rate testing programs, typically certify that a material or furnishing does not create indoor chemical concentrations in excess of the maximum concentrations permitted by their certification. For instance, the CDPH emission rate testing requires that the measured emission rates when input into an office, school, or residential model do not exceed one-half of the OEHHA Chronic Exposure Guidelines (OEHHA, 2017b) for the 35 specific VOCs, including formaldehyde, listed in Table 4-1 of the CDPH test method (CDPH, 2017). These certifications themselves do not provide the actual area-specific formaldehyde emission rate (i.e., $\mu g/m^2$-h) of the product, but rather provide data that the formaldehyde emission rates do not exceed the maximum rate allowed for the certification. Thus for example, the data for a certification of a specific type of flooring may be used to calculate that the area specific emission rate of formaldehyde is less than 31 $\mu g/m^2$-h, but not the actual measured specific emission rate, which may be 3,18, or 30 $\mu g/m^2$-h. These area-specific emission rates determined from the product certifications of CDPH, BIFA, and other certification programs can be used as an initial estimate of the formaldehyde emission rate.

If the actual area-specific emission rates of a building material or furnishing is needed (i.e. the initial emission rates estimates from the product certifications are higher than desired), then that data can be acquired by requesting from the manufacturer the complete chemical emission rate test report. For instance if the complete CDPH emission test report is requested for a CDHP certified product, that report will provide the actual area-specific emission rates for not only the 35 specific VOCs, including formaldehyde, listed in Table 4-1 of the CDPH test method (CDPH, 2017), but also all of the cancer and reproductive/developmental chemicals listed in the California Proposition 65 Safe Harbor Levels (OEHHA, 2017a), all of the toxic air contaminants (TACs) in the California Air Resources Board Toxic Air Contamination List (CARB, 2011), and the 10 chemicals with the greatest emission rates.

Alternatively, a sample of the building material or furnishing can be submitted to a chemical emission rate testing laboratory, such as Berkeley Analytical Laboratory (https://berkeleyanalytical.com), to measure the formaldehyde emission rate.

4.) Calculate the Total Formaldehyde Emission Rate. For each IAQ Zone, calculate the total formaldehyde emission rate (i.e. µg/h) from the individual formaldehyde emission rates from each of the building material/furnishings as determined in Step 3.

5.) Calculate the Indoor Formaldehyde Concentration. For each IAQ Zone, calculate the indoor formaldehyde concentration ($\mu g/m^3$) from Equation 1 by dividing the total formaldehyde emission rates (i.e. µg/h) as determined in Step 4, by the design minimum outdoor air ventilation rate (m^3/h) for the IAQ Zone.

$$C_{in} = \frac{E_{total}}{Q_{oa}} \quad \text{(Equation 1)}$$

where:
C_{in} = indoor formaldehyde concentration (µg/m3)
E_{total} = total formaldehyde emission rate (µg/h) into the IAQ Zone.
Q_{oa} = design minimum outdoor air ventilation rate to the IAQ Zone (m^3/h)

The above Equation 1 is based upon mass balance theory, and is referenced in Section 3.10.2 "Calculation of Estimated Building Concentrations" of the California Department of Health "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers", (CDPH, 2017).

6.) Calculate the Indoor Exposure Cancer and Non-Cancer Health Risks. For each IAQ Zone, calculate the cancer and non-cancer health risks from the indoor formaldehyde concentrations determined in Step 5 and as described in the OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines; Guidance Manual for Preparation of Health Risk Assessments (OEHHA, 2015).

7.) Mitigate Indoor Formaldehyde Exposures of exceeding the CEQA Cancer and/or Non- Cancer Health Risks. In each IAQ Zone, provide mitigation for any formaldehyde exposure risk as determined in Step 6, that exceeds the CEQA cancer risk of 10 per million or the CEQA non-cancer Hazard Quotient of 1.0.

Response. The commenter requests calculation of indoor formaldehyde concentrations from the specific building materials/furnishings from the Project, that a health risk assessment be performed for formaldehyde, and that mitigation is provided for elevated risk.

CARB's Phase 2 standards for formaldehyde in wood products have been developed to be adequately protective of residents and employees and no substantial evidence has been presented to suggest that these standards are not protective enough and are resulting in residual cancer and non-carcinogenic risk to residents and employees. New buildings under the Project will comply with Phase 2 standards for formaldehyde. Most importantly, new buildings would also be ventilated pursuant to California Building Code requirements. Ventilation, in addition to compliance with CARB's standards, is expected to ensure that there is no significant residual health risk to residents and employees from formaldehyde in wood products. Therefore, the City has determined that no further analysis is required or warranted, no new mitigation measures are required, and the findings of the Draft EIR remain valid.

L6.19 Provide the source and/or ventilation mitigation required in all IAQ Zones to reduce the health risks of the chemical exposures below the CEQA cancer and non-cancer health risks. Source mitigation for formaldehyde may include:

1.) reducing the amount materials and/or furnishings that emit formaldehyde

2.) substituting a different material with a lower area-specific emission rate of formaldehyde

Ventilation mitigation for formaldehyde emitted from building materials and/or furnishings may include:

1.) increasing the design minimum outdoor air ventilation rate to the IAQ Zone.

NOTE: Mitigating the formaldehyde emissions through use of less material/furnishings, or use of lower emitting materials/furnishings, is the preferred mitigation option, as mitigation with increased outdoor air ventilation increases initial and operating costs associated with the heating/cooling systems.

Response. The commenter suggests that adequate mitigation for formaldehyde emissions from wood products in building materials is ventilation or use of lower emitting materials. The commenter recommends lower emitting materials as a preferred option, citing cost as the reason.

No substantial technical argument is provided as to why lower emitting materials is preferred over ventilation.

As discussed in response to comment L6.18, CARB's Phase 2 standards for formaldehyde in wood products have been developed to be adequately protective of residents and employees and no substantial evidence has been presented to suggest that these standards are not protective enough and are resulting in residual cancer and non-carcinogenic risk to residents and employees. New buildings under the Project will comply with Phase 2 standards for formaldehyde. Most importantly, new buildings would also be ventilated pursuant to California Building Code requirements. Ventilation, in addition to compliance with CARB's standards, is expected to ensure that there is no significant residual health risk to residents and employees from formaldehyde in wood products. Therefore, the City has determined that no further analysis is required or warranted, no new mitigation measures are required, and the findings of the Draft EIR remain valid.

L6.20 Outdoor Air Ventilation Impact. Another important finding of the CNHS, was that the outdoor air ventilation rates in the homes were very low. Outdoor air ventilation is a very important factor influencing the indoor concentrations of air contaminants, as it is the primary removal mechanism of all indoor air generated air contaminants. Lower outdoor air exchange rates cause indoor generated air contaminants to accumulate to higher indoor air concentrations. Many homeowners rarely open their windows or doors for ventilation as a result of their concerns for security/safety, noise, dust, and odor concerns (Price, 2007). In the CNHS field study, 32% of the homes did not use their windows during the 24-hour Test Day, and 15% of the homes did not use their windows during the entire preceding week.

Most of the homes with no window usage were homes in the winter field session. Thus, a substantial percentage of homeowners never open their windows, especially in the winter season. The median 24-hour measurement was 0.26 ach, with a range of 0.09 ach to 5.3 ach. A total of 67% of the homes had outdoor air exchange rates below the minimum California Building Code (2001) requirement of 0.35 ach. Thus, the relatively tight envelope construction, combined with the fact that many people never open their windows for ventilation, results in homes with low outdoor air exchange rates and higher indoor air contaminant concentrations.

Response. The commenter states that ventilation rates in homes are very low, stating that many homeowners do not open their windows, causing air contaminants to accumulate.

A ventilation system is proposed in the new buildings under the Project, and mitigation measure MM AIR-2 requires use of MERV-13 filters in this system. Therefore, this issue would not apply to new buildings under the Project.

To support its claim that "outdoor air ventilation rates in the homes were very low", this comment relies on the CNHS study which apparently found that 32% of homes did not use their windows during one day of a formaldehyde test and 15% did not use them in the preceding week. That means that 68% of the participants did use their windows on the one specific day that they were asked about and 85% of the homes did use their windows during the preceding week. This hardly demonstrates that most residential occupants rarely open their windows. In fact, it clearly demonstrates the opposite, that most residential occupants do open their windows regularly.

In addition, the same 2019 Chan article on which the commenter relies states that participants in the study related that they generally keep their windows open for hours at a time during spring, summer, and fall and prior research showed that self-reported window usage was below actual usage. *Id.* p. 40 ("[i]n summer, fall, and spring, approximately half of the homes (47% on average)

reported substantial window use (>2 hours per day on average); but during winter more than half (57%) reported not opening their windows at all. For context, it is important to note the finding of Offermann (2009) that actual window use exceeded seasonal projected use in the sample of homes for which both types of data were available"). Thus despite commenter's unsupported assertion that outdoor air ventilation rates are very low, evidence shows most occupants often open their windows, for long periods of time, and they underreport actual window usage.

The commenter's cited formaldehyde studies require participants to keep their windows closed for the duration of the study and rely on mechanical ventilation, creating an a-typical situation and thus should not be utilized to derive a risk factor for Project homes. Actual ventilation that the studies show occurs with window usage would greatly reduce formaldehyde concentrations in indoor air and thus the studies do not accurately capture real-world scenarios. In addition, the studies assume a continuous 24-hour exposure and 100% absorption by the respiratory system, further unrealistic assumption unsupported by substantial evidence.

The commenter attempts to recalculate his purported risk value based on windows being open more often (equaling less exposure) or homes being built with Phase 1 compliant materials rather than Phase 2 compliant materials, but all this shows is that the commenter is engaging in pure speculation when attempting to calculate a risk value from the Project. The commenter's claim that the Project would result in significant impacts is based on pure speculation and tenuous assumptions. These include assumptions regarding Project construction and materials, health risk modeling of formaldehyde, how much ventilation there will be in Project homes, and application of a significance threshold that is not formaldehyde specific. CEQA does not require speculation. CEQA Guidelines section 15145; *Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal. 3d 376.

The commenter's assertion that formaldehyde constitutes a significant impact is unsupported, and no further analysis or discussion of formaldehyde impacts is required under CEQA. There is, in fact, no applicable threshold of significance for formaldehyde provided in State CEQA Guidelines, regional, or local guidance. Thus no further analysis or recirculation is required.

L6.21 The Arroyo at Monrovia Station project in Monrovia, CA includes residential and commercial spaces, and is located close to roads with moderate to high traffic (e.g. Interstate 210, S. Magnolia Avenue, W. Evegreen Avenue, W. Pomona Avenue) and the Metro Gold Line. As a result of these outdoor sources of noise, this area as been determined by the Draft Environmental Impact Report (City of Monrovia, 2019) to be a sound impacted area, with noise levels reported in Table 16-2 ranging from 73.5 to 75.1 dBA CNEL.

As a result of the high outdoor noise levels, the current project will require the need for mechanical supply of outdoor air ventilation air to allow for a habitable interior environment with closed windows and doors. Such a ventilation system would allow windows and doors to be kept closed at the occupant's discretion to control exterior noise within residential interiors.

Response. The commenter incorrectly cites the results of the noise impact analysis in the EIR, claiming that a ventilation system will be required to offset long-term indoor noise impacts under the Project. Chapter 16, Noise, of the EIR discusses that closing doors and windows does reduce noise levels. However, the EIR does not require closing doors and windows to offset impacts. There are no mitigation measures requiring closure of doors and windows in the EIR.

L6.22 $PM_{2.5}$ Outdoor Concentrations Impact. An additional impact of the nearby motor vehicle traffic associated with this project, are the outdoor concentrations of $PM_{2.5}$. The Draft

Environmental Impact Report (City of Monrovia, 2019) has determined that the South Coast Air Basin, where this project is located, is a non-attainment area for $PM_{2.5}$.

Response. The commenter states that vehicle traffic associated with the Project result in $PM_{2.5}$ emissions, and that the South Coast Air Basin is in non-attainment for $PM_{2.5}$. The City concurs with this statement. No further response is needed.

L6.23 An air quality analyses should be conducted to determine the concentrations of $PM_{2.5}$ in the outdoor and indoor air that people inhale each day. This air quality analyses needs to consider the cumulative impacts of the project related emissions, existing and projected future emissions from local $PM_{2.5}$ sources (e.g. stationary sources, motor vehicles, and airport traffic) upon the outdoor air concentrations at the project site. If the outdoor concentrations are determined to exceed the California and National annual average $PM_{2.5}$ exceedence concentration of 12 $\mu g/m^3$, or the National 24-hour average exceedance concentration of 35 $\mu g/m^3$, then the buildings need to have a mechanical supply of outdoor air that has air filtration with sufficient $PM_{2.5}$ removal efficiency, such that the indoor concentrations of outdoor PM2.5 particles is less than the California and National $PM_{2.5}$ annual and 24-hour standards.

It is my experience that based on the projected combination of high traffic and airport noise levels, the annual average concentration of $PM_{2.5}$ will exceed the California and National $PM_{2.5}$ annual and 24-hour standards and warrant installation of high efficiency air filters (i.e. MERV 13 or higher) in all mechanically supplied outdoor air ventilation systems.

Response. The commenter requests that an impact analysis be conducted to determine the impacts of existing $PM_{2.5}$ emissions in the area on the Project, and to determine whether the Project would significantly contribute to cumulative impacts of $PM_{2.5}$ in the area. The commenter recommends a requirement for a ventilation system using MERV-13 filters or higher to offset impacts if the Project is expected to result in an exceedance of State or National standards for $PM_{2.5}$.

An impact analysis of Project emissions of criteria pollutants, including $PM_{2.5}$, on the environment, including cumulative impacts, and the potential for emissions to exceed State or National standards is contained in Chapter 7, Air Quality, of the EIR. With implementation of standard dust control measures and idling restrictions, impacts were determined to be less than significant.

In *California Building Industry Association v. BAAQMD*, the California Supreme Court determined that CEQA requires review of a project's impacts on the environment rather than the effects of the environment on the residents or users of a project. The Court determined that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents. But when a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users. In those specific instances, it is the project's impact on the environment – and not the environment's impact on the project – that compels an evaluation of how future residents or users could be affected by exacerbated conditions."

An evaluation of whether the Project would exacerbate PM2.5 levels in the area is contained in Chapter 7, Air Quality, of the EIR. Because it was determined that the Project, could exacerbate adverse impacts of existing PM2.5 levels in the area, mitigation measure MM AIR-2 was required to ensure that ventilation systems are installed in new buildings and that MERV-13 filters would be utilized to afford maximum protection to residents.

The commenter's requests have already been met in Chapter 7, Air Quality, of the EIR. The City has determined that no further analysis is required or warranted, no new mitigation measures are required, and the findings of the Draft EIR remain valid.

L6.24 Indoor Air Quality Impact Mitigation Measures

The following are recommended mitigation measures to minimize the impacts upon indoor quality:

- indoor formaldehyde concentrations
- outdoor air ventilation
- $PM_{2.5}$ outdoor air concentrations

Indoor Formaldehyde Concentrations Mitigation. Use only composite wood materials (e.g. hardwood plywood, medium density fiberboard, particleboard) for all interior finish systems that are made with CARB approved no-added formaldehyde (NAF) resins or ultralow emitting formaldehyde (ULEF) resins (CARB, 2009). Other projects such as the AC by Marriott Hotel – West San Jose Project (Asset Gas SC Inc.) and 2525 North Main Street, Santa Ana (AC 2525 Main LLC, 2019) have entered into settlement agreements stipulating the use of composite wood materials only containing NAF or ULEF resins.

Alternatively, conduct the previously described Pre-Construction Building Material/Furnishing Chemical Emissions Assessment, to determine that the combination of formaldehyde emissions from building materials and furnishings do not create indoor formaldehyde concentrations that exceed the CEQA cancer and non-cancer health risks.

It is important to note that we are not asking that the builder to "speculate" on what and how much composite materials be used, but rather at the design stage to select composite wood materials based on the formaldehyde emission rates that manufacturers routinely conduct using the California Department of Health "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers", (CDPH, 2017), and use the procedure described earlier (i.e. Pre-Construction Building Material/Furnishing Formaldehyde Emissions Assessment) to insure that the materials selected achieve acceptable cancer risks from material off gassing of formaldehyde.

Outdoor Air Ventilation Mitigation. Provide each habitable room with a continuous mechanical supply of outdoor air that meets or exceeds the California 2016 Building Energy Efficiency Standards (California Energy Commission, 2015) requirements of the greater of 15 cfm/occupant or 0.15 cfm/ft2 of floor area. Following installation of the system conduct testing and balancing to insure that required amount of outdoor air is entering each habitable room and provide a written report documenting the outdoor airflow rates. Do not use exhaust only mechanical outdoor air systems, use only balanced outdoor air supply and exhaust systems or outdoor air supply only systems. Provide a manual for the occupants or maintenance personnel, that describes the purpose of the mechanical outdoor air system and the operation and maintenance requirements of the system.

PM2.5 Outdoor Air Concentration Mitigation. Install air filtration with sufficient $PM_{2.5}$ removal efficiency (e.g. MERV 13 or higher) to filter the outdoor air entering the mechanical outdoor air supply systems, such that the indoor concentrations of outdoor $PM_{2.5}$ particles are less than the California and National $PM_{2.5}$ annual and 24-hour standards. Install the air filters in the system such that they are accessible for replacement by the occupants or maintenance personnel. Include in the mechanical outdoor air ventilation system manual instructions on how to replace the air filters and the estimated frequency of replacement.

Response. The commenter is requesting the following mitigation in the EIR:

a) Use only composite wood materials (e.g. hardwood plywood, medium density fiberboard, particleboard) for all interior finish systems that are made with CARB approved no-added formaldehyde (NAF) resins or ultralow emitting formaldehyde (ULEF) resins (CARB, 2009);

b) Provide each habitable room with a continuous mechanical supply of outdoor air that meets or exceeds the California 2016 Building Energy Efficiency Standards (California Energy Commission, 2015) requirements of the greater of 15 cfm/occupant or 0.15 cfm/ft^2 of floor area; and

c) Install air filtration with sufficient PM2.5 removal efficiency (e.g. MERV 13 or higher) to filter the outdoor air entering the mechanical outdoor air supply systems.

a) As discussed in response to comment L6.18, CARB's Phase 2 standards for formaldehyde in wood products have been developed to be adequately protective of residents and employees and no substantial evidence has been presented to suggest that these standards are not protective enough and are resulting in residual cancer and non-carcinogenic risk to residents and employees. New buildings under the Project will comply with Phase 2 standards for formaldehyde. Most importantly, new buildings would also be ventilated pursuant to California Building Code requirements. Ventilation, in addition to compliance with CARB's standards, is expected to ensure that there is no significant residual health risk to residents and employees from formaldehyde in wood products. Therefore, the City has determined that no further analysis is required or warranted, no new mitigation measures are required, and the findings of the Draft EIR remain valid.

b and c) New buildings would also be ventilated pursuant to California Building Code requirements and using MERV-13 filters as also required in mitigation measure MM AIR-2. Therefore, the City has determined that no further analysis is required or warranted, no new mitigation measures are required, and the findings of the Draft EIR remain valid.

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Complete SAFER Submittal #1 Including Attachments

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3. DRAFT EIR REVISIONS

The following section includes all revisions to the Draft EIR (DEIR) made in response to comments received during the Draft EIR comment period. All text revisions are indicated by strike-through (deleted text) and underlining (added text) as errata to the Draft EIR. All of the revisions supersede the corresponding text in the Draft EIR. None of the criteria listed in CEQA Guidelines Section 15088.5 (Recirculation of an EIR Prior to Certification) indicating the need for recirculation of the Draft EIR has been met as a result of the revisions. In particular:

- No new significant environmental impacts due to the project or due to a new mitigation measure has been identified;
- No substantial increase in the severity of an environmental impact has been identified; and
- No additional feasible project alternative or mitigate measure considerably different from others analyzed in the Draft EIR has been identified that would clearly lessen the significant environmental impacts of the project.

Text revisions to the Draft EIR are identified below and will be incorporated in the Final EIR.

CHAPTER 7, AIR QUALITY

On page 7-22 of the Draft EIR, the first bullet under the Regional Construction Emissions discussion is revised as follows:

> "Demolition of approximately ~~47,112~~51,740 square feet of existing building space and associated debris hauling activities; and"

On pages 7-22 to 7-23 of the Draft EIR, Tables 7-7 and 7-8 are revised as follows:

Table 7-7: Unmitigated Regional Construction Emissions Estimates

Season	Total Unmitigated Maximum Daily Emissions (Pounds Per Day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer 2019	~~4.3~~ 4.4	44.7	~~32.0~~ 32.7	0.1	~~5.0~~ 5.2	2.7
Summer 2020	~~219.2~~ 219.9	~~25.6~~ 26.0	~~30.1~~ 30.7	0.1	5.0	2.0
Winter 2019	~~4.5~~ 4.6	45.0	~~31.0~~ 31.6	0.1	~~5.0~~ 5.2	2.7
Winter 2020	~~219.2~~ 219.9	~~25.7~~ 26.1	~~29.2~~ 29.8	0.1	5.0	2.0
SCAQMD CEQA Threshold	75	100	550	150	150	55
Threshold Exceeded?	**Yes**	No	No	No	No	No
Source: MIG ~~2018~~2019a (see Appendix C1).						

Table 7-8: Mitigated Regional Construction Emissions Estimates

Season	Total Mitigated Maximum Daily Emissions (Pounds Per Day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Summer 2019	4.4	44.7	~~32.0~~ 32.7	0.1	~~5.0~~ 5.2	2.7
Summer 2020	~~43.0~~ 43.1	~~25.6~~ 26.0	~~30.1~~ 30.7	0.1	~~4.8~~ 5.0	2.0
Winter 2019	~~4.5~~ 4.6	45.0	~~31.0~~ 31.6	0.1	~~5.0~~ 5.2	2.7
Winter 2020	43.1	~~25.7~~ 26.1	~~29.2~~ 29.8	~~0.1~~	~~4.8~~ 5.0	2.0
SCAQMD CEQA Threshold	75	100	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No
Source: MIG 2019a (see Appendix C1)						

On page 7-25 of the Draft EIR, Table 7-9 is revised as follows:

Table 7-9: LST Construction Analysis

Construction Phase	Maximum Daily Emissions (Pounds per Day)[A]			
	NO_X	**CO**	**PM_{10}[C]**	**$PM_{2.5}$[C]**
~~Demolition~~				
Demolition	22.7	14.9	2.2	1.3
Site Preparation	21.5	11.9	1.5	0.9
Grading	22.7	10.2	3.6	2.3
Building Construction 2019	18.9	15.3	1.1	1.0
Building Construction 2020	17.4	14.9	0.9	0.9
Paving	11.6	11.8	0.7	0.6
Architectural Coating	1.7	1.8	0.1	0.1
SCAQMD LST Threshold (1.5-Acre)[B]	**108.5**	**784.0**	**6.0**	**3.9**
Threshold Exceeded?	No	No	No	No

Source: MIG 2019a (see Appendix C1)

(A) Emissions presented are worst-case total emissions and may reflect summer or winter emissions levels.

(B) Grading would involve the use of one grader and one rubber-tired dozer, which equals a 1.5-acre project site for LST purposes (1*1.0)+(1*0.5)=1.5. Accordingly, a 1.5-acre LST threshold was developed using linear regression.

(C) PM emissions assume compliance with SCAQMD Rule 403 best available control measures for site watering and replacing ground cover.

On page 7-26 of the Draft EIR, Table 7-10 is revised as follows:

Table 7-10: Operational Emissions Estimates

Emission Scenario	Maximum Daily Emissions (Pounds Per Day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area Sources	8.6	4.5	26.8	0.0	0.5	0.5
Energy Sources	0.1	1.0	0.4	0.0	0.1	0.1
Mobile Sources	2.3	~~4.3~~ 4.4	~~32.0~~ 32.5	0.1	~~9.8~~ 10.0	2.7
Total Emissions(B)	11.0	9.9	~~59.3~~ 59.7	0.1	~~10.4~~ 10.6	3.3
Total Existing Emissions(C)	4.1	4.1	16.1	0.0	3.3	1.4
Net Change in Emissions Levels						
Total Net Change	~~+7.0~~ +6.9	+5.8	~~+43.1~~ +43.6	+0.1	~~+6.9~~ +7.3	+1.9
SCAQMD CEQA Threshold	55	55	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Source: MIG 2019a (see Appendix C1)

(A) Emissions presented are worst-case emissions and may reflect summer or winter emissions levels. Maximum daily ROG, CO, SOX emissions occur during the summer. Maximum daily NOX emissions occur during the winter. In general, due to rounding, there is no difference between summer and winter PM10 and PM2.5 emissions levels for the purposes of this table.

(B) Totals may not equal due to rounding. Stationary sources would add less than 0.000 pounds per day of emissions to the project's area, energy, and mobile source total.

(C) See Table 7-3.

On page 7-27 of the Draft EIR, Table 7-11 is revised as follows:

Table 7-11: LST Operational Analysis

Emissions	Maximum On-Site Pollutant Emissions (Pounds Per Day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Area Sources	4.5	26.8	~~0.0~~ 0.5	0.5
Energy Sources	1.0	0.4	~~0.0~~ 0.1	0.1
Mobile Sources(A)	0.1	0.7	~~<0.00~~ 0.2	0.1
Stationary Sources	<0.00(B)	<0.00(B)	<0.00(B)	<0.00(B)
Subtotal Emissions(C)	5.6	27.9	~~0.0~~ 0.8	0.7
SCAQMD LST Threshold(D)	128	953	2	2
Threshold Exceeded?	No	No	No	No

Source: MIG 2019a (see Appendix C1)

(A) Mobile source emissions estimates reflect potential on-site vehicle emissions only and were derived by assuming 2% of operational mobile source emissions in Table 7-10 will occur on site.

(B) "<0.00" does not indicate the emissions are less than or equal to 0; rather, it indicates the emission is smaller than 0.01 but larger than 0.000.

(C) Emissions presented are worst-case emissions and may reflect summer or winter emissions levels. In

Emissions	Maximum On-Site Pollutant Emissions (Pounds Per Day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
general, due to rounding, there is no difference between summer and winter emissions levels for the purposes of this table.				
(D) LST threshold is conservatively based on a 2.0-acre project size and 25-meter (82-foot) receptor distance.				

On page 7-42 of the Draft EIR, the references are revised as follows:

2019a Arroyo at Monrovia Station Project: Air Quality and Greenhouse Gas Analysis. ~~February~~December 2019.

CHAPTER 9, CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES

On pages 9-36 through 9-37, and in Table 2-1 of the Draft EIR, mitigation measures for potential impacts on archaeological resources and Tribal Cultural Resources are revised as follows:

"**MM CUL-1. Conduct Archaeological Sensitivity Training for Construction Personnel.** The applicant shall retain a qualified professional archaeologist who meets U.S. Secretary of the Interior's Professional Qualifications and Standards to conduct an archaeological sensitivity training for construction personnel prior to commencement of excavation activities. The training session shall include a handout and focus on how to identify archaeological resources, including Tribal Cultural Resources, that may be encountered during earthmoving activities; the procedures to be followed in such an event, the duties of archaeological monitors, and the general steps a qualified professional archaeologist would follow in conducting a salvage investigation, if one is necessary. **Requirements and Timing:** Measure shall be printed on all construction drawings. The archaeologist shall obtain signatures from each worker receiving the training and shall submit the list to the City following completion of construction. **Monitoring:** City Planning staff shall conduct periodic inspections in the field during construction to ensure measure is adhered to.

MM CUL-2. Cease Ground-Disturbing Activities and Implement Treatment Plan if Archaeological Resources Are Encountered. If archaeological resources, including Tribal Cultural Resources, are unearthed during ground-disturbing activities, ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. A buffer area of at least 50 feet shall be established around the find where construction activities will not be allowed to continue until a qualified archaeologist has examined the newly discovered artifact(s) and has evaluated the area of the find. Work shall be allowed to continue outside of the buffer area. All archaeological resources, including Tribal Cultural Resources, unearthed by Project construction activities shall be evaluated by a qualified professional archaeologist, who meets the U.S. Secretary of the Interior's Professional Qualifications and Standards. Should the newly discovered artifacts be determined to be prehistoric, Native American Tribes/Individuals shall be contacted and consulted, and Native American construction monitoring shall be initiated. The applicant and City shall coordinate with the archaeologist to develop an appropriate treatment plan for the resources. The plan may include implementation of archaeological data recovery excavations to address treatment of the resource along with subsequent laboratory processing and analysis. **Requirements and Timing:** Measure shall be printed on all construction drawings. **Monitoring:** City Planning staff shall conduct periodic inspections in the field during construction to ensure measure is adhered to.

MM CUL-3. Conduct Periodic Archaeological Resources Spot Checks during grading and earth-moving activities in Younger Alluvial Sediments. The applicant shall retain a qualified professional archaeologist, who meets the U.S. Secretary of the Interior's Professional Qualifications and Standards to conduct periodic Archaeological Spot Checks beginning at depths below three (3) feet to determine if construction excavations have exposed or have a high probability of exposing archaeological resources, including Tribal Cultural Resources. After the initial Archaeological Spot Check, further periodic checks will be conducted at the discretion of the qualified archaeologist. If the qualified archaeologist determines that construction excavations have exposed or have a high probability of exposing archaeological artifacts, ongoing construction monitoring for archaeological resources, including Tribal Cultural Resources, shall be required. For the ongoing monitoring, the applicant shall retain a qualified archaeological monitor and Native American monitor, who will work under the guidance and direction of a professional archaeologist, who meets the qualifications set forth by the U.S. Secretary of the Interior's Professional Qualifications and Standards. The archaeological monitor and Native American monitor shall be present during all construction excavations (e.g., grading, trenching, or clearing/grubbing) into non-fill younger Pleistocene alluvial sediments. Multiple earth-moving construction activities may require multiple archaeological monitors. The frequency of monitoring shall be based on the rate of excavation and grading activities, proximity to known archaeological resources, including Tribal Cultural Resources, the materials being excavated (native versus artificial fill soils), the depth of excavation, and if found, the abundance and type of archaeological resources, including Tribal Cultural Resources encountered. Full-time monitoring can be reduced to part-time inspections as directed by the Project archaeologist. **Requirements and Timing:** Measure shall be printed on all construction drawings. **Monitoring:** City Planning staff shall conduct periodic inspections in the field during construction to ensure measure is adhered to."

CHAPTER 11, GLOBAL CLIMATE CHANGE, GREENHOUSE GASES, AND ENERGY

On page 11-7 of the Draft EIR, the footnote at the bottom of the page is revised as follows:

"Service population is the sum of population and employment in the project area. The existing residential land uses support approximately 23 people (see Section 17.2.3) and the approximately ~~39,500~~44,240 square feet of industrial land uses support approximately 23 jobs, based on a rate of one employee per 1,700 square feet of warehouse space in a suburban area (SCAG 2015)."

On page 11-16 of the Draft EIR, Table 11-4 is revised as follows:

Table 11-1 Estimated Project Construction GHG Emissions

Construction Year	GHG Emissions (Metric Tons / Year)			
	CO_2	CH_4	N_2O	Total MTCO2e
2019	~~186.4~~ 191.2	0.02	0.00	~~186.9~~ 191.7
2020	~~640.2~~ 659.7	0.06	0.00	~~641.7~~ 661.2
Total	~~826.6~~ 850.9	0.1	0.00	~~828.6~~ 852.9
Total Amortized Emissions[(A)]	~~27.6~~	<0.00[(B)]	0.00	~~27.6~~

	28.4			28.4

Source: MIG 2019 (see Appendix C1).
(A) Emissions amortized over 30 year-period for inclusion in total GHG emissions.
(B) "<0.0" does not indicate the emissions are less than or equal to 0; rather, it indicates the emission is smaller than 0.01, but larger than 0.000.

On page 11-17 of the Draft EIR, Table 11-5 and paragraph below Table 11-5 are revised as follows:

Table 11-5 Estimated Project Operational GHG Emissions

Emission Source	GHG Emissions ($MTCO_2e$ / Year)		
	Existing[(A)]	**Proposed**	**Net Change**
Area	2.70	67.2	+64.5
Energy	190.9	~~664.5~~ 671.6	~~+473.6~~ +480.7
Mobile	456.3	~~1,609.4~~ 1,632.5	~~+1,153.1~~ +1,176.2
Stationary	–	0.3	+0.3
Waste	32.1	~~18.4~~ 73.7	~~-13.7~~ +41.6
Water	49.8	106.2	+56.4
Amortized Construction	–	~~27.6~~ 28.4	~~+27.6~~ +28.4
Total[(B)]	731.8	~~2,466.1~~ 2,579.9	~~+1,761.8~~ +1,848.1
SCAQMD Tier 3 Screening Threshold	–	–	3,000
SCAQMD Tier 3 Threshold Exceeded?	–	–	No

Source: MIG, 2019 (see Appendix C1).
Notes:
(A) See Table 11-3 for existing GHG emissions in the Project area.
(B) Totals may not equal due to rounding.

"As shown in Table 11-5, construction and operation of the Project would result in a net increase in GHG emissions equal to approximately ~~1,762~~1,848 $MTCO_2e$ per year. This net emissions increase is below the SCAQMD latest interim Tier 3 "bright-line" guidance and recommendation for GHG significance thresholds for mixed-use projects (3,000 $MTCO_2e$)."

On page 11-20 of the Draft EIR, the 2nd paragraph under Impact GHG-3 (Energy Consumption) and the corresponding footnote are revised as follows:

"As estimated in the TIS (see Appendix J) and the emissions modeling conducted using CalEEMod defaults, buildout of the Project is anticipated to result in an increase in trip generation by approximately 1,107 trips per weekday, natural gas consumption by 3,533,135 kBTU annually, and electricity consumption by 1,738,379 kWh annually. Although trip generation and energy consumption would increase under implementation of the proposed Project, consumption rates per service population would decrease. Buildout of the Project would result in a trip generation decrease from 6.15 weekday trips/service population to 2.14 weekday trips/service population. Natural gas

consumption would also reduce from 10,502 kBtu/service population/year to 6,213 kBtu/service population/year, and annual electricity consumption would decrease from 19,473 kWh/service population/year to ~~3,620~~3,570 kWh/service population/year."

[1] Calculations based on a service population of ~~634~~653. Approximately ~~611~~630 of the service population would be residents (see Section 17.2.3) and 23 would be employees~~12,500 square feet for retail would result in employment of 23 people, based on a rate of one employee per 550 square feet of retail (GBC 2008)~~.

On page 11-20 of the Draft EIR, the paragraph under Section 11.2.4, Impact Conclusions, is revised as follows:

The Project would not result in greenhouse gas emissions in excess of thresholds of significance~~, would meet SCAQMD's 2035 project-level target of 3.0 MTCO$_2$e/yr/service population,~~ and would not conflict with the CARB Scoping Plan, SCAG 2016 RTP/SCS, or City's Energy Action Plan.

On page 11-23 of the Draft EIR, the references are revised as follows:

2019a Arroyo at Monrovia Station Project: Air Quality and Greenhouse Gas Analysis. ~~February~~December 2019.

CHAPTER 2, SUMMARY AND CHAPTER 12, HAZARDS AND HAZARDOUS MATERIALS

In Table 2-2 of Chapter 2 and on pages 12-12 and 12-13 of Chapter 12, the language in mitigation measures MM HAZ-1 and MM HAZ-2 has been changed as follows to further clarify applicable regulatory requirements:

MM HAZ-1: The DTSC shall be notified of the results of all Phase I Environmental Site Assessments (ESAs), Phase II (ESAs), and Human Health Risk Assessments prepared for the Project site. The Applicant/Developer shall address all environmental conditions at the property that may pose an unacceptable environmental risk to future site users and the surrounding community caused by the project, using applicable health-based cleanup goals approved by the DTSC. The cleanup may include one or more of the following site remediation or mitigation techniques or approaches: excavation of impacted soil for onsite management or treatment or off-site disposal; implementation of engineering controls such as barriers or vapor mitigation systems to minimize contact between impacted media and future site users; implementation of institutional controls such as land use covenants to prevent inappropriate uses of the property and ensure the long-term protection of future site users, and the surrounding community. Such cleanup activities will be designed and implemented under the jurisdiction and with the approval of the DTSC and in compliance with applicable law. **Requirements and Timing:** The remediation measures specified above shall be performed in accordance with any plan or agreement that has been approved by DTSC, including work that is to be performed prior to or in conjunction with grading or other movement of soil and/or demolition in the portions of the development subject to CERCLA or California Health and Safety Code Division 20, Chapter 6.8, as required by DTSC. **Monitoring:** Prior to issuance of grading permits and/or demolition permits, City Planning shall be provided with any approved plan or agreement for remediation of the project site, along with documentation of DTSC's approval of the plan or agreement. Prior to the issuance of a certificate of occupancy for any structure on the property, City Planning shall be provided with documentation that all physical remediation actions, which are required to be implemented by the approved plan or agreement, if any, except for any ongoing monitoring requirements, have been implemented in accordance with the approved plan or agreement and that DTSC has signed off on any such required remediation completion report documenting implementation.

MM HAZ-2: Prior to issuance of permits for demolition of structures older than 1950 in the Project area, a survey for lead-based paint (LBP) and a survey for asbestos containing material (ACM) shall be performed, and that all hazardous building materials, including mercury switches, PCB containing transformers, ACM and LBP have been appropriately removed or abated, as required by law, including but not limited to worker protection laws and regulations and regulations promulgated by the California Air Resources Board, South Coast Air Quality Management District (SCAQMD). Prior to issuance of demolition permits, copies of the abatement and survey report(s) and all notifications submitted to the South Coast Air Quality Management District (SCAQMD) of the proposed demolition and any response from SCAQMD shall be provided to City Planning. **Requirements and Timing:** LBP and ACM survey and hazardous materials abatement reports shall be submitted to City Planning prior to issuance of demolition permits along with copies of all notifications that have been provided to SCAQMD and any response from SCAQMD, including any LBP and ACM abatement actions that are being required by SCAQMD. Documentation of performance of any LBP and ACM abatement actions that are required to be performed prior to the issuance of demolition permits and signoff by the SCAQMD, also shall be provided to City Planning prior to the issuance of demolition permits by the City. **Monitoring:** City Planning staff shall require receipt of LBP and ACM reports and shall confirm notifications have been sent to the SCAQMD prior to issuance of demolition permits. City Planning staff shall confirm that the SCAQMD has signed off on any abatement activities that are required to be completed prior to demolition and that such requirements have been completed and signed off by SCAQMD prior to issuance of City permits for demolition. Documentation of completion of any abatement actions required by SCAQMD, which are required to be performed concurrently with demolition and sign off by SCAQMD, shall be provided to City Planning prior to the issuance of a certificate of occupancy by the City.

~~**MM HAZ-1**: The DTSC shall be notified of the results of all Phase I Environmental Site Assessments (ESAs), Phase II (ESAs), and Human Health Risk Assessments prepared for the Project site. The Applicant/Developer shall comply with all requirements of DTSC for remediation of the portions of the Project site that are subject to CERCLA or California Health and Safety Code Division 20, Chapter 6.8 including, without limitation, requirements of any remediation plan or agreement and the requirement to install a vapor barrier, and the timing established by DTSC for such remediation. **Requirements and Timing:** The remediation measures specified above shall be performed in accordance with any plan or agreement that has been approved by DTSC, including work that is to be performed prior to or in conjunction with grading and/or demolition in the portions of the development subject to CERCLA or California Health and Safety Code Division 20, Chapter 6.8, as required by DTSC. **Monitoring:** Prior to issuance of grading and/or demolition permits, City Planning shall be provided with any approved plan or agreement for remediation of the project site, along with documentation of DTSC's approval of the plan or agreement. Prior to the issuance of a certificate of occupancy for any structure on the property, City Planning shall be provided with documentation that all remediation actions, which are required to be implemented by the approved plan or agreement, if any, have been implemented in accordance with the approved plan or agreement and that DTSC has signed off on any such required remediation.~~

~~**MM HAZ-2:** Prior to issuance of permits for demolition of structures older than 1950 in the Project area, a survey for lead-based paint (LBP) and a survey for asbestos containing material (ACM) shall be performed. Prior to issuance of demolition permits, copies of the survey report(s) and all notifications submitted to the South Coast Air Quality Management District (SCAQMD) of the proposed demolition and any response from SCAQMD shall be provided to City Planning. **Requirements and Timing:** LBP and ACM survey reports shall be submitted to City Planning prior to issuance of demolition permits along with copies of all notifications that have been provided to SCAQMD and any response from SCAQMD, including any abatement actions that~~

~~are being required by SCAQMD. Documentation of performance of any abatement actions that are required to be performed prior to the issuance of demolition permits and signoff by the SCAQMD, also shall be provided to City Planning prior to the issuance of demolition permits by the City. **Monitoring:** City Planning staff shall require receipt of LBP and ACM reports and shall confirm notifications have been sent to the SCAQMD prior to issuance of demolition permits. City Planning staff shall confirm that the SCAQMD has signed off on any abatement activities that are required to be completed prior to demolition and that such requirements have been completed and signed off by SCAQMD prior to issuance of City permits for demolition. Documentation of completion of any abatement actions required by SCAQMD, which are required to be performed concurrently with demolition and sign off by SCAQMD, shall be provided to City Planning prior to the issuance of a certificate of occupancy by the City.~~

CHAPTER 19, TRANSPORTATION

On pages 19-33 and 19-34 of the Draft EIR, the last paragraph on page 19-33 and continues onto page 19-34 is revised as follows:

As described in Chapter 3, the Project qualifies as a project within one-half mile of an existing major transit stop and therefore, is a mixed-use project in a TPA and in a HQTA. According to CEQA Guidelines Section 15064.3(a)(2), the Project "should be presumed to cause a less than significant transportation impact." ~~However, this statement is based upon an analysis of vehicle miles traveled from developments of this type. Vehicle Miles Traveled (VMT) is a measure of the number of miles traveled by vehicles within a specified region for a specific time period. VMT enables evaluation of a project's impacts on accessibility of a region rather than intersection delay measured by LOS. Evidence must be provided to substantiate a statement that impacts "should be presumed to cause a less than significant transportation impact."~~

APPENDIX C, AIR QUALITY IMPACT ANALYSIS

The Air Quality Impact Analysis has been revised with the above changes as well. A new report is included below.

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Appendix C Revised Air Quality Impact Analysis Report

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APPENDIX C
AIR QUALITY IMPACT
ANALYSIS REPORT

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C1
AIR QUALITY IMPACT ANALYSIS REPORT

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Arroyo at Monrovia Station Project

Air Quality and Greenhouse Gas Analysis

December 2019

Prepared for:

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This document is formatted for double-sided printing to conserve natural resources.

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List of Acronyms, Abbreviations, and Symbols	
Acronym / Abbreviation	Full Phrase or Description
§	section
° F	degrees Fahrenheit
µg	micrograms
AADT	Annual average daily trips
AB	Assembly Bill
ACC	Advanced Clean Cars
ADT	Average daily trips
AERMAP	terrain preprocessor for AERMOD
AERMET	AERMOD Meteorological Preprocessor
AERMOD	Atmospheric Dispersion Modeling System
AQ	air quality
AQMP	Air Quality Management Plan
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BAU	Business As Usual
BTU	British Thermal Unit
CA	California
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CBSC	California Building Standards Commission
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	methane
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	Carbon Dioxide
CPF	cancer potency factor
CRP	Coating Restriction Plan
DPM	diesel particulate matter
ED	exposure duration

List of Acronyms, Abbreviations, and Symbols	
Acronym / Abbreviation	Full Phrase or Description
EF	exposure frequency
EIR	Environmental Impact Report
EMFAC	Emission Factors Model
EO	Executive Order
F	Fahrenheit
FAH	Fraction of Time at Home
GHG	Greenhouse Gas(es)
GVWR	gross vehicle weight rating
GWh	Gigawatt-hours
GWP	Global Warming Potential
H_2S	hydrogen sulfide
HAP	Hazardous Air Pollutants
HARP	Hot Spots Analysis and Reporting Program
HESIS	Hazard Evaluation System and Information Service
HFCs	hydrofluorocarbons
HHDT	heavy-heavy duty trucks
HI	Hazard Index
HRA	Health Risk Assessment
HVAC	Heating, ventilation, and air conditioning
I	Interstate
IAQ	Indoor Air Quality
IARC	International Agency for Research on Cancer
kBtu	Thousand British Thermal Units
kg	kilogram
kWH	kilowatt-hours
LCFS	Low Carbon Fuel Standard
LDA	passenger cars
LDT1	light-duty trucks, weight class 0 - 3,750 pounds
LDT2	light-duty trucks, weight class 3,751-5,750 pounds
LEV	Low Emission Vehicle
LHDT1	light-heavy-duty trucks, weight class 8,501-10,000 pounds
LHDT2	light-heavy-duty trucks, weight class 10,001-14,000 pounds
LOS	Level of Service

List of Acronyms, Abbreviations, and Symbols	
Acronym / Abbreviation	Full Phrase or Description
LST	Localized Significance Threshold
m^3	cubic meter
MATES	Multiple Air Toxics Exposure Study
MDV	medium-duty truck
MEIR	Maximally Exposed Individual Resident
MERV	Minimum Efficiency Rating Value
mg	milligram
MH	motor home
MHDT	medium-heavy duty diesel truck
mph	miles per hour
MPO	Metropolitan Planning Organization
$MTCO_2e$	Metric Tons of Carbon Dioxide Equivalents
N_2O	nitrous dioxide
NAAQS	National Ambient Air Quality Standards
NO	nitrogen oxide
No.	number
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NO_x	oxides of nitrogen
NTP	U.S. National Toxicology Program
O_3	ozone
OBUS	motor coach bus
OEHHA	Office of Environmental Health Hazard Assessment
PFCs	perfluorocarbons
PM	particulate matter
PM_{10}	coarse particulate matter
$PM_{2.5}$	fine particulate matter
ppm	parts per million
RAST	Risk Assessment Stand Alone Tool
REL	Reference Exposure Level
ROG	reactive organic gases
ROW	right-of-way
RPS	Renewable Portfolio Standard

List of Acronyms, Abbreviations, and Symbols	
Acronym / Abbreviation	Full Phrase or Description
RTP	Regional Transportation Plan
SB	Senate Bill
SBUS	school bus
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_4^{2-}	sulfates
SO_x	oxides of sulfur
SRA	Source Receptor Area
TAC	Toxic Air Contaminants
TIA	Traffic Impact Analysis
U.S.	United States
U.S. EPA	United States Environmental Protection Agency
UBUS	urban bus
UTM	Universal Transverse Mercator
V.	Versus
VMT	Vehicle Miles Traveled
VOC	volatile organic compounds
Yr	year
ZEV	Zero Emission Vehicle

1 INTRODUCTION

Evergreen Investment Partners, LLC has submitted an application to the City of Monrovia for its proposed 2.99-acre mixed-use residential development (proposed Project). The Project area currently comprises nearly one whole City block, except for a 0.14-acre single-family residential parcel. The Project area is bounded by West Evergreen Avenue to the north, South Primrose Avenue to the east, West Pomona Avenue to the south, and South Magnolia Avenue to the west. The METRO Monrovia Gold Line Station is located approximately 385 feet to the south of Project area and Interstate 210 (I-210) is located on the north side of West Evergreen Avenue, across from the Project area. The Project involves the development of a 302-unit, seven-story apartment complex and an seven-level (six-story) partially underground parking structure. The proposed development also includes 7,080 square feet of retail space.

The current land uses within the proposed Project site include a mix of single-family residential (8 total dwelling units), two industrial parcels (approximately 44,240 square feet), vacant lot, and private parking lot. Project development would generate emissions of air quality and GHG pollutants that could affect air quality and/or contribute to global climate change. MIG, Inc. (MIG) has prepared this Air Quality and Greenhouse Gas Impact Analysis Report (Report) at the request of Evergreen Investment Partners. This Report evaluates the potential construction- and operational-related air quality and GHG impacts of the proposed Project using specific information provided by Evergreen Investment Partners. Where necessary, MIG has supplemented available information with standardized sources of information, such as model assumptions pertaining to construction equipment activity levels. In general, this Report evaluates the potential "worst-case" conditions associated with the proposed Project's construction and operational emissions levels to ensure a conservative (i.e., likely to overestimate) assessment of potential air quality and GHG impacts is presented.

This Report is intended for use by the Lead Agency to assess the potential air quality and GHG impacts of the proposed Project in compliance with the California Environmental Quality Act (CEQA; PRC §21000 et seq.) and the State CEQA Guidelines (14 CCR §15000 et seq.), particularly in respect to the air quality and GHG issues identified in Appendix G of the State CEQA Guidelines.

1.1 REPORT ORGANIZATION

This Report is organized as follows:

- Chapter 1, Introduction, explains the contents of this Report and its intended use.
- Chapter 2, Air Quality Setting and Regulatory Framework, provides pertinent background information on the air quality, describes the existing air quality setting of the proposed Project, and provides information on the federal, state, and local regulations that govern the proposed Project's air quality setting and potential air quality impacts.
- Chapter 3, GHG Setting and Regulatory Framework, provides pertinent background information on GHG and climate change, describes the existing GHG setting of the proposed Project, and provides information on the federal, state, and local regulations that govern the proposed Project's GHG setting and potential GHG impacts.
- Chapter 4, Proposed Project Description, provides an overview of the construction and operational activities associated with the proposed Project.

- Chapter 5, Air Quality Impact Assessment, identifies the potential construction and operational air quality impacts of the proposed Project and evaluates these effects in accordance with Appendix G of the State CEQA Guidelines.
- Chapter 6, GHG Impact Assessment, identifies the potential construction and operational GHG impacts of the proposed Project and evaluates these effects in accordance with Appendix G of the State CEQA Guidelines.
- Chapter 7, Report Preparers and References, list the individuals involved, and the references used, in the preparation of this Report.

2 AIR QUALITY SETTING AND REGULATORY FRAMEWORK

This chapter provides information on the environmental and regulatory air quality setting of the proposed Project. Information on existing air quality conditions, federal and state ambient air quality standards, and pollutants of concern was obtained from the U.S. Environmental Protection Agency (U.S. EPA), CARB, and SCAQMD.

2.1 ENVIRONMENTAL SETTING

Air quality is a function of pollutant emissions and topographic and meteorological influences. The physical features and atmospheric conditions of a landscape interact to affect the movement and dispersion of pollutants and determine its air quality.

2.1.1 Regulated Air Pollutants

The U.S. EPA has established National Ambient Air Quality Standards (NAAQS) for six common air pollutants: ozone (O_3), particulate matter (PM), which consists of "inhalable coarse" PM (particles with an aerodynamic diameter between 2.5 and 10 microns in diameter, or PM_{10}) and "fine" PM (particles with an aerodynamic diameter smaller than 2.5 microns, or $PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. The U.S. EPA refers to these six common pollutants as "criteria" pollutants because the agency regulates the pollutants on the basis of human health and/or environmentally-based criteria. CARB has established California Ambient Air Quality Standards (CAAQS) for the six common air pollutants regulated by the federal Clean Air Act (the CAAQS are more stringent than the NAAQS) plus the following additional air pollutants: hydrogen sulfide (H_2S), sulfates (SO_X), vinyl chloride, and visibility reducing particles. The NAAQS and CAAQS are shown in Table 2-1. A description of these regulated air pollutants is provided below.

- Ground-level ozone, or smog, is not emitted directly into the atmosphere. It is created from chemical reactions between oxides of nitrogen (NO_X) and volatile organic compounds (VOCs), also called reactive organic gases (ROG), in the presence of sunlight (U.S. EPA, 2017a). Thus, ozone formation is typically highest on hot sunny days in urban areas with NO_X and ROG pollution. Ozone irritates the nose, throat, and air pathways and can cause or aggravate shortness of breath, coughing, asthma attacks, and lung diseases such as emphysema and bronchitis.

Table 2-1: Summary of Ambient Air Quality Standards						
Pollutant	Averaging Time	CAAQS		NAAQS		
		Concentration	Method	Primary[5]	Secondary	Method
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.07 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable PM_{10} [9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		-		
Fine Particulate Matter($PM_{2.5}$) [9]	24 Hour	-	-	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12.0 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/ m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	-	Non-Dispersive Infrared Photometry (NDIR) -
	8 Hour	9.0 ppm (10mg/m^3)		9 ppm (10 mg/m^3)	-	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/ m^3)		-	-	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.03 ppm (57 µg/m^3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m^3)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m^3)		100 ppb (188 µg/m^3)	-	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	-	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method) -
	3 Hour	-		-	0.5 ppm (1,300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	-	
	Annual Arithmetic Mean	-		0.030 ppm (for certain areas)[11]	-	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	-	-	High Volume Sampler and Atomic Absorption
	Calendar Quarter	-		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average[10]	-		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			
Source: CARB, 2016a.						

- Particulate matter (PM), also known as particle pollution, is a mixture of extremely small solid and liquid particles made up of a variety of components such as organic chemicals, metals, and soil and dust particles (U.S. EPA, 2016a).
  - PM_{10}, also known as inhalable coarse, respirable, or suspended PM_{10}, consists of particles less than or equal to 10 micrometers in diameter (approximately 1/7th the thickness of a human hair). These particles can be inhaled deep into the lungs and possibly enter the blood stream, causing health effects that include, but are not limited to, increased respiratory symptoms (e.g., irritation, coughing), decreased lung capacity, aggravated asthma, irregular heartbeats, heart attacks, and premature death in people with heart or lung disease (U.S. EPA, 2016a).
  - $PM_{2.5}$, also known as fine PM, consists of particles less than or equal to 2.5 micrometers in diameter (approximately 1/30th the thickness of a human hair). These particles pose an increased risk because they can penetrate the deepest parts of the lung, leading to and exacerbating heart and lung health effects (U.S. EPA, 2016a).
- Carbon Monoxide (CO) is an odorless, colorless gas that is formed by the incomplete combustion of fuels. Motor vehicles are the single largest source of carbon monoxide in the Basin. At high concentrations, CO reduces the oxygen-carrying capacity of the blood and can aggravate cardiovascular disease and cause headaches, dizziness, unconsciousness, and even death (U.S. EPA, 2016b).
- Nitrogen Dioxide (NO_2) is a by-product of combustion. NO_2 is not directly emitted, but is formed through a reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as NO_X and are major contributors to ozone formation. NO_2 also contributes to the formation of particulate matter. NO_2 can cause breathing difficulties at high concentrations (U.S. EPA, 2016c).
- Sulfur Dioxide (SO_2) is one of a group of highly reactive gases known as oxides of sulfur (SO_X). Fossil fuel combustion in power plants and industrial facilities are the largest emitters of SO_2. Short-term effects of SO_2 exposure can include adverse respiratory effects such as asthma symptoms. SO_2 and other SO_X can react to form PM (U.S. EPA, 2016d).
- Sulfates (SO_4^{2-}) are the fully oxidized ionic form of sulfur. SO_4^{2-} are primarily produced from fuel combustion. Sulfur compounds in the fuel are oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. Sulfate exposure can increase risks of respiratory disease (CARB, 2009a).
- Lead is primarily emitted from metal processing facilities (i.e. secondary lead smelters) and other sources such as manufacturers of batteries, paints, ink, ceramics, and ammunition. Historically, automobiles were the primary sources before lead was phased out of gasoline. The health effects of exposure to lead include gastrointestinal disturbances, anemia, kidney diseases, and potential neuromuscular and neurologic dysfunction. Lead is also classified as a probable human carcinogen (U.S. EPA, 2017b).

In addition to criteria air pollutants, the U.S. EPA and CARB have classified certain pollutants as hazardous air pollutants (HAPs) or toxic air contaminants (TACs), respectively. These pollutants can cause severe health effects at very low concentrations, and many are suspected or confirmed carcinogens. The U.S. EPA has identified 187 HAPs, including such substances as arsenic and chlorine; CARB considers all U.S. EPA designated HAPS, as well as particulate emissions from diesel-fueled engines (DPM) and other substances, to be a TAC. Since CARB's list of TACs references and includes U.S. EPA's list of HAPs, this document uses the term TAC when referring to HAPs and TACs. A description of the TACs associated with the proposed Project and its vicinity is provided below.

- Gasoline-Powered Mobile Sources. According to the SCAQMD's *Multiple Air Toxics Exposure Study in the South Coast Air Basin* (SCAQMD 2015a), or MATES IV, gasoline-powered vehicles emit TACs, such as benzene, which can have adverse health risks. Gasoline-powered sources emit TACs in much smaller amounts than diesel-powered vehicles. The MATES IV study identifies that diesel emissions account for between 68% to 80% of the total air toxics and cancer risk in the Basin.
- Diesel Particulate Matter (DPM). Diesel engines emit both gaseous and solid material; the solid material is known as DPM. Almost all DPM is less than 1 µm in diameter, and thus is a subset of $PM_{2.5}$. DPM is typically composed of carbon particles and numerous organic compounds. Diesel exhaust also contains gaseous pollutants, including VOCs and NO_x. The primary sources of diesel emissions are ships, trains, trucks, rail yards and heavily traveled roadways. These sources are often located near highly populated areas, resulting in greater DPM related health consequences in urban areas. The majority of DPM is small enough to be inhaled into the lungs and what particles are not exhaled can be deposited on the lung surface and in the deepest regions of the lungs where the lung is most susceptible to injury. In 1998, CARB identified DPM as a toxic air contaminant based on evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM also contributes to the same non-cancer health effects as $PM_{2.5}$ exposure (CARB 2016c).
- PM from Wheel-Rail Interaction. PM may also be generated from friction between rail and locomotive wheels (wheel-rail interaction). This abrasion process can suspend metals such as iron, chromium, manganese, and copper in the form of PM (CARB 2019d, Loxham et al. 2013); however, the potential for PM to be generated is dependent on the weight of the train and the conditions of the wheels and track on which the train rides. The Metro Gold Line is commuter rail that consists of an Electric Multiple Unit locomotive system that is lighter than traditional diesel locomotive commuter and freight trains, and in new condition. Thus, while the Metro Gold Line may generate PM from wheel-rail interaction, this contribution is anticipated be minimal (i.e., would not have an appreciable effect on mass emission or health risk estimates) and this issue is not discussed further in this Report.

Common criteria air pollutants, such as ozone precursors, SO_2, and PM, are emitted by a large number of sources and have effects on a regional basis (i.e., throughout the Basin); other pollutants, such as HAPs, TACs, and fugitive dust, are generally not as prevalent and/or emitted by fewer and more specific sources. As such, these pollutants have much greater effects on local air quality conditions and local receptors.

2.1.2 Regional Air Pollutant Emissions Levels

CARB's estimate of the amount of emissions generated within the Basin in 2012, the most recent year for which data is available, is summarized in Table 2-2.

Table 2-2: South Coast Air Basin Emissions Summary							
Emissions Source	2012 Pollutant Emissions (Tons Per Day)						
	ROG	NO_X	$PM_{2.5}$	PM_{10}	PM	CO	SO_X
Stationary(A)	97	49	15	20	26	55	10
Area-wide(B)	115	21	28	93	175	54	1
Mobile(C)	256	445	22	36	37	2,004	7
Total(D)	468	514	65	148	238	2,113	17
Emissions Source	2012 Pollutant Emissions (Tons Per Year)						
	ROG	NO_X	$PM_{2.5}$	PM_{10}	PM	CO	SO_X
Stationary (A)	35,478	17,925	5,497	7,253	9,574	20,130	3,555
Area-wide (B)	42,026	7,523	10,370	33,821	63,849	19,728	186
Mobile (C)	93,334	162,294	7,884	13,104	13,447	731,442	2,398
Total (D)	170,838	187,741	23,751	54,177	86,870	771,300	6,139

Source: CARB 2016b, modified by MIG.

(A) Stationary sources include fuel combustion in stationary equipment or a specific type of facility such as printing and metals processing facilities. Concrete batching is a subset of stationary source emissions.

(B) Mobile sources include automobiles, trucks, and other vehicles intended for "on-road" travel and other self-propelled machines such as construction equipment and all-terrain vehicles intended for "off-road" travel.

(C) Area-wide sources include solvent evaporation (e.g., consumer products, painting, and asphalt paving) and miscellaneous processes such as residential space heating, fugitive windblown dust, and cooking.

(D) Totals may not equal due to rounding.

2.1.3 South Coast Air Basin Climate, Topography, and Meteorology

Los Angeles County and the broader Los Angeles Basin are defined by a semi-arid, Mediterranean climate with mild winters and warm summers. The San Gabriel, San Bernardino, and San Jacinto Mountains bound the Basin to the north and east trap ambient air and pollutants within the Los Angeles and Inland Empire valleys below.

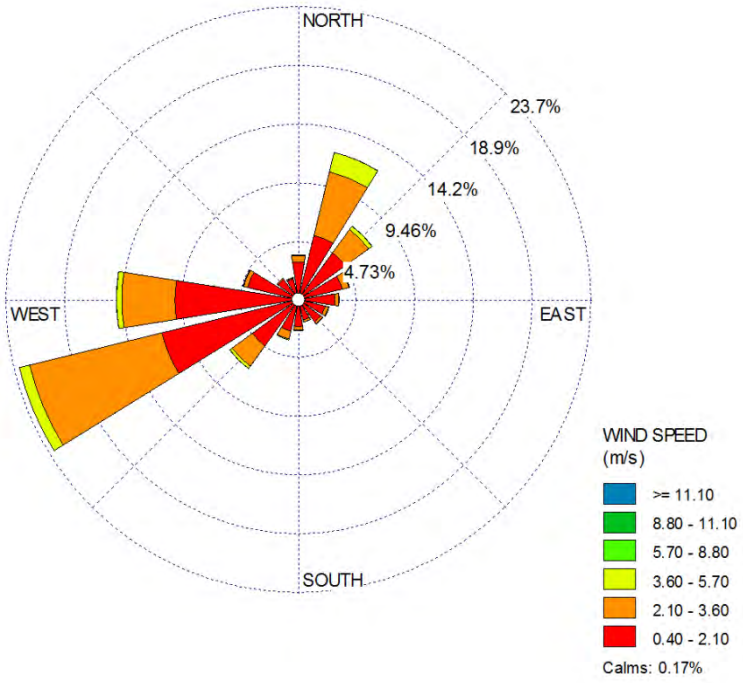
The City's climate, and that of Southern California in general, is generally controlled by the strength and position of the subtropical high pressure cell over the Pacific Ocean. It maintains moderate temperatures and comfortable humidity, and limits precipitation to a few storms during the winter rainy season. Temperatures are normally mild, excepting the summer months, which can bring temperatures well above 100 degrees Fahrenheit (° F). The annual average temperature in the Basin is approximately 62 degrees Fahrenheit. Near the City of Monrovia, winds are driven by the dominant land/sea breeze circulation system. Regional wind patterns are dominated by daytime onshore sea breezes while at night the wind generally slows and reverses direction traveling towards the sea. The frequency of calm winds (less than 2 miles per hour) is less than 10 percent, meaning there is little stagnation near the City, especially during busy daytime traffic hours; however, the Basin experiences temperature inversions which inhibit the dispersion of pollutants. Inversions may be either ground based or elevated. Ground-based inversions, sometimes referred to as radiation inversions, are most severe during clear, cold, early winter mornings. Under conditions of a ground-based inversion, very little mixing or turbulence occurs, and high concentrations of primary pollutants may occur local to major roadways. Elevated inversions can be generated by a variety of meteorological phenomena. Elevated inversions act as a lid or upper boundary and restrict vertical mixing. Below the elevated inversion, dispersion is not restricted.

City of Monrovia elevations range from approximately 440 feet above mean seal level (AMSL) in the southern portion of the City to approximately 1,240 feet AMSL in the northern portion of the City.

Portions of the City's sphere of influence include step hillsides and rugged terrain that can reach 1,800 feet AMSL. The proposed Project site is generally located at an approximate elevation of 450 feet AMSL.

The SCAQMD maintains publically available meteorological data for use in air quality analyses. The closest meteorological station to the proposed Project site is the Azusa meteorological station, located less than five miles to the east of the proposed Project. The SCAQMD Azusa meteorological station data includes five complete years of meteorological data from January 2012 to December 2016. The wind rose for the Azusa meteorological station data set is shown in Figure 2-1.

Figure 2-1 Wind Rose for Azusa Meteorological Station (Blowing From)



Source: SCAQMD 2018e

2.1.4 Regional Air Quality Conditions and Attainment Status

As described in Section 2.1.1 and shown in Table 2-1, the federal and state governments have established emission standards and limits for air pollutants which may reasonably be anticipated to endanger public health or welfare. These standards typically take one of two forms: standards or requirements that are applicable to specific types of facilities or equipment (e.g., petroleum refining, metal smelting), or concentration-based standards that are applicable to overall ambient air quality. Air quality conditions are best described and understood in the context of these standards; areas that meet, or attain, concentration-based ambient air quality standards are considered to have levels of pollutants in the ambient air that, based on the latest scientific knowledge, do not endanger public health or welfare.

The U.S. EPA, CARB, and the SCAQMD assess the air quality of an area by measuring and monitoring the amount of pollutants in the ambient air and comparing pollutant levels against NAAQS and CAAQS. Based on these comparisons, regions are classified into one of the following categories:

- Attainment. A region is "in attainment" if monitoring shows ambient concentrations of a specific pollutant are less than or equal to NAAQS or CAAQS. In addition, an area that has

been re-designated from nonattainment to attainment is classified as a "maintenance area" for 10 years to ensure that the air quality improvements are sustained.

- Nonattainment. If the NAAQS or CAAQS are exceeded for a pollutant, the region is designated as nonattainment for that pollutant. It is important to note that some NAAQS and CAAQS require multiple exceedances of the standard in order for a region to be classified as nonattainment. Federal and state laws require nonattainment areas to develop strategies, plans, and control measures to reduce pollutant concentrations to levels that meet, or attain, standards.
- Unclassified. An area is unclassified if the ambient air monitoring data are incomplete and do not support a designation of attainment or nonattainment.

Table 2-3 below summarizes the Basin's attainment status for criteria pollutants. The Basin is currently in nonattainment for state and federal ozone, state PM_{10}, and state and federal $PM_{2.5}$ standards.

Table 2-3: South Coast Air Basin Attainment Status

Pollutant	Federal	State
O_3 (1-hr)	Nonattainment	Nonattainment
O_3 (8-hr)	Nonattainment	Nonattainment
PM_{10} (24-hr and Annual)	Attainment	Nonattainment
$PM_{2.5}$ (24-hr)	Nonattainment	--
$PM_{2.5}$ (Annual)	Nonattainment	Nonattainment
CO	Attainment (Maintenance)	Attainment
NO_2 (1-hr)	Attainment	Attainment
NO_2 (Annual)	Attainment (Maintenance)	Attainment
SO_2	Attainment	Attainment
Lead	Partial Nonattainment	Attainment
Visibility Reducing Particles	--	Unclassified
SO_4	--	Attainment
H_2S	--	Attainment

Source: SCAQMD, 2016a

Pollution problems in the Basin are caused by emissions within the area and the specific meteorology that promotes pollutant concentrations. Emissions sources vary widely from smaller sources such as individual residential water heaters and short-term grading activities to extensive operational sources including long-term operation of electrical power plants and other intense industrial use. Pollutants in the Basin are blown inward from coastal areas by sea breezes from the Pacific Ocean and are prevented from horizontally dispersing due to the surrounding mountains. This is further complicated by atmospheric temperature inversions that create inversion layers. The inversion layer in Southern California refers to the warm layer of air that lies over the cooler air from the Pacific Ocean. This is strongest in the summer and prevents ozone and other pollutants from dispersing upward. A ground-level surface inversion commonly occurs during winter nights and traps carbon monoxide emitted during the morning rush hour.

2.1.5 Local Air Quality Conditions

Air pollution levels are measured at monitoring stations located throughout the Basin. The Project site is located in SCAQMD Source Receptor Area (SRA) 9 – East San Gabriel Valley. The station closest to Monrovia is identified as the East San Gabriel Valley 1 Station (Station #060) by SCAQMD (CARB refers to this station as Azusa). The station is located less than four miles to the east of Monrovia's boundary and monitors CO, O_3, NO_2, PM_{10} and $PM_{2.5}$. This monitoring station represents the best approximation of the air quality conditions within the City.

Table 2-4 summarizes the published monitoring data from the East San Gabriel Valley 1 monitoring station from 2014 to 2016, the three most recent years for which verified, published data is available from the SCAQMD (2017 data was not yet available as of the time of writing of this Report). Table 2-4 shows that air quality standards at this location have been exceeded for $PM_{2.5}$, PM_{10}, and O_3. This is consistent with the entire Basin's classification as non-attainment for $PM_{2.5}$, PM_{10}, and O_3. As shown in Table 2-4:

- The maximum 1-hour and 8-hour CO concentration generally decreased from 2014 to 2016. There were no days in which CO standards were exceeded during this time period.
- The maximum 1-hour NO_2 concentration generally increased from 2014 to 2016, while the average annual NO_2 concentration generally decreased. There were no days in which NO_2 standards were exceeded during this time period.
- The maximum 1-hour and 8-hour O_3 concentration, as well as the number of days exceeding O_3 standards, generally increased from 2014 to 2016.
- The maximum 24-hour and average annual PM_{10} concentration fluctuated during the 2014 to 2016 period but there were no days/years in which the Federal PM_{10} standards were exceeded. The State PM_{10} annual standard was exceeded in 2014, 2015, and 2016; however, the annual average PM_{10} concentration and the number of days exceeding the state 24-hour standard generally decreased over this time period.
- The maximum 24-hour and average annual $PM_{2.5}$ concentration fluctuated during the 2014 to 2016 period but there were no years in which the Federal or State $PM_{2.5}$ annual average standards were exceeded. The Federal 24-hour $PM_{2.5}$ standard was exceeded once in 2015.

Table 2-4: 2014-2016 Local Air Quality Data for East San Gabriel Valley(A)				
Pollutant	Ambient Air Standard	Year(A)		
		2014	2015	2016
Ozone (O_3)				
Maximum 1-hour Concentration (ppm)		0.123	0.122	0.146
Maximum 8-hr Concentration (ppm)		0.092	0.096	0.106
Number of Days Exceeding State 1-hr Standard	>180 µg/m3	11	21	30
Number of Days Exceeding State 8-hr Standard	>137 µg/m3	20	28	40
Days Exceeding Federal 1-hr Standard	>0.124 ppm	0	0	4
Days Exceeding Federal 8-hr Standard	>0.070 ppm	11	27	39
Carbon Monoxide (CO)				
Maximum 1-hr Concentration (ppm)		2	2.1	1.3
Maximum 8-hr Concentration (ppm)		1.9	1.3	1.2
Days Exceeding State 1-hr Standard	>23,000 µg/m^3	--	--	--
Days Exceeding Federal/State 8-hr Standard	>10,000 µg/m^3	--	--	--
Days Exceeding Federal 1-hr Standard	>40,000 µg/m^3	--	--	--
Nitrogen Dioxide (NO_2)				
Maximum 1-hr Concentration (ppb)		70.2	71.0	74.2
Annual Arithmetic Mean Concentration (ppb)		17.8	15.4	16.6
Days Exceeding State 1-hr Standard	>180 µg/m^3	--	--	--
Coarse Particulate Matter (PM_{10})				
Maximum 24-hr Concentration (µg/m^3)		96	101	74
Annual Arithmetic Mean (µg/m^3)		44.1	37.1	33.7
Samples Exceeding State 24-hr Standard	>50 µg/m^3	22	12	12
Samples Exceeding Federal 24-hr Standard	>150 µg/m^3	0	0	0
Fine Particulate Matter ($PM_{2.5}$)				
Maximum 24-hr Concentration (µg/m^3)		32.4	44.3	32.17
Annual Arithmetic Mean (µg/m^3)		11.63	9.4	10.15
Samples Exceeding Federal 24-hr Standard	>35 µg/m^3	0	1	0
Source: SCAQMD 2018a, 2018b, 2018c (A) "--" indicates data are not available.				

2.2 LOCAL AIR QUALITY SETTING

The proposed Project is located in the City of Monrovia, in Los Angeles County. According to the City's General Plan, motor vehicles represent the major source of emissions within the City and the Basin. The proposed Project site consists of a mix of single-family residential (8 total dwelling units), two industrial parcels (approximately 44,130 square feet), vacant lot, and private parking lot. The site bounded by West Evergreen Avenue to the north, South Primrose Avenue to the east, West Pomona Avenue to the south, and South Magnolia Avenue to the west. The Project area has a current General Plan land use designation of Planned Development and is zoned Planned Development-12. The site is generally bordered by other commercial and industrial land uses with some residential uses nearby.

2.2.1 Existing Operations and Emissions Estimates

As described previously, the existing land uses in the Project area consists of a mix of single-family residential (8 total dwelling units), two industrial parcels (approximately 44,130 square feet), vacant lot, and private parking lot. These existing land uses generate emissions from the following sources:

- Small "area" sources. Existing land uses in the Project area generate emissions from small area sources including landscaping equipment and the use of consumer products such as paints, cleaners, and fertilizers that result in the evaporation of chemicals into the atmosphere during product use.
- Energy use and consumption. Existing land uses in the Project area generate emissions from the combustion of natural gas in water and space heating equipment, as well as industrial processes.
- Mobile sources. Existing land uses in the Project area generate emissions from vehicles travelling to and from the plan area.

The Project area's existing emissions were estimated using CalEEMod, V. 2016.3.2. The existing emissions were estimated using default data assumptions provided by CalEEMod, with the following Project-specific modifications:

- The default acreage and square footage for each of the Project area's land use types were adjusted to reflect the actual Project area as currently developed.
- The default trip generation rates for the existing land use types were replaced with trip generation rates contained in the TIS prepared for the Project (Linscott, Law, and Greenspan 2019).

The Project area's existing emissions of criteria air pollutants are summarized in Table 2-5 below.

Table 2-5 Existing Emissions in the Project Area

Emissions Source	Maximum Daily Pollutant Emissions (Pounds Per Day) (A)							
	ROG	NO_x	CO	SO_2	PM_{10}		$PM_{2.5}$	
					Dust	Exhaust	Dust	Exhaust
Area	3.3	0.2	4.7	0.01	--	0.6	--	0.6
Energy	0.03	0.3	0.2	0.00(C)	--	0.02	--	0.02
Mobile	0.8	3.8	11.2	0.03	2.6	0.04	0.7	0.03
Total(B)	4.1	4.2	16.1	0.05	2.6	0.7	0.7	0.7

Source: MIG 2019, see Appendix A.

(A) Emissions estimated using CalEEMod, V 2016.3.2. Estimates are based on default model assumptions unless otherwise noted. Maximum daily ROG, CO, and SO_2 emissions occur during the summer. Maximum daily NO_X, PM_{10}, and $PM_{2.5}$ emissions occur during the winter.

(B) Totals may not equal due to rounding.

(C) "<0.00" does not indicate the emissions are less than or equal to 0; rather, it indicates the emission is smaller than 0.01 but larger than 0.000.

2.2.2 Sensitive Air Quality Receptors and Existing Regional Health Risks

The SCAQMD identifies sensitive receptors as populations more susceptible to the effects of air pollution than the general population. Some people are more affected by air pollution than others. Sensitive air quality receptors include specific subsets of the general population that are susceptible to poor air quality and the potential adverse health effects associated with poor air quality. Both CARB and the

SCAQMD consider residences, schools, parks and playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes to be sensitive air quality land uses and receptors (SCAQMD 2017a; CARB 2005). The potential sensitive air quality receptors adjacent or in close proximity to the perimeter of the Project area (i.e., within 1,000 feet) include:

- The single-family residence at 230 West Evergreen Avenue (surrounded by the Project area);
- The multi-family residential development at 228 West Pomona Avenue (MODA at Monrovia Station, 60 feet south of the Project area)
- The multi-family residential development at 313 Genoa Street (350 feet southwest of the Project area, across the Metro Gold Line right-of row (ROW)).

The existing sensitive air quality receptors located adjacent or in close proximity to the Project area, as well as the existing and proposed residents within the Project area, are exposed to air pollution associated with motor vehicles travelling on the I-210, which lies adjacent to the Project area.

According to the SCAQMD's MATES IV Carcinogenic Risk Map, the existing carcinogenic risk on either side of the I-210 in the vicinity of the Project (south and north of I-210) is 1,456 and 1,142, respectively (i.e., there is a probability of 1,456 and 1,142 cases of cancer out of a population of one million) (SCAQMD 2018d). These cancer risks are orders of magnitude higher than the SCAQMD's significance threshold of 10 cases in one million for cancer risk. These estimates, however, are based upon regional modeling efforts that largely do not account for site specific emission rates and dispersion characteristics that typically result in refined and substantially lower health risk estimates.

According to the Office of Environmental Health Hazard Assessment (OEHHA) CalEnviroScreen 3.0 Map, the proposed Project Area is in census tract 6037430902 and has an average pollution indicator percentile of 60% to 65% based on the CalEnviroScreen indicators (e.g., exposure, environmental effects, population characteristics, socioeconomic factors) (OEHHA 2018). These numbers also indicate relatively high health risks in the Project area, likely attributable to the proximity to the I-210. CalEnviroScreen is a mapping tool that helps identify California communities that are most affected by many sources of pollution, and where people are often especially vulnerable to pollution's effects. The tool uses environmental, health, and socioeconomic information to produce scores for every census tract in the state. The scores are then mapped so that different communities can be compared.

The CalEnviroScreen data indicates approximately 28 people per 10,000 people in the Project area's census tract visited an emergency facility for asthma-related health issues. This rate places the Project area's census tract in the 20th percentile, meaning the asthma rate in this census tract is higher than 20% of the census tracts in the State (OEHHA 2018). This factor indicates that adverse respiratory health is not prevalent in the census tract in which the proposed Project area is located, and that the existing conditions in the census tract are such that sensitive receptors are in an area of lower risk for adverse respiratory health effects compared to other areas in the state.

2.3 FEDERAL, STATE, AND LOCAL AIR QUALITY REGULATIONS

2.3.1 Federal Air Quality Regulations

Clean Air Act

The Federal Clean Air Act (CAA) defines the U.S. EPA's responsibilities for protecting and improving the United States air quality and ozone layer. Key components of the CAA include reducing

ambient concentrations of air pollutants that cause health and aesthetic problems, reducing emission of toxic air pollutants, and stopping production and use of chemicals that destroy the ozone.

Federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, Carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop State Implementation Plans (SIPs); comprehensive documents that identify how an area will attain NAAQS. Deadlines for attainment were established in the 1990 amendments to the CAA based on the severity of an area's air pollution problem. Failure to meet air quality deadlines can result in sanctions against the State or the EPA taking over enforcement of the CAA in the affected area. SIPs are a compilation of new and previously submitted plans, programs, district rules, and State and Federal regulations. The SCAQMD implements the required provisions of an applicable SIP through its Air Quality Management Plan (AQMP). Currently, SCAQMD implements the 2012 Lead SIP for the Los Angeles County portion of Basin through the 2012 AQMP, and the 8-hr Ozone, 1-hr Ozone, 24-hr $PM_{2.5}$, and annual $PM_{2.5}$ SIPs through the 2016 AQMP.

2.3.2 State Air Quality Regulations

California Clean Air Act

In addition to being subject to Federal requirements, air quality in the State is also governed by more stringent regulations under the California Clean Air Act, which was enacted in 1988 to develop plans and strategies for attaining the California Ambient Air Quality Standards. CARB, which is part of the California Environmental Protection Agency (Cal-EPA), develops Statewide air quality regulations, including industry-specific limits on criteria, toxic, and nuisance pollutants. The California Clean Air Act is more stringent than Federal Law in a number of ways, including revised standards for PM_{10} and ozone and for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

In California, both the Federal and State Clean Air acts are administered by CARB. It sets all air quality standards including emission standards for vehicles, fuels, and consumer goods as well as monitors air quality and sets control measures for toxic air contaminants. CARB oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional level.

In-Use Off-Road Diesel Equipment Program

CARB's In-Use Off-Road Diesel Equipment regulation is intended to reduce emissions of NO_x and PM from off-road diesel vehicles, including construction equipment, operating within California. The regulation imposes limits on idling; requires reporting equipment and engine information and labeling all vehicles reported; restricts adding older vehicles to fleets; and requires fleets to reduce their emissions by retiring, replacing, or repowering older engines or installing exhaust retrofits for PM. The requirements and compliance dates of the off-road regulation vary by fleet size, and large fleets (fleets with more than 5,000 horsepower) must meet average targets or comply with Best Available Control Technology (BACT) requirements beginning in 2014. CARB has off-road anti-idling regulations affecting self-propelled diesel-fueled vehicles of 25 horsepower and up. The off-road anti-idling regulations limit idling on applicable equipment to no more than five minutes, unless exempted due to safety, operation, or maintenance requirements.

On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation

CARB's On-Road Heavy-Duty Diesel Vehicles (In-Use) regulation (also known as the Truck and Bus Regulation) is intended to reduce emission of NO_X, PM, and other criteria pollutants generated from existing on-road diesel vehicles operating in California. The regulation applies to nearly all diesel-fueled

trucks and buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds that are privately or federally owned, and for privately and publicly owned school buses. Heavier trucks and buses with a GVWR greater than 26,000 pounds must comply with a schedule by engine model year or owners can report to show compliance with more flexible options. Fleets complying with the heavier trucks and buses schedule must install the best available PM filter on 1996 model year and newer engines, and replace the vehicle 8 years later. Trucks with 1995 model year and older engines had to be replaced starting in 2015. Replacements with a 2010 model year or newer engine meet the final requirements, but owners can also replace the equipment with used trucks that have a future compliance date (as specified in regulation). By 2023, all trucks and buses must have at least 2010 model year engines with few exceptions.

CARB Stationary Diesel Engines – Emission Regulations

In 1998, CARB identified DPM as a TAC. To reduce public exposure to DPM, in 2000, the Board approved the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (Risk Reduction Plan) (CARB 2000). Integral to this plan is the implementation of control measures to reduce DPM such as the control measures for stationary diesel-fueled engines. As such, diesel generators must comply with regulations under CARB's amendments *to Airborne Toxic Control Measure for Stationary Compression Ignition Engines* and be permitted by SCAQMD.

CARB Air Quality and Land Use Handbook

In 1998, CARB identified particulate matter from diesel-fueled engines as a TAC. CARB's Air Quality and Land Use Handbook is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process (CARB 2005). The CARB Handbook recommends that planning agencies consider proximity to air pollution sources when considering new locations for "sensitive" land uses, such as residences, medical facilities, daycare centers, schools, and playgrounds. Air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the Handbook relative to the Project Area include taking steps to consider or avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day;
- Within 300 feet of gasoline fueling stations; or
- Within 300 feet of dry cleaning operations (dry cleaning with TACs is being phased out and will be prohibited in 2023). The SCAQMD (Regulation 14, Rule 21) has established emission controls for the use of perchloroethylene, the most common dry-cleaning solvent.

Air Toxics "Hot Spots" Program

- State requirements specifically address air toxic issues through Assembly Bill (AB) 1807 (known as the Tanner Bill) that established the State air toxics program and the Air Toxics Hot Spots Information and Assessment Act (AB 2588). The air quality regulations developed from these bills have been modified recently to incorporate the Federal regulations associated with the Federal Clean Air Act Amendments of 1990. The Air Toxics Hot Spots Information and Assessment Act (Hot Spots Act) was enacted in September 1987. Under this Bill, stationary sources of emissions are required to report the types and quantities of certain substances that their facilities routinely release into the air.

California Building Industry Association vs. Bay Area Air Quality Management District

The California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369 (2015) ruled that CEQA review is focused on a project's impact on the environment "and not the environment's impact on the project." The opinion also holds that when a project has "potentially significant exacerbating effects on existing environmental hazards" those impacts are properly within the scope of CEQA because they can be viewed as impacts of the project on "existing conditions" rather than impacts of the environment on the project. The Supreme Court provided the example of a project that threatens to disperse existing buried environmental contaminants that would otherwise remain undisturbed. The Court concluded that it is proper under CEQA to undertake an analysis of the dispersal of existing contaminants because such an analysis would be focused on how the project "would worsen existing conditions." The court also found that the limited number of express CEQA provisions that require analysis of the impacts of the existing environment on a project – such as impacts associated with school siting and airports – should be viewed as specific statutory exceptions to the general rule that such impacts are not properly within CEQA's scope.

2.3.3 Regional Air Quality Regulations

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is a Joint Powers Authority under California State Law, established as an association of Local Governments and agencies that voluntarily convene as a forum to address regional issues. SCAG encompasses the counties of Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial.

SCAG is designated as a Metropolitan Planning Organization (MPO) and as a Regional Transportation Planning Agency. Under SB 375, SCAG, as a designated MPO, is required to prepare a Sustainable Communities Strategy (SCS) as an integral part of its Regional Transportation Plan (RTP). On April 7, 2016, SCAG's Regional Council adopted the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS). The 2016 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Information contained in Chapter 5: The Road to Greater Mobility and Sustainable Growth of the 2016 RTP/SCS forms the basis for the land use and transportation components of the Air Quality Management Plan (AQMP), and are utilized in the preparation of air quality forecasts and consistency analysis included in the AQMP.

SCAQMD 2016 Air Quality Management Plan

The purpose of an AQMP is to bring an air basin into compliance with federal and state air quality standards and is a multi-tiered document that builds on previously adopted AQMPs. The 2016 AQMP for the Basin, which updated the 2012 AQMP, was approved by the SCAQMD Board of Directors on March 3, 2017. The 2016 AQMP provides new and revised demonstration's for how the SCAQMD, in coordination with Federal, State, Regional and Local Governments will bring the Basin back into attainment for the

following NAAQS: 2008 8-hour Ozone; 2012 Annual PM2.5; 2006 24-hour PM2.5[1]; 1997 8-hour Ozone; and 1997 1-hour Ozone.

To achieve the reductions necessary to bring ambient air quality back into attainment the SCAQMD has identified seven primary objectives for the AQMP, which include:

1. Eliminating reliance on unknown future technology measures to demonstrate future attainment of air quality standards;
2. Calculating and accounting for co-benefits associated with measures identified in other, approved planning efforts (e.g., SCAG's RTP/SCS);
3. Developing a strategy with fair-share emission reductions at the Federal, State, and local levels;
4. Investing in strategies and technologies that meet multiple objectives regarding air quality, climate change, air toxic exposure, energy, and transportation – especially in disadvantaged communities;
5. Seeking, identifying, and securing significant sources of funding for incentives to implement early deployment and commercialization of zero and near-zero technologies, particularly in the mobile source sector;
6. Enhancing the socioeconomic analysis and selecting the most efficient and cost-effective path to achieve multi-pollutant and deadline targets; and
7. Prioritize non-regulatory, innovative approaches that can contribute to the economic vitality of the regional while maximizing emission reductions.

The emission forecasts and demonstrations presented in the 2016 AMQP rely heavily on information contained in other planning and strategy documents. For example, the 2016 AQMP's long-term emissions inventory is based on the growth and land use(s) projections contained in the SCAG's 2016 RTP/SCS. Additionally, the conclusions relating to ozone compliance are based on implementation of measures presented in CARB's Mobile Source Strategy and SIP strategy. The Mobile Source Strategy outlines a suite of measures targeted at on-road light- and heavy-duty vehicles, off-road equipment, and Federal and international sources. A subset of the Statewide strategy is a mobile source strategy for the South Coast SIP. Because the SCAQMD has limited authority in regulating mobile source emissions, coordination and cooperation between SCAQMD, CARB, and the U.S. EPA is imperative to meeting the NOx reductions required to meet ozone standards. Although not incorporated specifically from another planning document strategy, the 2016 AQMP also provides numerous control measures for stationary sources.

[1] Although the 2006 24-hour $PM_{2.5}$ standard was focused on in the 2012 AQMP, it has since been determined, primarily due to unexpected drought conditions, that it is impractical to meet the standard by the original attainment year. Since adoption of the 2012 AQMP, the US EPA approved a re-classification to "serious" non-attainment for the standard, which requires a new attainment demonstration and deadline.

SCAQMD Rule Book

In order to control air pollution in the Basin, the SCAQMD adopts rules that establish permissible air pollutant emissions and governs a variety of businesses, processes, operations, and products to implement the AQMP and the various federal and state air quality requirements. SCAQMD does not adopt rules for mobile sources; those are established by CARB or the U.S. EPA. In general, the SCAQMD rules that are anticipated to be applicable to the development of the proposed Project, include:

- Rule 401 (Visible Emissions) prohibits discharge into the atmosphere from any single source of emission for any contaminant for a period or periods aggregating more than three minutes in any one hour that is as dark or darker in shade than that designated as No. 1 on the Ringelmann Chart, as published by the U.S. Bureau of Mines.
- Rule 402 (Nuisance) prohibits discharges of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
- Rule 403 (Fugitive Dust) prohibits emissions of fugitive dust from any grading activity, storage pile, or other disturbed surface area if it crosses the project property line or if emissions caused by vehicle movement cause substantial impairment of visibility (defined as exceeding 20 percent capacity in the air). Rule 403 requires the implementation of Best Available Control Measures and includes additional provisions for projects disturbing more than five acres and those disturbing more than fifty acres.
- Rule 445 (Wood Burning Devices) prohibits installation of woodburning devices such as fireplaces and wood-burning stoves in new development unless the development is located at an elevation above 3,000 feet or if existing infrastructure for natural gas service is not available within 150-feet of the development. All fireplaces installed within the Proposed Project Area will be natural gas fueled fireplaces.
- Rule 481 (Spray Coating Operations) imposes equipment and operational restrictions during construction for all spray painting and spray coating operations.
- Rule 1108 (Cutback Asphalt) prohibits the sale or use of any cutback asphalt containing more than 0.5 percent by volume organic compounds which evaporate at 260°C (500°F) or lower.
- Rule 1113 (Architectural Coatings) establishes maximum concentrations of VOCs in paints and other applications and establishes the thresholds for low-VOC coatings.
- Rule 1143 (Consumer Paint Thinners and Multi-Purpose Solvents) prohibits the supply, sale, manufacture, blend, package or repackage of any consumer paint thinner or multi-purpose solvent for use in the SCAQMD unless consumer paint thinners or other multi-purpose solvents comply with applicable VOC content limits.
- Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities) specifies work practice requirements to limit asbestos emissions from building demolitions and renovation activities, including the removal and associated disturbance of asbestos containing materials. The requirements for demolition and renovation activities include asbestos surveying, notification, asbestos containing materials removal procedures and time schedules, asbestos containing materials handling and clean-up procedures, and storage, disposal, and land filling requirements for asbestos containing waste materials.

2.3.4 City of Monrovia General Plan

The City of Monrovia's existing General Plan does not establish specific goals, policies, or standards related to air quality; however, the City's Monrovia General Plan Proposed Land Use and Circulation Elements EIR (City of Monrovia 2008) included the following mitigation measures related to air quality:

- AIR-A: The City shall require applicants to analyze the air quality impacts of construction for each project.
- AIR-B: If project-level analysis demonstrates that NOx emissions would be significant, the project shall provide a plan, for approval by the City, demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, shall utilize all feasible measures to reduce the emissions to a less than significant level. Acceptable options for reducing emissions may include use of late model low-emission diesel engines, alternative fuels, engine retrofit technology, and/or other options as they become available. The SCAQMD web site provides specific information on mitigation options for off-road and on-road construction equipment.
- AIR-C: The following measure shall be incorporated into all project specifications to reduce diesel engine emissions of O_3 precursors including ROG and NO_X, PM_{10}, $PM_{2.5}$, and diesel PM:

  Idling Restrictions. Idling of diesel-powered vehicles and equipment shall not be permitted during periods of non-active vehicle use. Diesel-powered engines shall not be allowed to idle for more than 5 consecutive minutes in a 60-minute period when the equipment is not in use, occupied by an operator, or otherwise in motion, except as follows:

  - When equipment is forced to remain motionless because of traffic conditions or mechanical difficulties over which the operator has no control;
  - When it is necessary to operate auxiliary systems installed on the equipment, only when such system operation is necessary to accomplish the intended use of the equipment;
  - To bring the equipment to the manufacturer's recommended operating temperature;
  - When the ambient temperature is below 40 degrees F or above 85 degrees F; or
  - When equipment is being repaired.
- AIR–D: The City shall require that all new residential fireplaces to be fueled by natural gas. Wood stoves and wood burning fireplaces shall be prohibited.
- AIR-E: The City shall require applicants to analyze the potential for creating a local CO hotspot due to traffic congestion that could result from implementation of projects anticipated in the proposed General Plan amendments to the Land Use and Circulation Element.
- AIR-F: The City shall require applicants to complete a Health Risk Assessment (HRA) to determine the cancer risk to sensitive receptors for all residential projects located within 500 feet of Interstate 210 (I-210).
- AIR-G: The City shall require applicants to assess the potential impacts to children's respiratory health for all residential projects located within 500 feet of I-210.

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3 GREENHOUSE GAS SETTING AND REGULATORY FRAMEWORK

This chapter provides information on the environmental and regulatory GHG setting of the proposed Project. Information on existing GHG conditions, relevant standards, and issues of concern was obtained from the U.S. EPA, CARB, and SCAQMD.

3.1 DEFINING CLIMATE CHANGE

Climate change is the distinct change in measures of climate for a long period of time. Climate change can result from natural processes and from human activities. Natural changes in the climate can be caused by indirect processes such as changes in the Earth's orbit around the Sun or direct changes within the climate system itself (i.e. changes in ocean circulation). Human activities can affect the atmosphere through emissions of gases and changes to the planet's surface. Emissions affect the atmosphere directly by changing its chemical composition, while changes to the land surface indirectly affects the atmosphere by changing the way the Earth absorbs gases from the atmosphere. The term "climate change" is preferred over the term "global warming" because "climate change" conveys the fact that other changes can occur beyond just average increase in temperatures near the Earth's surface.

Elements that indicate that climate change is occurring on Earth include, but are not limited to:

- Rising of global surface temperatures by 1.3°F over the last 100 years;
- Changes in precipitation patterns;
- Melting ice in the Arctic;
- Melting glaciers throughout the world;
- Rising ocean temperatures;
- Acidification of oceans; and
- Range shifts in plant and animal species

Climate change is intimately tied to the Earth's greenhouse effect. The greenhouse effect is a natural occurrence that helps regulate the temperature of the planet. The majority of radiation from the Sun hits the Earth's surface and warms it. The Earth's surface in turn radiates heat back towards the atmosphere, known as infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping back into space and re-radiate it in all directions. This process is essential to supporting life on Earth because it keeps the planet warmer during the nights than without it. Emissions from human activities since the beginning of the industrial revolution (approximately 150 years ago) are adding to the natural greenhouse effect by increasing the gases in the atmosphere that trap heat, thereby contributing to an average increase in the Earth's temperature. Human activities that enhance the greenhouse effect are detailed below.

3.1.1 Greenhouse Gases

Gases that trap heat in the atmosphere and affect regulation of the earth's temperature are known as a greenhouse" gas, or GHG(s). Many chemical compounds found in the earth's atmosphere exhibit the GHG property. GHGs allow sunlight to enter the atmosphere freely. When sunlight strikes the earth's surface, it is either absorbed or reflected back toward space. Earth that has absorbed sunlight warms up and emits infrared radiation toward space. GHGs absorb this infrared radiation and "trap" the energy in the earth's atmosphere.

GHGs that contribute to climate regulation are a different type of pollutant than criteria or hazardous air pollutants because climate regulation is global in scale, both in terms of causes and effects. Some GHGs are emitted to the atmosphere naturally by biological and geological processes such as evaporation (water vapor), aerobic respiration (carbon dioxide), and off-gassing from low oxygen environments such as swamps or exposed permafrost (methane); however, GHG emissions from human activities such as fuel combustion (e.g., carbon dioxide) and refrigerants use (e.g., hydrofluorocarbons) significantly contribute to overall GHG concentrations in the atmosphere, climate regulation, and global climate change. Human production of GHG has increased steadily since pre-industrial times (approximately pre-1880) and atmospheric carbon dioxide concentrations have increased from a pre-industrial value of 280 parts per million (ppm) in the early 1800's to 406 ppm in October 2018 (NOAA, 2018).

The 1997 United Nations' Kyoto Protocol international treaty set targets for reductions in emissions of four specific GHGs – carbon dioxide, methane, nitrous oxide, and sulfur hexafluoride – and two groups of gases – hydrofluorocarbons and perfluorocarbons. These GHG are the primary GHG emitted into the atmosphere by human activities. Water vapor is also a common GHG that regulates the earth's temperature; however, the amount of water vapor in the atmosphere can change substantially from day to day, whereas other GHG emissions remain in the atmosphere for longer periods of time. Black carbon consists of particles emitted during combustion; although a particle and not a gas, black carbon also acts to trap heat in the Earth's atmosphere. The six common GHGs are described below.

- Carbon Dioxide (CO_2). CO_2 is released to the atmosphere when fossil fuels (oil, gasoline, diesel, natural gas, and coal), solid waste, and wood or wood products are burned.
- Methane (CH_4). CH_4 is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from the decomposition of organic waste in municipal solid waste landfills and the raising of livestock.
- Nitrous Oxide (N_2O). N_2O is emitted during agricultural and industrial activities, as well as during combustion of solid waste and fossil fuels.
- Sulfur Hexafluoride (SF_6). SF_6 is commonly used as an electrical insulator in high voltage electrical transmission and distribution equipment such as circuit breakers, substations, and transmission switchgear. Releases of SF_6 occur during maintenance and servicing as well as from leaks of electrical equipment.
- Hydrofluorocarbons (HFCs) and Perfluorocarbons (PFCs). HFCs and PFCs are generated in a variety of industrial processes. Although the amount of these gases emitted into the atmosphere is small in terms of their absolute mass, they are potent agents of climate change due to their high global warming potential.

GHGs can remain in the atmosphere long after they are emitted. The potential for a particular greenhouse gas to absorb and trap heat in the atmosphere is considered its global warming potential (GWP). The reference gas for measuring GWP is CO_2, which has a GWP of one. By comparison, CH_4 has a GWP of 25, which means that one molecule of CH_4 has 25 times the effect on global warming as one molecule of CO_2. Multiplying the estimated emissions for non-CO_2 GHGs by their GWP determines their carbon dioxide equivalent (CO2e), which enables a project's combined global warming potential to be expressed in terms of mass CO_2 emissions. The GWPs and estimated atmospheric lifetimes of the common GHG are shown in Table 3-1.

Table 3-1: Global Warming Potential (GWP) of Common Greenhouse Gases (GHG)		
GHG	Lifetime (years)	GWP(A)
Carbon Dioxide (CO_2)	50-200	1
Methane (CH_4)	12	25
Nitrous Oxide (N_2O)	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC-14	50,000	7,390
PFC-116	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800
Source: CARB, 2014. (A) GWPs are based on the United Nations Intergovernmental Panel on Climate Change (IPCC) 4th Assessment Report.		

3.1.2 Climate Change and California

The 2009 California Climate Adaptation Strategy prepared by the California Natural Resources Agency (CNRA) identified anticipated impacts to California due to climate change through extensive modeling efforts. General climate changes in California indicate that:

- California is likely to get hotter and drier as climate change occurs with a reduction in winter snow, particularly in the Sierra Nevada Mountain Range.
- Some reduction in precipitation is likely by the middle of the century.
- Sea levels will rise up to an estimated 55 inches.
- Extreme events such as heat waves, wildfires, droughts, and floods will increase.
- Ecological shifts of habitat and animals are already occurring and will continue to occur (CNRA 2009).

In July 2012, the CNRA and Emergency management Agency published an update, titled Emergency Management Agency published California Adaptation Planning Guide, which walks local decision-makers through the steps to create climate vulnerability assessments and adaptation strategies. This guide presents the basis for climate change adaptation planning and introduces a step-by-step process for local and regional climate vulnerability assessment and adaptation strategy development. The guide outlines nine steps in adaptation planning development, the first five steps are a vulnerability assessment which covers: 1) exposure, 2) sensitivity, 3) potential impacts, 4) adaptive capacity, and 5) risk and onset. The last four steps are guiding principles for adaptation strategy development, which are: 6) prioritize adaptive needs, 7) identify strategies, 8) evaluate and prioritize, and 9) phase and implement.

The potential impacts of global climate change in California are detailed below.

Public Health and Welfare

Concerns related to public health and climate change includes higher rates of mortality and morbidity, change in prevalence and spread of disease vectors, decreases in food quality and security,

reduced water availability, and increased exposure to pesticides. These concerns are all generally related to increase in ambient outdoor air temperature, particularly in summer.

Higher rates of mortality and morbidity could arise from more frequent heat waves at greater intensities. Health impacts associated with extreme heat events include heat stroke, heat exhaustion, and exacerbation of medical conditions such as cardiovascular and respiratory diseases, diabetes, nervous system disorders, emphysema, and epilepsy. Climate change would result in degradation of air quality promoting the formation of ground-level pollutants, particularly ozone. Degradation of air quality would increase the severity of health impacts from criteria and other air pollutants discussed in Section 2.1.1 (Regulated Air Pollutants). Temperature increases and increases in carbon dioxide are also expected to increase plant production of pollens, spores, and fungus. Pollens and spores could induce or aggravate allergic rhinitis, asthma, and obstructive pulmonary diseases.

Precipitation projections suggest that California will become drier over the next century due to reduced precipitation and increased evaporation from higher temperatures. These conditions could result in increased occurrences of drought. Surface water reductions will increase the need to pump groundwater, reducing supplies and increasing the potential for land subsidence.

Precipitation changes are also suspected to impact the Sierra snowpack (see "Water Management" herein). Earlier snowmelts could coincide with the rainy season and could result in failure of the flood control devices in that region. Flooding can cause property damage and loss of life for those affected. Increased wildfires are also of concern as the State "dries" over time. Wildfires can also cause property damage, loss of life, and injuries to citizens and emergency response services.

Sea-level rises would also threaten human health and welfare. Flood risks will be increased in coastal areas due to strengthened storm surges and greater tidal damage that could result in injury and loss of property and life. Gradual rising of the sea will permanently inundate many coastal areas in the state.

Other concerns related to public health are changes in the range, incidence, and spread of infectious, water-borne, and food-borne diseases. Changes in humidity levels, distribution of surface water, and precipitation changes are all likely to shift or increase the preferred range of disease vectors (i.e. mosquitoes). This could expose more people and animals to potential for vector-borne disease.

Biodiversity and Habitat

Changes in temperature will change the livable ranges of plants and animals throughout the state and cause considerable stress on these species. Species will shift their range if appropriate habitat is available and accessible if they cannot adapt to their new climate. If they do not adapt or shift, they face local extirpation or extinction. As the climate changes, community compositions and interactions will be interrupted and changed. These have substantial implications on the ecosystems in the state. Extreme events will lead to tremendous stress and displacement on affected species. This could make it easier for invasive species to enter new areas, due to their ability to more easily adapt. Precipitation changes would alter stream flow patterns and affect fish populations during their life cycle. Sea level rises could impact fragile wetland and other coastal habitat.

Water Management

Although disagreement among scientists on long-term precipitation patterns in the State has occurred, it is generally accepted by scientists that rising temperatures will impact California's water supply due to changes in the Sierra Nevada snowpack. Currently, the State's water infrastructure is designed to both gather and convey water from melting snow and to serve as a flood control device. Snowpack melts

gradually through spring warming into early summer, releasing an average of approximately 15 million acre-feet of water. The State's concern related to climate change is that due to rising temperatures, snowpack melt will begin earlier in the spring and will coincide with the rainy season. The combination of precipitation and snowmelt would overwhelm the current system, requiring tradeoffs between water storage and flood protection to be made. Reduction in reserves from the Sierra Nevada snowpack is troublesome for California and particularly for Southern California. Approximately 75-percent of California's available water supply originates in the northern third of the state while 80 percent of demand occurs in the southern two-thirds. There is also concern is that rising temperatures will result in decreasing volumes from the Colorado River basin. Colorado River water is important to Southern California because it supplies water directly to Metropolitan Water District of Southern California. Water from the Colorado River is also used to recharge groundwater basins in the Coachella Valley.

Agriculture

California is the most agriculturally productive state in the US resulting in more than 37 billion dollars in revenue in 2008. California is the nation's leading producer of nearly 80 crops and livestock commodities, supplying more than half of the nation's fruit and vegetables and over 90 percent of the nation's production of almonds, apricots, raisin grapes, olives, pistachios, and walnuts. Production of crops is not limited to the Central Valley but also occurs in Southern California. Strawberries and grapes are grown in San Bernardino and Riverside Counties. Orange County and San Diego County also contribute to strawberry production. Cherries are also grown in Los Angeles and Riverside County. Anticipated impacts to agricultural resources are mixed when compared to the potentially increased temperatures, reduced chill hours, and changes in precipitation associated with climate change. For example, wheat, cotton, maize, sunflower, and rice are anticipated to show declining yields as temperatures rise. Conversely, grapes and almonds would benefit from warming temperatures. Anticipated increases in the number and severity in heat waves would have a negative impact on livestock where heat stress would make livestock more vulnerable to disease, infection and mortality. The projected drying trend and changes in precipitation are a threat to agricultural production in California. Reduced water reliability and changes in weather patterns would impact irrigated farmlands and reduce food security. Furthermore, a drying trend would increase wildfire risk. Overall, agriculture in California is anticipated to suffer due to climate change impacts.

Forestry

Increases in wildfires will substantially impact California's forest resources that are prime targets for wildfires. This can increase public safety risks, property damage, emergency response costs, watershed quality, and habitat fragmentation. Climate change is also predicted to affect the behavior or plant species including seed production, seedling establishment, growth, and vigor due to rising temperatures. Precipitation changes will affect forests due to longer dry periods and moisture deficits and drought conditions that limit seedling and sapling growth. Prolonged drought also weakens trees, making them more susceptible to disease and pest invasion. Furthermore, as trees die due to disease and pest invasion (e.g., the Bark Beetle invasion of the San Bernardino Forest), wildfires can spread more rapidly.

Transportation and Energy Infrastructure

Higher temperatures will require increased cooling, raising energy production demand. Higher temperatures also decrease the efficiency of distributing electricity and could lead to more power outages during peak demand. Climate changes would impact the effectiveness of California's transportation infrastructure as extreme weather events damage, destroy, and impair roadways and railways throughout the state causing governmental costs to increase as well as impacts to human life as accidents increase. Other infrastructure costs and potential impacts to life would increase due to the need to upgrade levees

and other flood control devices throughout the state. Infrastructure improvement costs related to climate change adaptation are estimated in the tens of billions of dollars.

3.1.3 Carbon Sequestration

Carbon sequestration is the process by which plants absorb CO_2 from the atmosphere and store it in biomass like leaves and grasses. Agricultural lands, forests, and grasslands can all sequester carbon dioxide, or emit it. The key is to determine if the land use is emitting carbon dioxide faster than it is absorbing it. Young, fast-growing trees are particularly good at absorbing more than they release and are known as a sink. Agricultural resources often end up being sources of carbon release because of soil management practices. Deforestation contributes to carbon dioxide emissions by removing trees, or carbon sinks, that would otherwise absorb CO_2. Forests are a crucial part of sequestration in some parts of the world, but not much in the United States. Another form of sequestration is geologic sequestration. This is a manmade process that results in the collection and transport of CO_2 from industrial emitters (i.e. power plants) and injecting it into underground reservoirs.

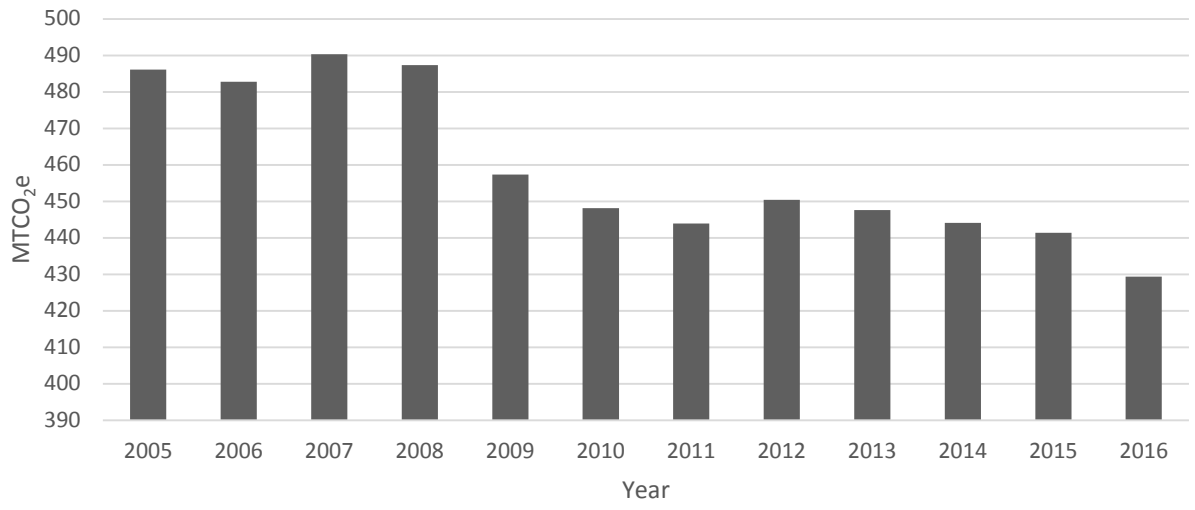
3.2 EXISTING GHG EMISSIONS LEVELS

3.2.1 State GHG Emissions Levels

CARB prepares an annual statewide GHG emissions inventory using regional, state, and federal data sources, including facility-specific emissions reports prepared pursuant to the state's Mandatory GHG Reporting Program (see Section 3.4.2). The statewide GHG emissions inventory helps CARB track progress towards meeting the state's AB 32 GHG emissions target of 431 million metric tons of CO_2 equivalents (MTCO2e), as well as establish and understand trends in GHG emissions. CARB approved use of 431 MMCO2e as the state's 2020 GHG emission target in May 2014. Previously, the target had been set at 427 MMCO2e. Statewide GHG emissions for the 2006 to 2016 time period are shown in Table 3-2. Statewide GHG emissions have generally decreased over the last decade, with 2016 levels (429 million MTCO2e) approximately 12 percent less than 2005 levels (486 million MTCO2e). The transportation sector (169 million MTCO2e) accounted for more than one-third (approximately 39.4%) of the state's total GHG emissions inventory (429 million MTCO2e) in 2016.

Table 3-2: 2005 – 2016 Statewide GHG Emissions (Million $MTCO_2e$)

Scoping Plan Sector	Year											
	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16
Agriculture	34	35	36	36	33	34	35	36	35	36	34	34
Commercial/Residential	42	43	43	44	44	45	46	43	44	37	38	39
Electric Power	108	105	114	120	101	90	88	95	90	88	84	69
High GWP	9	10	11	12	12	14	15	16	17	18	19	20
Industrial	96	93	90	91	88	91	91	91	94	94	92	90
Recycling and Waste	8	8	8	8	8	8	8	8	9	9	9	9
Transportation	189	189	189	178	170	165	162	161	161	162	166	169
Total Million $MTCO_2e$[(A)]	*486*	*483*	*490*	*487*	*457*	*448*	*444*	*450*	*448*	*444*	*441*	*429*



Source: CARB, 2018

(A) Totals may not equal due to rounding. CARB inventory uses GWPs based on the United Nations' ICC's 4th Assessment Report.

3.2.2 Existing Project Area GHG Emissions

As explained in Section 2.2.1, the proposed Project area consists of eight single-family residences and light industrial uses that generate emissions, including GHG emissions, which contribute to existing environmental conditions. In addition to the mobile, energy, and area sources described in Section 2.2.1, the existing land uses generate emissions from the following additional sources specific to GHG emissions. Existing GHG emissions were modeled using CalEEMod, V. 2016.3.2, using default data assumptions.

GHG emissions generated within the Project area primarily come from the area, energy, and mobile sources described in Section 2.1., Air Quality, as well as the following additional sources specific to GHG emissions:

- Energy use and consumption: Emissions generated from purchased electricity and natural gas. As estimated using CalEEMod, the existing land uses in the project area use and consume approximately 504,116 kWh of electricity per year and 934,747 kBtus of natural gas per year.
- Solid waste disposal: Emissions generated from the transport and disposal of waste generated by land uses. CalEEMod estimates approximately 67.6 tons of solid waste are generated per year by the people working and living within the Project area
- Water/wastewater: Emissions from electricity used to supply water to land uses, and treat the resulting wastewater generated. As estimated in CalEEMod, existing land uses within the Project area use approximately 11.4 million gallons of water per year.

The Project area's existing GHG emissions were estimated using default emissions assumptions provided by CalEEMod, with the Project-specific modifications described in Section 7.1.1 and below:

- Mobile Sources. As described in Section 7.1.1, the default trip generation rates for the proposed land use types were replaced with trip generation rates contained in the TIS prepared for the Project (Linscott, Law, and Greenspan 2019). According to the TIS, the existing land uses generate approximately 295 trips per weekday. CalEEMod does not estimate N_2O emissions from on-road vehicle travel or off-road construction sources. To account for this, CalEEMod emissions estimates were adjusted as follows:
    - N_2O emissions were estimated for the Project by comparing the ratio of CO_2 and N_2O emissions for the on-road (light-duty vehicles) and off-road transportation sectors contained in the State's most recent GHG inventory (CARB 2018b, 2018c). In 2016, statewide CO_2 and N_2O emissions estimates for the on-road transportation sector (light-duty gasoline vehicles) were 115.4 and 0.005 million metric tons, respectively (N_2O emissions are therefore equal to 0.004% of CO_2 emissions for this sector). In 2016, the off-road transportation sector emitted 2.29 million metric tons of CO_2 and 0.0002 million metric tons of N_2O (N_2O emissions are therefore equal to 0.001% of CO_2 emissions for this sector).
- Energy use and consumption: In addition to natural gas usage, the existing land uses in the Project area would generate indirect GHG emissions from electricity use. Southern California Edison provides electricy service in the City of Monrovia. The CalEEMod default GHG intensity values for this electric service provider are from 2012 and do not represent existing and future reductions in GHG intensity that have been achieved under the State's Renewable Portfolio Standard (see Section 2.3.2). To account for this, CalEEMod default assumptions regarding energy use were adjusted as follows:
    - The SCE GHG intensity value was reduced based on an increase in renewable energy mix from 20% under estimated Year 2012 conditions to 33% under existing conditions (2016, the last year of data available from SCE). This adjustment reduced the estimated amount of CO_2 produced by the SCE energy mix from approximately 702 pounds/megawatt-hour (mWh) to 526 pounds/mWh.

The Project area's existing GHG emissions are summarized in Table 3-3 below.

Table 3-3 Existing GHG Emissions in the Project Area

Source	GHG Emissions (Metric Tons / Year)			
	CO_2	CH_4	N_2O	Total $MTCO_2e$
Area	2.6	<0.00(A)	<0.00(A)	2.7
Energy(B)	190.1	<0.00(A)	<0.00(A)	190.9
Mobile(C)	455.6	0.02	0.00	456.3
Waste	13.0	0.8	<0.00(A)	32.1
Water	38.4	0.4	<0.00(A)	49.8
Totall(D)	699.7	1.2	0.01	731.8

Source: MIG 2019 (see Appendix A)
Notes:
(A) "<0.0" does not indicate the emissions are less than or equal to 0; rather, it indicates the emission is smaller than 0.01, but larger than 0.000.
(B) The emissions estimated in CalEEMod account for the carbon intensity metrics provided in Southern California Edison's 2016 Corporate Responsibility and Sustainability Report (SCE 2016) and U.S. Environmental Protection Agency's eGrid2014v2 emission rates (USEPA 2017).
(C) Totals may not equal due to rounding.

3.3 STATE AND REGIONAL ENERGY SETTING

Energy use can affect air quality and other natural resources adversely. Energy is primarily categorized in three areas: electricity, natural gas, and fuels used for transportation. According to the U.S. Energy Information Administration (USEIA), California is the most populous state in the U.S., representing 12 percent of the total national population, has the largest economy, and is second only to Texas in total energy consumption. However, California has one of the lowest per capita energy consumption levels in the U.S. This is a result of California's mild climate, extensive efforts to increase energy efficiency, and implementation of alternative technologies. California leads the nation in electricity generation from solar, geothermal, and biomass resources (USEIA, 2018).

Total annual energy consumption in the U.S. as of October 2018 was approximately 83.7 quadrillion British thermal units (Btu) (EIA 2019). Fossil fuels provided approximately 79% of this energy, consisting of petroleum (approximately 30 %), natural gas (approximately 33%), and coal (approximately 16%) resources. Total renewable sources accounted for approximately 12% of energy consumption, and nuclear electric power accounted for approximately 9% of the energy consumed in the U.S. In 2016, California was ranked the forth lowest state in terms of energy use on a per capita basis (199 million Btu per person).

3.3.1 Electricity

Almost half of California's net electricity generation was from renewable resources, including hydropower, in 2017 (EIA 2019). In 2017 the California electric system used 292,039 Gigawatt hours (GWh) of electricity, of which 206,336 GWh was produced in-state (CEC 2018a). Los Angeles County consumed 67,598 GWh of electricity, about 23 percent of the state's electricity consumption (CEC, 2019a). Southern California Edison (SCE) is the utility provider for the City of Monrovia. In the 2017 fiscal year, SCE sold approximately 85,879 million kilowatt-hours (kWh) of electricity (SCE 2018a); approximately 46% of the electricity that SCE delivered to customers came from carbon-free resources, including solar energy (approximately 13%, wind energy (approximately 10%), and geothermal energy (approximately 8%)(SCE 2018b).

Based on the CalEEMod emissions estimates prepared for the project (see Section 2.2.1), the existing development in the project area is estimated to consume approximately 556,730 kWh of electricity per year. Based on a service population of approximately 48, this works out to approximately 11,599 kWh / service population, annually.[2]

3.3.2 Natural Gas

California accounts for less than one percent of total U.S. natural gas reserves and production; however, almost two-thirds of California households use natural gas for home heating (EIA 2019). In 2017, California consumed about 25,142 million therms of natural gas. Approximately 18% of natural gas was consumed by the residential sector. Los Angeles County consumed approximately 2,956 million therms of natural gas in the same year, accounting for 12% of statewide consumption. The residential sector made up approximately 38% of county wide consumption (CEC 2019b).

The Southern California Gas Company (SoCalGas) provides natural gas service to the City. SoCalGas is the principal distributor of natural gas in Southern California and provides natural gas for residential, commercial, and industrial markets. The annual natural gas sale to all markets in 2017 was approximately 5,142 million Btu (CEC 2019c).

Based on the CalEEMod emissions estimates prepared for the project (see Section 2.2.1), the existing development in the project area is estimated to consume approximately 1,020,541 kBtu per year. Based on a service population of approximately 48, this works out to approximately 21,261 kBtu / service population, annually.

3.3.3 Transportation

California's transportation sector consumed 79.3 million Btu of energy per capita in 2017, which ranked 32nd in the nation (EIA 2017). Most gasoline and diesel fuel sold in California for motor vehicles is refined in California to meet state-specific formulations required by CARB.

According to the Board of Equalization (BOE), statewide taxable sales figures indicate a total of 15,584 million gallons of gasoline and 3,124 million gallons of diesel fuel were sold in 2017 (CEC, 2019d; CDFTA 2018a and 2018b). Although exact estimates are not available by County, retail fuel outlet survey data indicates Santa Clara County accounted for approximately 23.4% and 9.7% of total statewide gasoline and diesel sales, respectively (CEC, 2018b).

According to CalTrans, the annual vehicle miles traveled within all jurisdiction of Los Angeles County (state highway and local roadway) is 80,773,551 (Caltrans 2017).

The TIA prepared for the proposed project identifies the existing land uses in the project area generate approximately 1,107 net new trips per weekday (Linscott, Law, and Greenspan 2019). This level

[2] Service population is the sum of population and employment in the project area. The existing residential land uses support approximately 22 people (see Section 17.2.3) and the approximately 44,240 square feet of industrial land uses support approximately 26 jobs, based on a rate of one employee per 1,700 square feet of warehouse space in a suburban area (SCAG 2015).

of trip generation was estimated by CalEEMod to produce 1,006,843 vehicle miles travelled per year (see Appendix A).

3.4 FEDERAL, STATE, AND LOCAL CLIMATE CHANGE REGULATIONS

3.4.1 Federal GHG Regulations

U.S. EPA GHG Tailoring Rule and GHG Reporting System

On December 7, 2009, the U.S. EPA issued an endangerment finding that current and projected concentrations of the six Kyoto GHGs (CO_2, CH_4, N_2O, SF_6, HFCs, and PFCs) in the atmosphere threaten the public health and welfare of current and future generations. This finding came in response to the Supreme Court ruling in *Massachusetts v. EPA*, which found that GHG are pollutants under the federal Clean Air Act. As a result, the U.S. EPA issued its GHG Tailoring Rule in 2010, which applies to facilities that have the potential to emit more than 100,000 MTCO2e. In 2014, the U.S. Supreme Court issued its decision in *Utility Air Regulatory Group v. EPA* (No. 12-1146), finding that the U.S. EPA may not treat greenhouse gases as an air pollutant for purposes of determining whether a source is a major source required to obtain a permit pursuant to the Clean Air Act's Prevention of Significant Deterioration or Title V operating permit programs. The U.S. EPA's Greenhouse Gas Reporting Program requires facilities that emit 25,000 MTCO2e or more of GHG to report their GHG emissions to the U.S. EPA to inform future policy decisions.

Current Administration

President Trump and the U.S. EPA have stated their intent to halt various federal regulatory activities to reduce GHG emission. California and other states have stated their intent to challenge federal actions that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives. The timing and consequences of these types of federal decisions and potential responses from California and other states are speculative at this time.

3.4.2 State Climate Change Regulations

Executive Order S-3-05

Executive Order S-3-05 was issued by California Governor Arnold Schwarzenegger and established targets for the reduction of greenhouse gas emission at the milestone years of 2010, 2020, and 2050. Statewide GHG emissions must be reduced to 1990 levels by year 2020 and by 80 percent beyond that by year 2050. The Order requires the Secretary of the Cal-EPA to coordinate with other State departments to identify strategies and reduction programs to meet the identified targets. A Climate Action Team (CAT) was created and is headed by the Secretary of Cal-EPA who reports on the progress of the reduction strategies. The latest CAT Biennial Report to the Governor and Legislature was completed in April 2016.

Assembly Bill 32 – California Global Warming Solutions Act and Related GHG Reduction Goals

In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006. AB 32 establishes the caps on Statewide greenhouse gas emissions proclaimed in Executive Order S-3-05 and established the timeline for meeting State GHG reduction targets. The deadline for meeting the 2020 reduction target is December 31, 2020.

As part of AB 32, CARB determines 1990 GHG emissions levels and projected a "business-as-usual" (BAU)[3] estimate for 2020, to determine the amount of GHG emission reductions that would need to be achieved. In 2007, CARB approved a Statewide 1990 emissions level and corresponding 2020 GHG emissions limit of 427 million $MTCO_2e$ (CARB 2007). In 2008, CARB adopted its Climate Change Scoping Plan, which projects 2020 Statewide GHG emissions levels of 596 million $MTCO_2e$ and identifies numerous measures (i.e., mandatory rules and regulations and voluntary measures) that will achieve at least 174 million $MTCO_2e$ of GHG reductions and bring Statewide GHG emissions to 1990 levels by 2020 (CARB 2009).

Executive Order B-30-15, 2030 Carbon Target and Adaptation, issued by Governor Brown in April 2015, set a target of reducing GHG emissions by 40 percent below 1990 levels in 2030. To achieve this ambitious target, Governor Brown identified five key goals for reducing GHG emissions in California through 2030:

- Increase renewable electricity to 50 percent.
- Double energy efficiency savings achieved in existing buildings and make heating fuels cleaner.
- Reduce petroleum use in cars and trucks by up to 50 percent.
- Reduce emissions of short-lived climate pollutants.
- Manage farms, rangelands, forests and wetlands to increasingly store carbon.

By directing State agencies to take measures consistent with their existing authority to reduce GHG emissions, Executive Order B-30-15 establishes coherence between the 2020 and 2050 GHG reduction goals set by AB 32 and seeks to align California with the scientifically established GHG emissions levels needed to limit global warming below two degrees Celsius.

To reinforce the goals established through Executive Order B-30-15, Governor Brown went on to sign Senate Bill (SB) 32 and AB 197 on September 8, 2016. SB 32 made the GHG reduction target (to reduce GHG emissions by 40 percent below 1990 levels by 2030) a requirement, as opposed to a goal. AB 197 gives the Legislature additional authority over CARB to ensure the most successful strategies for lowering emissions are implemented, and requires CARB to, "protect the State's most impacted and disadvantaged communities …[and] consider the social costs of the emissions of greenhouse gases."

Scoping Plan

The CARB Scoping Plan is the comprehensive plan primarily directed at identifying the measures necessary to reach the GHG reduction targets stipulated in AB 32. The key elements of the 2008 Plan were to expand and strengthen energy efficiency programs, achieve a Statewide renewable energy mix of 33 percent, develop a cap-and-trade program with other partners (including seven States in the United States and four territories in Canada) in the Western Climate Initiative, establish transportation-related targets, and establish fees (CARB 2009). CARB estimated that implementation of these measures will achieve at least 174 million $MTCO_2e$ of reductions and reduce Statewide GHG emissions to 1990 levels by 2020 (CARB 2009).

[3] BAU is a term used to define emissions levels without considering reductions from future or existing programs or technologies.

On February 10, 2014, CARB released the public draft of the "First Update to the Scoping Plan." "The First Update" built upon the 2008 Scoping Plan with new strategies and recommendations, and identified opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. "The First Update" defined CARB's climate change priorities over the next five years, and set the groundwork to reach post-2020 goals set forth in Executive Orders S-3-05 and B-16-12. It also highlighted California's progress toward meeting the 2020 GHG emission reduction goals defined in the 2008 Scoping Plan. "The First Update" evaluated how to align the State's long-term GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. "The First Update" to the Scoping Plan was approved by the Board on May 22, 2014.

The second update to the scoping plan, the 2017 Climate Change Scoping Plan update (CARB 2017c), was adopted by CARB in December 2017. The primary objective for the 2017 Climate Change Scoping Plan is to identify the measures required to achieve the mid-term GHG reduction target for 2030 (i.e., reduce emissions by 40 percent below 1990 levels by 2030) established under Executive Order B-30-15 and SB 32. The *2017* Climate Change Scoping Plan identifies an increased need for coordination among State, Regional, and local governments to realize the potential for GHG emissions reductions that can be gained from local land use decisions. It notes that emissions reductions targets set by more than one hundred local jurisdictions in the State could result in emissions reductions of up to 45 million $MTCO_2e$ and 83 million $MTCO_2e$ by 2020 and 2050, respectively. To achieve these goals, the 2017 Scoping Plan Update includes a recommended plan-level efficiency threshold of six metric tons or less per capita by 2030 and no more than two metric tons by 2050. The major elements of the *2017* Climate Change Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing zero emission vehicle (ZEV) buses and trucks.
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030).
- Implementation of SB 350, which expands the Renewable Portfolio Standard (RPS) to 50 percent and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy, which focuses on reducing CH4 and hydrocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Continued implementation of SB 375.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- 20 percent reduction in GHG emissions from refineries by 2030.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Senate Bill 375 – Sustainable Communities and Climate Protection Act

In January 2009, California SB 375 went into effect known as the Sustainable Communities and Climate Protection Act. The objective of SB 375 is to better integrate regional planning of transportation, land use, and housing to reduce sprawl and ultimately reduce greenhouse gas emissions and other air pollutants. SB 375 tasks ARB to set greenhouse gas reduction targets for each of California's 18 regional Metropolitan Planning Organizations (MPOs). Each MPO is required to prepare an SCS as part of their RTP. The SCS is a growth strategy in combination with transportation policies that will show how the MPO

will meet its GHG reduction target. If the SCS cannot meet the reduction goal, an Alternative Planning Strategy may be adopted that meets the goal through alternative development, infrastructure, and transportation measures or policies.

In the Southern California Association of Governments (SCAG) region (in which the proposed Project is located), sub-regions can also elect to prepare their own RTP/SCS. In April 2016, the SCAG adopted the 2016 RTP/SCS. The RTP/SCS identifies over 4,000 transportation projects ranging from highway improvements, railroad grade separations, bicycle lanes, new transit hubs, and replacement bridges. These future investments were included in county plans developed by the six county transportation commissions and seek to reduce traffic bottlenecks, improve the efficiency of the region's network, and expand mobility choices. The RTP/SCS would result in an eight percent reduction in GHG emissions by 2020, and 18 percent reduction by 2035, and 31 percent reduction by 2040 – compared with 2005 levels.

In March 2018, CARB established new regional GHG reduction targets for SCAG and other MPOs in the state (CARB, 2018a). The new SCAG targets are an 8% reduction in per capita passenger vehicle GHG reductions by 2020 and an 19% reduction by 2035.

Executive Order B-30-15 / Senate Bill 32 and Assembly Bill 197

Executive Order B-30-15, 2030 Carbon Target and Adaptation, issued by Governor Brown in April 2015, sets a target of reducing GHG emissions by 40 percent below 1990 levels in 2030. By directing state agencies to take measures consistent with their existing authority to reduce GHG emissions, this order establishes coherence between the 2020 and 2050 GHG reduction goals set by AB 32 and seeks to align California with the scientifically established GHG emissions levels needed to limit global warming below two degrees Celsius.

To reinforce the goals established through Executive Order B-30-15, Governor Brown went on to sign SB 32 and AB 197 on September 8, 2016. SB 32 made the GHG reduction target to reduce GHG emissions by 40 percent below 1990 levels by 2030 a requirement as opposed to a goal. AB-197 gives the Legislature additional authority over CARB to ensure the most successful strategies for lowering emissions are implemented, and requires CARB to, "protect the state's most impacted and disadvantaged communities …[and] consider the social costs of the emissions of greenhouse gases."

Assembly Bill 1493

With the passage of AB 1493 (Pavley I) in 2002, California launched an innovative and pro-active approach for dealing with GHG emissions and climate change at the State level. AB 1493 requires CARB to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards apply to automobiles and light trucks from 2009 through 2016. Although litigation was filed challenging these regulations and the U.S. EPA initially denied California's related request for a waiver, a waiver has since been granted (CARB 2017b). In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 among light-duty vehicles. In January 2012, CARB approved the Advanced Clean Cars (ACC) program (formerly known as Pavley II) for model years 2017 through 2025. The components of the ACC program are the Low-Emission Vehicle (LEV) regulations and the Zero-Emission Vehicle (ZEV) regulation. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards.

Renewables Portfolio Standard (RPS) Program

In 2002, California established its RPS Program, with the goal of increasing the percentage of renewable energy in the State's electricity mix to 20 percent of retail sales by 2017. The 2003 Integrated

Energy Policy Report recommended accelerating that goal to 20 percent by 2010, and the 2004 Energy Report Update further recommended increasing the target to 33 percent by 2020. The State's Energy Action Plan also supported this goal. In 2006 under SB 107, California's 20 percent by 2010 RPS goal was codified. The legislation required retail sellers of electricity to increase renewable energy purchases by at least one percent each year with a target of 20 percent renewables by 2010. Publicly owned utilities set their own RPS goals, recognizing the intent of the legislature to attain the 20 percent by 2010 target.

On November 17, 2008, Governor Schwarzenegger signed Executive Order S-14-08 requiring "[a]ll retail sellers of electricity shall serve 33 percent of their load with renewable energy by 2020." The following year, Executive Order S-21-09 directed the California Air Resources Board, under its AB 32 authority, to enact regulations to achieve the goal of 33 percent renewables by 2020. In October 2015, Governor Brown signed SB 350 to codify the ambitious climate and clean energy goals of Executive Order S-14-08. One key provision of SB 350 is for retail sellers and publicly owned utilities to procure "half of the State's electricity from renewable sources by 2030."

Most recently, on September 10, 2018, Governor Brown signed SB 100 and issued Executive Order B-55-18. SB 100 revised the above-described legislation to mandate a 50 percent renewable energy mix by December 31, 2026, achieve a 60 percent renewable energy target by December 31, 2030, as well as call for 100 percent carbon-free electricity by 2045. Executive Order B-55-18 further strengthens California's commitment to clean energy by calling for statewide carbon-neutrality by 2045.

Water Conservation in Landscaping Act

Section 65591 of the Government Code requires all local jurisdictions to adopt a water efficient landscape ordinance. The ordinance is to address water conservation through appropriate use and grouping of plants based on environmental conditions, water budgeting to maximize irrigation efficiency, storm water retention, and automatic irrigation systems. Failure to adopt a water efficiency ordinance requires a local jurisdiction to enforce the provisions of the State's model water efficiency ordinance. In 2009, the Department of Water Resources updated the Model Water Efficient Landscape Ordinance pursuant to amendments to the 1991 Act. These amendments and the new model ordinance went into effect on January 1, 2010. The amended Act is applicable to any new commercial, multi-family, industrial or tract home project containing 2,500 square feet (SF) or more of landscaping. Individual landscape projects of 5,000 SF or more on single-family properties will also be subject to the Act. All landscape plans are required to include calculations verifying conformance with the maximum applied water allowance and must be prepared and stamped by a licensed landscape architect.

Title 24 Energy Standards

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the State. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) planning and design; (2) energy efficiency; (3) water efficiency and

conservation; (4) material conservation and resource efficiency; and (5) environmental air quality." The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission.

CALGreen contains both mandatory and voluntary measures. For non-residential land uses there are 39 mandatory measures including, but not limited to exterior light pollution reduction, wastewater reduction by 20 percent, and commissioning of projects over 10,000 square feet. Two tiers of voluntary measures apply to non-residential land uses, for a total of 36 additional elective measures.

California's Building Energy Efficiency Standards are updated on an approximately three-year cycle. The 2019 standards, adopted May 9, 2018, will go into effect on January 1, 2020 and improve upon existing standards, focusing on three key areas: proposing new requirements for installation of solar photovoltaics for newly constructed low-rise residential buildings; updating current ventilation and indoor air quality requirements, and extending Title 24, Part 6 to apply to healthcare facilities. The 2019 standards also propose several smaller improvements in energy efficiency.

Biological Diversity v. California Department of Fish and Wildlife

In its decision in *Center for Biological Diversity v. California Dep't of Fish and Wildlife* (*Newhall*) 62 Cal.4th 204 (2015), the California Supreme Court set forth several options that lead agencies may consider for evaluating the cumulative significance of a proposed project's GHG emissions:

1. A calculation of emissions reductions compared to a "business as usual" (BAU) scenario based upon the emissions reductions in CARB's Scoping Plan, including examination of the data to determine what level of reduction from BAU a new land use development at the proposed location must contribute in order to comply with statewide goals.
2. A lead agency might assess consistency with AB 32's goals by looking to compliance with regulatory programs designed to reduce GHG emissions from particular activities.
3. Use of geographically specific GHG emission reduction plans to provide a basis for tiering and streamlining of project-level CEQA analysis.
4. A lead agency may rely on existing numerical thresholds of significance for GHG emissions, though use of such thresholds is not required.

3.4.3 City of Monrovia Climate Change Regulations

The City of Monrovia, along with Southern California Edison and Intergy Corporation, has implemented an Energy Action Plan that contains goals and specific actions to ensure that sufficient, dependable, and reasonably-priced electrical power and energy supplies are achieved and provided through policies, strategies, and actions that are cost-effective and environmentally sound for the city's consumers and taxpayers. The Energy Action Plan looks at self-generation and demand reduction strategies that can further offset the energy, water, and transportation needs for the city of Monrovia, including the use of renewable energy sources. Appendix A to the Energy Action Plan includes the City's environmental accords or actions; however, none of these actions are directly applicable to individual development projects. Rather, Appendix A to the Energy Action Plan primarily lists actions that apply to City equipment, electricity consumption, and GHG emissions sources, or which would be implemented on a City-wide basis.

4 PROPOSED PROJECT DESCRIPTION

The Evergreen Investment Partners, LLC proposes to implement The Arroyo at Monrovia Station Specific Plan (proposed Project). The Specific Plan would allow a 302-unit, seven-story apartment complex and an seven-level (six-story) partially underground parking structure to be constructed (see Figure Figure 4-1, Figure 4-2, and Figure 4-3). The apartment complex would also contain 7,080 sf of retail space. In addition, of the 302 units proposed, three (3) would comprise live/work units. A range of studios, and one-bedroom and two-bedroom apartments are proposed. Other tenant amenities include a pool, a pet spa, bike "kitchen" (i.e., bicycle repair area), tenant lounge, centralized mail/package delivery room, and a golf simulation room. No offsite improvements to utilities are proposed under the Project.

The proposed maximum height of the residential structures is 70 feet and 7 inches; a billboard on top of one residential structure is proposed for a maximum height of 106 feet. The parking structure would have five levels of Type III wood construction wrapping around six levels of above-grade Type I concrete parking structure and half of a level of semi-subterranean parking. There are 500 parking spaces provided in the parking structure including 19 paid parking spaces for adjacent transit users and 40 spaces for electric vehicles. A total of 171 bike parking spaces would also be provided.

Vehicular access to the Project would occur via two access driveways: one right-turn in/right-turn out driveway on Evergreen Avenue (Evergreen Avenue is a one-way eastbound street along the Project frontage) and one full access driveway on Pomona Avenue. Loading services for retail, trash pick-up, and move-in are provided inside the parking structure, at ground level, to avoid traffic congestion on the adjacent streets.

4.1.1 Project Construction

Construction activities, duration, and typical equipment usage was generated using CalEEMod, V. 2016.3.2, and are shown in detail in Section 5.3.1.

Approximately 51,740 square feet (sf) of existing structures would be demolished and construction of the proposed Project would involve 8,585 cubic yards (cy) of cut, 3,430 cy of fill, with a net export of 3,430 cy. Construction of the proposed Project is planned to begin in the third quarter of 2019 and expected to take 13 months to complete, with a target construction completion date in 2020.

4.1.2 Project Operation

Once constructed, the Project would generate emissions of regulated air pollutants and GHG from area, energy, mobile, off-road, solid waste, and water /wastewater sources. These sources are described in detail in Sections 5.3.2 and 6.2. The proposed Project also includes small stationary sources of emissions such as a back-up generator and a fire pump. The Project is anticipated to be fully operational in early 2022.

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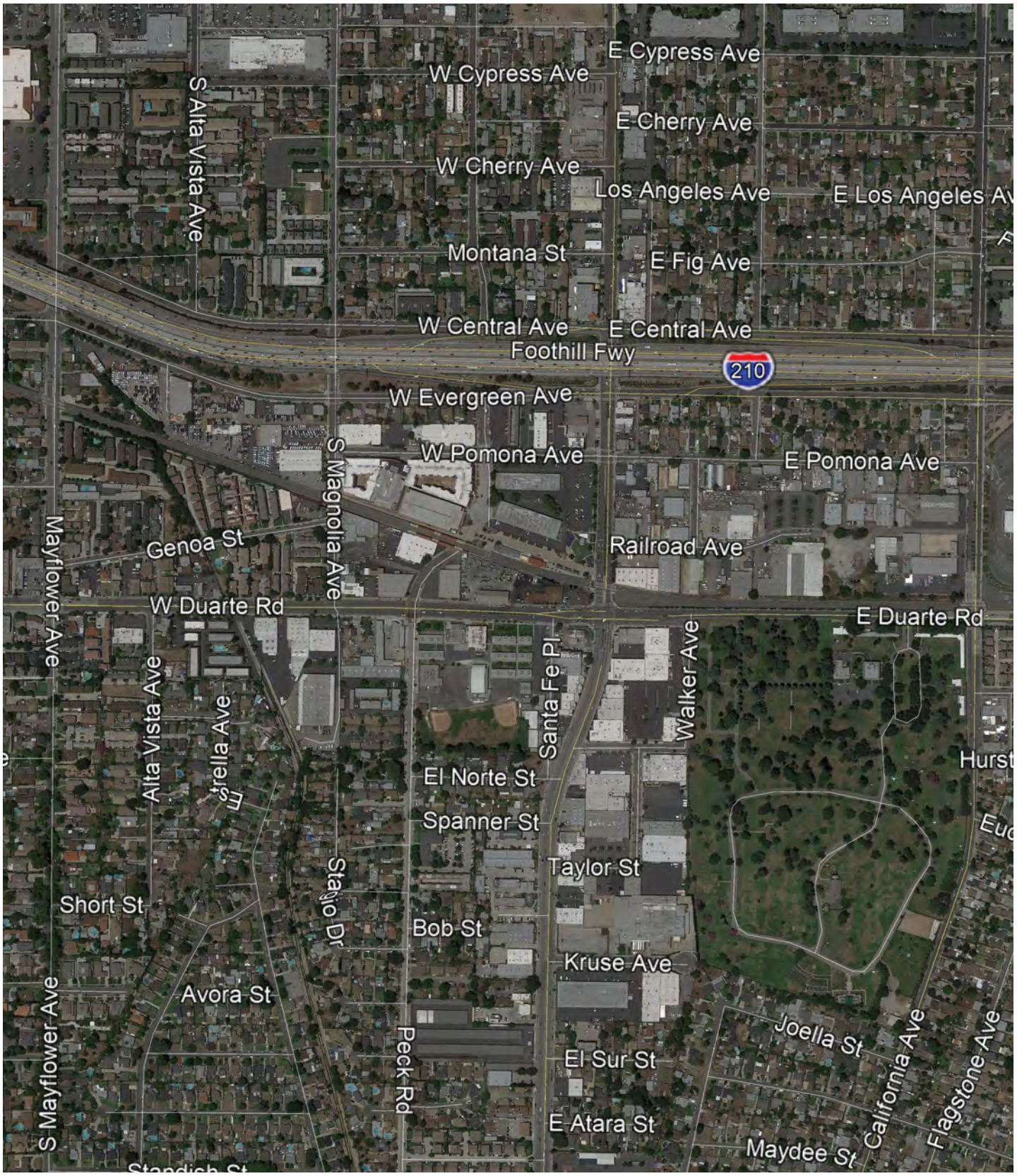


Source: ©2019 Google

Figure 4-1: Aerial View of Project Area

The Arroyo at Monrovia Station Project

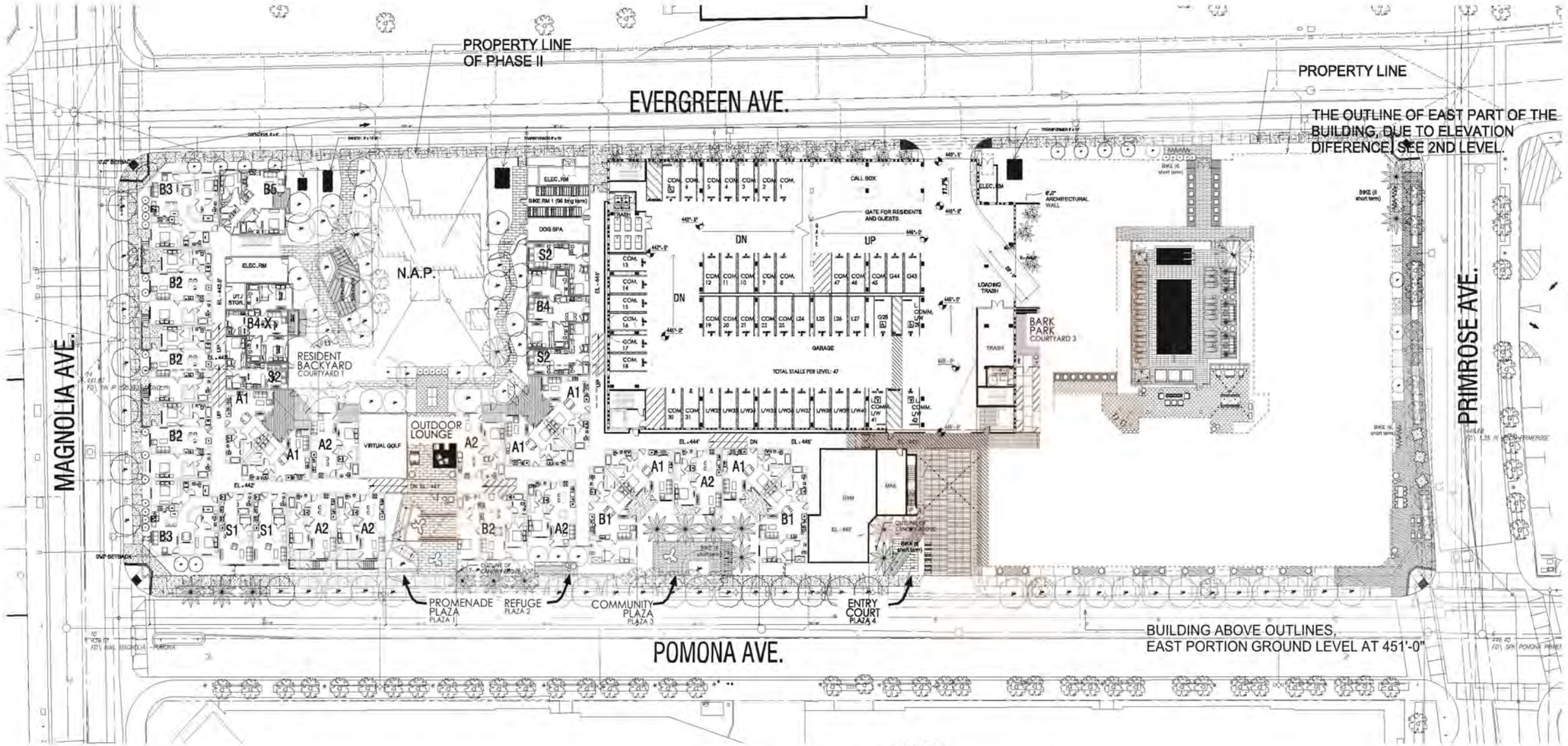
Legend:

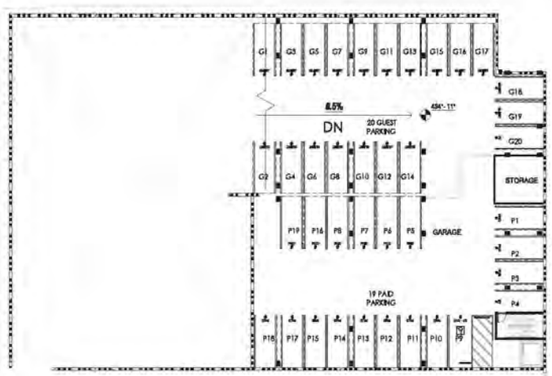
Existing parcel boundaries

The Arroyo at Monrovia Station Specific Plan Area

Figure 4-2 Project Area Map

The Arroyo at Monrovia Station Project Site, Monrovia, CA





NOTES:

ALL SETBACK DIMENSIONS SHOWN ON THE PLANS ARE TO THE WALL OF BUILDING. ARCHITECTURAL PROJECTIONS AND STOOPS ARE ALLOWED WITHIN THE SETBACK AREA

REFERENCE TO LANDSCAPE DRAWING FOR LANDSCAPE DESIGN

REFERENCE TO CIVIL DRAWINGS FOR GRADING, UTILITY, LID, TRACT MAP INFORMATION.

GROUND LEVEL PLAN

N

SCALE: 1" = 20'-0"
DATE:04/22/2019
JOB NO.:2017-667

A-1.0

ARCHITECTS ORANGE
144 NORTH ORANGE ST., ORANGE, CA 92886
(714) 639-9860

Figure 4-3 Site Plan: Ground Level

The Arroyo at Monrovia Station Project

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5 AIR QUALITY IMPACT ANALYSIS

This chapter evaluates the direct and indirect air quality impacts that could result from implementation of the proposed Project.

5.1 SIGNIFICANCE CRITERIA

In accordance with Appendix G of the State CEQA Guidelines, the proposed Project could result in potentially significant impacts related to air quality if it would:

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

(b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable Federal or State ambient air quality standard;

(c) Expose sensitive receptors to substantial pollutant concentrations (i.e., carbon monoxide hot spots or TACs); or

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

5.1.1 Regional Significance Thresholds

Consistent with the guidance contained in Appendix G of the State CEQA Guidelines, this Report relies upon SCAQMD-recommended methods and pollutant thresholds to evaluate whether the proposed Project's emissions would violate any air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in nonattainment criteria air pollutants. The SCAQMD's recommended thresholds of significance for criteria pollutants are shown in Table 5-1.

Table 5-1: SCAQMD-Recommended Regional Pollutant Thresholds

Pollutant	Maximum Daily Emissions (lbs/day)	
	Construction	Operation
NO_X	100	55
VOC/ROG	75	55
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_X	150	150
CO	550	550
Lead	3	3

Source: SCAQMD, 2015b

5.1.2 Localized Significance Thresholds

In addition to establishing thresholds of significance for emissions of criteria air pollutants on a regional level, the SCAQMD has also developed Localized Significance Thresholds (LSTs) that represent

the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable Federal or State ambient air quality standards, which would result in significant adverse localized air quality effects. The LST methodology takes into account a number of factors, including (1) existing ambient air quality in each Source Receptor Area (SRA); (2) how many acres the project would disturb in a day; and (3) how far project construction and operational activities would take place from the nearest sensitive receptor. Unlike the regional emission significance thresholds, LSTs have only been developed for NO_X, CO, PM_{10} and $PM_{2.5}$. This Report evaluates the proposed Project's potential to expose sensitive receptors to substantial pollutant concentrations pursuant to the SCAQMD Final Localized Significance Thresholds Methodology. This methodology provides screening tables for one through five-acre project scenarios, depending on the amount of site disturbance during a day, using the SCAQMD's Fact Sheet for Applying CalEEMod to Localized Significance Thresholds (SCAQMD, 2016c). The construction and operational LSTs for one-acre, two-acre, and five-acre sites in SRA 9 (East San Gabriel Valley), the SRA in which the City of Monrovia is located, are shown in Table 5-2.

Table 5-2: SCAQMD Localized Significance Thresholds for Source Receptor Area 9

Pollutant Monitored	Maximum Allowable Emissions (Pounds per Day) as a Function of Receptor Distance (in Feet) from Site Boundary				
	82 Feet	164 Feet	328 Feet	656 Feet	1,640 Feet
ONE-ACRE SITE					
Construction Thresholds					
Nitrogen Oxides (NO_x)	89	112	159	251	489
Carbon Monoxide (CO)	623	945	1,914	4,803	20,721
Particulate Matter (PM_{10})	5	14	34	75	199
Particulate Matter ($PM_{2.5}$)	3	5	9	22	94
Pollutant Monitored	Maximum Allowable Emissions (Pounds per Day) as a Function of Receptor Distance (in Feet) from Site Boundary				
	82 Feet	164 Feet	328 Feet	656 Feet	1,640 Feet
ONE-ACRE SITE					
Operational Thresholds					
Nitrogen Oxides (NO_x)	89	112	159	251	489
Carbon Monoxide (CO)	623	945	1,914	4,803	20,721
Particulate Matter (PM_{10})	2	4	9	19	48
Particulate Matter ($PM_{2.5}$)	1	2	3	6	23
TWO-ACRE SITE					
Construction Thresholds					
Nitrogen Oxides (NO_x)	128	151	200	284	513
Carbon Monoxide (CO)	953	1,344	2,445	5,658	22,093
Particulate Matter (PM_{10})	7	22	42	84	207
Particulate Matter ($PM_{2.5}$)	5	7	12	26	100
Operational Thresholds					
Nitrogen Oxides (NO_x)	128	151	200	284	513
Carbon Monoxide (CO)	953	1,344	2,445	5,658	22,093
Particulate Matter (PM_{10})	2	6	11	20	50
Particulate Matter ($PM_{2.5}$)	2	2	3	7	25

Table 5-2: SCAQMD Localized Significance Thresholds for Source Receptor Area 9					
Pollutant Monitored	Maximum Allowable Emissions (Pounds per Day) as a Function of Receptor Distance (in Feet) from Site Boundary				
	82 Feet	164 Feet	328 Feet	656 Feet	1,640 Feet
FIVE-ACRE SITE					
Construction Thresholds					
Nitrogen Oxides (NO_x)	203	227	286	368	584
Carbon Monoxide (CO)	1,733	2,299	3,680	7,600	25,558
Particulate Matter (PM_{10})	14	43	63	105	229
Particulate Matter ($PM_{2.5}$)	8	11	17	35	116
Operational Thresholds					
Nitrogen Oxides (NO_x)	203	227	286	368	584
Carbon Monoxide (CO)	1,733	2,299	3,680	7,600	25,558
Particulate Matter (PM_{10})	4	11	16	26	55
Particulate Matter ($PM_{2.5}$)	2	3	5	9	28

Source: SCAQMD 2008, modified by MIG 2019

Note: The localized thresholds for NOx in this table account for the conversion of NO to NO_2. The emission thresholds are based on NO_2 levels, as this is the compound associated with adverse health effects.

5.1.3 Carbon Monoxide "Hot Spot Thresholds"

Historically, to determine whether a project poses the potential for a CO hotspot, the quantitative CO screening procedures provided in the *Transportation Project-Level Carbon Monoxide Protocol* (the Protocol) were used (UCD ITS 1997). The Protocol determines whether a project may worsen air quality by increasing the percentage of vehicles in cold start modes by two percent or more; significantly increasing traffic volumes by five percent or more; or worsening traffic flow at signalized intersections (by increasing average delay at intersections operating at level of service (LOS) E or F or causing an intersection that would operate at LOS D or better without the project, to operate at LOS E or F). With new vehicles and improvements in fuels resulting in fewer emissions, the retirement of older polluting vehicles, and new controls and programs, CO concentrations have declined dramatically in California. As a result of emissions controls on new vehicles, the number of vehicles that can idle, and the length of time that vehicles can idle before emissions would trigger a CO impact, has increased. Therefore, the use of LOS as an indicator is no longer applicable for determining CO impacts.

The Bay Area Air Quality Management District (BAAQMD) developed a screening-level analysis for CO hotspots in 2010 which finds that projects that are consistent with the applicable congestion management program, and that do not cause traffic volumes at affected intersections to increase to more than 44,000 vehicles per hour, would not result in a CO hotspot that could exceed State or Federal air quality standards (BAAQMD 2017 pg. 3-4). CO modeling was conducted for the SCAQMD's 2003 AQMP at four busy intersections during morning and evening peak hour periods as well. The busiest intersection studied in this analysis, Wilshire Boulevard and Veteran Avenue, had 8,062 vehicles per hour during morning peak hours, 7,719 vehicles per hour during evening peak hours, and approximately 100,000 vehicles per day. The 2003 AQMP estimated that the 1-hour CO concentration for this intersection was 4.6 ppm, which is less than a fourth of the 1-hour CAAQS CO standard (20 ppm) (SCAQMD 2003a). The BAAQMD screening threshold is generally consistent with the results of the CO modeling conducted for the SCAQMD's 2003 AQMP.

Therefore, for purposes of this Report, the Project would pose the potential for a CO hotspot if it would exceed the BAAQMD's screening traffic level for peak hour intersection traffic volumes (44,000 vehicles per hour) (thereby having the potential to result in CO concentrations that exceed 1-hour State [20 ppm], 1-hour Federal [35 ppm], and/or State and Federal 8-hour [9 ppm] ambient air quality standards for CO).

5.1.4 Toxic Air Contaminant Thresholds

The SCAQMD recommends preparation of a Health Risk Assessment (HRA) for large commercial or industrial projects to determine the specific health risks posed by long-term emissions of TACs from a project. Following OEHHA and SCAQMD guidance, health risks from TAC emissions are estimated based on "Individual Cancer Risk," which is the likelihood that a person exposed to TACs over 70-year lifetime will get cancer or suffer some other "non-cancer" effect (measured by what is called as a "hazard index"). Numerous weighting factors (e.g., age sensitivity factors, breathing rates, etc.) are applied during health risk calculations to account for those members of the public who may be more sensitive to pollution than others (e.g., sensitive receptors). A project is considered to have a significant effect if it results in any of the following:

- A maximum incremental cancer risk greater than or equal to 10 in one million;
- A population-wide cancer burden greater than 0.5 (in areas where cancer risk is greater than or equal to 1 in one million); or
- A chronic or acute hazard index greater than or equal to 1.0.

The California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369 (2015) ruled CEQA review is focused on a project's impact on the environment "and not the environment's impact on the project." The opinion also holds that when a project has "potentially significant exacerbating effects on existing environmental hazards" those impacts are properly within the scope of CEQA because they can be viewed as impacts of the project on "existing conditions" rather than impacts of the environment on the project. The Supreme Court provided the example of a project that threatens to disperse existing buried environmental contaminants that would otherwise remain undisturbed. The Court concluded that it is proper under CEQA to undertake an analysis of the dispersal of existing contaminants because such an analysis would be focused on how the project "would worsen existing conditions." The court also found that the limited number of express CEQA provisions that require analysis of the impacts of the existing environment on a project – such as impacts associated with school siting and airports – should be viewed as specific statutory exceptions to the general rule that such impacts are not properly within CEQA's scope.

Consistent with this court ruling, the impact discussion presented below focuses on the proposed Project's effect on air quality and existing health risks, rather than the effect of existing air quality and its potential risks on the proposed Project's residents. The analysis evaluates whether the proposed Project would create or exacerbate adverse public health risk conditions at sensitive receptor locations, as identified in the SCAQMD's CEQA significance criteria.

5.2 Analysis Methodology

Construction and operational emissions associated with buildout of the Project were calculated and evaluated against regional and localized significance thresholds to determine potential impacts on air quality standards, as well as to evaluate potential impacts associated with DPM emissions on sensitive receptors. In addition, a discussion is provided below on the potential for the Project to generate CO

hotspots or objectionable odors. An evaluation of whether the Project is consistent with existing plans and policies protecting air quality is also included below.

For potential environmental impacts, mitigation measures were designed to avoid or reduce each effect to a less than significant level, where possible.

5.3 ENVIRONMENTAL IMPACTS

5.3.1 Consistency with the SCAQMD AQMP

As described in Section 2.1.3, the proposed Project is within the South Coast Air Basin, which is under the jurisdiction of the SCAQMD. Pursuant to the methodology provided in Chapter 12 of the SCAQMD *CEQA Air Quality Handbook*, consistency with the AQMP is affirmed if the Project:

1) Is consistent with the growth assumptions in the AQMP; and
2) Does not increase the frequency or severity of an air quality standards violation, or cause a new one.

Consistency Criterion 1 refers to the growth forecasts and associated assumptions included in the 2016 AQMP. The 2016 AQMP was designed to achieve attainment for all criteria air pollutants within the Basin while still accommodating growth in the region. Projects that are consistent with the AQMP growth assumptions would not interfere with attainment of air quality standards, because this growth is included in the projections used to formulate the AQMP. Therefore, if the growth under the Project is consistent with the regional population, housing, and employment forecasts identified by SCAG in the RTP/SCS, plan implementation would be consistent with the AQMP, even if emissions could potentially exceed the SCAQMD's recommended daily emissions thresholds.

The proposed Project would result in 302 residential units for a total population of 630 residents (see Chapter 17, Population and Housing). The 2016 RTP/SCS population and employment projections for the City of Monrovia, as well as the increase in population and employment that would occur with the implementation of the proposed Project, and other City projects that are currently under review, are shown in Table 5-3.

Table 5-3: RTP/SCS and Specific Plan Growth Assumptions for Air Quality Impact Analysis		
Proposed Project	Population	Employment
Arroyo at Monrovia Station	630	23
Other City Projects		
Other Past, Present, and Future Projects	2,796 (A)	541(A)
Total Growth	3,426	5643
RTC/SCS Growth 2012 - 2040	3,500	3,600
Within Growth Assumptions?	No	Yes

Source: SCAG 2016; MIG 2019

Notes:

(A) According to the City's cumulative project list, approved, under-construction, or reasonably foreseeable residential projects (or portions of mixed-use projects). Assuming 20% of these are 2-bedroom units and based on the U.S. Census Bureau estimate of 1.56 people per bedroom (Linscott, Law, and Greenspan 2019).

(B) According to the City's cumulative project list approved, under-construction, or reasonably foreseeable non-residential projects (or portions of mixed-use projects) and based upon the U.S. Green Building Council's (2008) average SF/employee: General Office is 250 SF/employee, Hotel is 1,500 SF/employee, and General Retail (100,000 SF or less) is 550 SF/employee (Linscott, Law, and Greenspan 2019) .

As shown in Table 5-3, the implementation of the proposed Project, along with other City projects currently under review, would not exceed the growth assumptions contained in the AQMP. Furthermore, the proposed Project supports the overall goal of the AQMP. The RTP/SCS Transportation Control Measures, included as Appendix IV-C of the AQMP, are to focus new growth around transit/high quality transit areas. The Project is consistent with this goal because it is located less than 0.1 miles away from the Metro Gold Line and is estimated to n a 25% reduction in vehicle trips and vehicle miles travelled.

Consistency Criterion 2 refers to the CAAQS. SCAQMD has identified CO as the best indicator pollutant for determining whether air quality violations would occur since it is most directly related to automobile traffic, the emissions of which have been modeled by the SCAQMD to determine future air quality conditions. The CO hotspot analysis described below indicates that the Project would not result in a localized CO hotspot and, therefore, would not cause or contribute to an existing or projected air quality violation.

Potential impacts with respect to consistency with the SCAQMD AQMP would be less than significant.

5.3.2 Result in Cumulatively Considerable Increase in Criteria Air Pollutants

The proposed Project would generate both short-term construction emissions and long-term operational emissions. The Project's potential emissions were estimated using CalEEMod, V. 2016.3.2. As described in more detail below, with standard conditions and mitigation measures incorporated, the proposed Project would not generate short-term or long-term emissions that exceed SCAQMD-recommended pollutant thresholds.

Regional Construction Emissions

Construction activities would include demolition, site preparation, grading, construction, paving, and architectural coating work. The proposed Project's potential construction emissions were modeled using CalEEMod, Version 2016.3.2 (see Appendix A). Construction phase and duration and type and amount of equipment used during construction was generated using CalEEMod default assumptions and modified as necessary to reflect additional-Project-specific construction activities, including:

- Demolition of approximately 51,740 square feet of existing building space and associated debris hauling activities; and
- Export of 3,430 cubic yards of soil during the Project's grading phase.

The unmitigated maximum daily construction emissions generated by the proposed Project are shown in Table 5-4.

Table 5-4: Unmitigated Regional Construction Emissions Estimates

Season	Total Unmitigated Maximum Daily Emissions (Pounds Per Day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer 2019	4.4	44.7	32.7	0.1	5.2	2.7
Summer 2020	219.9	26.0	30.7	0.1	5.0	2.0
Winter 2019	4.6	45.0	31.6	0.1	5.2	2.7
Winter 2020	219.9	26.1	29.8	0.1	5.0	2.0
SCAQMD CEQA Threshold	75	100	550	150	150	55
Threshold Exceeded?	Yes	No	No	No	No	No

Source: MIG 2019 (see Appendix A).

As shown in Table 5-4, the maximum daily construction emissions generated by the Project would be below applicable SCAQMD thresholds for all pollutants except ROG in 2020, when peak architectural coating application activities would occur.

To reduce potential ROG emissions generated during coating application activities to levels below SCAQMD thresholds, the City would require the applicant to implement standard condition SC AIR-1, which requires the use of SCAQMD Rule 1113 "super compliant" coatings with a lower VOC content than the CalEEMod default assumption, as well as the application of coatings with efficient spray equipment. The City would also require the Applicant to implement mitigation measure MM AIR-1, which imposes idling restrictions consistent with General Plan EIR Mitigation Measure AIR-C.

The standard VOC content assumption for residential and non-residential coatings is 50 and 100 grams per liter, respectively. Thus, the use of coatings with a VOC content of less than 10 grams per liter of coating would substantially reduce ROG emissions during coating application activities, as shown in Table 5-5.

Table 5-5: Mitigated Regional Construction Emissions Estimates

Season	Total Mitigated Maximum Daily Emissions (Pounds Per Day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer 2019	4.4	44.7	32.7	0.1	5.2	2.7
Summer 2020	43.1	26.0	30.7	0.1	5.0	2.0
Winter 2019	4.6	45.0	31.6	0.1	5.2	2.7
Winter 2020	43.1	26.1	29.8	0.1	5.0	2.0
SCAQMD CEQA Threshold	75	100	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Source: MIG 2019 (see Appendix A)

As shown in Table 5-5, the maximum daily construction emissions generated by the Project would be below the SCAQMD's regional construction emission thresholds with the inclusion of standard conditions and mitigation measure AIR-1. Thus, the standard conditions and mitigation measure ensure that the Project's regional construction emissions would have a less than significant effect.

Standard Conditions

SC AIR-1: Comply with South Coast Air Quality Rule 1113 to reduce VOC emissions from architectural coating applications. Prior to the issuance of a building permit for the Project, the Applicant shall submit, to the satisfaction of the Planning Division, a Coating Restriction Plan (CRP), consistent with South Coast Air Quality Management District (SCAQMD) guidelines. The Applicant shall include in any construction contracts and/or subcontracts a requirement that Project contractors adhere to the requirements of the CRP. The CRP shall include a requirement that all interior and exterior residential and non-residential architectural coatings used in Project construction meet the SCAQMD "super compliant" coating VOC content standard of less than 10 grams of VOC per liter of coating. The CRP shall also specify the use of high-volume, low pressure spray guns during coating applications to reduce coating waste.

Requirements and Timing: Applicant shall receive Planning Division approval of a Coating Restriction Plan (CRP) prior to receipt of building permits.

Monitoring: City Planning staff shall conduct site inspections to ensure that the CRP is followed during construction.

Mitigation Measures

MM AIR-1: Idling Restrictions: Idling of diesel-powered vehicles and equipment shall not be permitted during periods of non-active vehicle use. Diesel-powered engines shall not be allowed to idle for more than 5 consecutive minutes in a 60-minute period when the equipment is not in use, occupied by an operator, or otherwise in motion, except as follows:

- When equipment is forced to remain motionless because of traffic conditions or mechanical difficulties over which the operator has no control;
- When it is necessary to operate auxiliary systems installed on the equipment, only when such system operation is necessary to accomplish the intended use of the equipment;
- To bring the equipment to the manufacturer's recommended operating temperature;
- When the ambient temperature is below 40 degrees F or above 85 degrees F; or
- When equipment is being repaired.

Requirements and Timing: Mitigation measure shall be printed on construction drawings and included as a requirement in the construction contract.

Monitoring: City Planning staff shall conduct site inspections during construction to ensure that the mitigation measure is adhered to.

Regional Operational Emissions

Once operational, the Project would result in long-term emissions from area, energy, and mobile sources. The net change in emissions of regulated air pollutants that would occur with implementation of the Project was modeled using CalEEMod, Version 2016.3.2. The operation emissions for the Project were modeled based on the Project's first full year of operation (2022), using default data assumptions provided by CalEEMod, with the following Project-specific modifications:

- The default trip generation rates for the existing land use types were replaced with trip generation rates contained in the Traffic Impact Study (TIS) prepared for the Project (Linscott, Law, and Greenspan 2019). The Project TIS provided trip generation rates for peak weekday activities. Accordingly, the residential average daily traffic rate contained in the TIS was adjusted by a factor of 0.96 for Saturday trip rate and 0.88 for Sunday trip rate to account for reduced weekend trip rates (this provides a more accurate estimate of total annual emissions). Retail weekend trip rates were also adjusted, by a factor of 1.17 and 0.59 for Saturday and Sunday accordingly. Pass-by trips were excluded from the retail land use (since these reductions are already accounted for in the TIS) and added to primary and diverted trip types
- The default electrical efficiency intensity values for non-residential land uses were adjusted downwards to reflect the recent adoption of the 2019 energy efficiency standards. The 2019 energy efficiency standards took effect on January 1, 2020 and will reduce energy use from residential and non-residential development through the required installation of solar photovoltaic systems, electric demand response compliance options such as battery storage systems, stronger building envelope insulation for attics, walls, and windows, and use of light-emitting diode lighting systems.
- Woodstoves and hearths were excluded pursuant to City General Plan requirements and SCAQMD Rule 445 (see standard condition SC AIR-2).
- One 50-horsepower diesel-fueled back-up generator and one 50-horsepower, diesel-fueled fire pump were presumed to be present on-site and operate a total of 18 hours per year.

The net change in long-term operational emissions that would be generated by buildout of the proposed Project is shown in Table 5-6 below.

Table 5-6: Operational Emissions Estimates

Emission Scenario	Maximum Daily Emissions (Pounds Per Day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area Sources	8.6	4.5	26.8	0.0	0.5	0.5
Energy Sources	0.1	1.0	0.4	0.0	0.1	0.1
Mobile Sources	2.3	4.4	32.5	0.1	10.0	2.7
Total Buildout Emissions(B)	11.0	9.9	59.7	0.1	10.6	3.3
Total Existing Emissions(C)	4.1	4.1	16.1	0.0	3.3	1.4
Net Change in Emissions Levels						
Total Net Change	+6.9	+5.8	+43.6	+0.1	+7.3	+1.9
SCAQMD CEQA Threshold	55	55	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Source: MIG 2019 (see Appendix A)

(A) Emissions presented are worst-case emissions and may reflect summer or winter emissions levels. Maximum daily ROG, CO, SOX emissions occur during the summer. Maximum daily NOX emissions occur during the winter. In general, due to rounding, there is no difference between summer and winter PM10 and PM2.5 emissions levels for the purposes of this table.

(B) Totals may not equal due to rounding. Stationary sources would add less than 0.000 pounds per day of emissions to the project's area, energy, and mobile source total.

(C) See Table 2-5.

As shown in Table 5-6, the maximum daily operational emissions associated with the proposed Project would not exceed the SCAQMD's recommended regional pollutant thresholds for all pollutants.

Standard Conditions

SC AIR-2: Natural Gas Fireplaces. All residential fireplaces installed shall be fueled by natural gas. Wood stoves and wood burning fireplaces shall be prohibited. (Consistent with General Plan EIR Mitigation Measure AIR-D).

Requirements and Timing: Standard condition shall be printed on construction drawings.

Monitoring: City Planning staff shall conduct site inspections during construction to confirm condition is adhered to.

5.3.3 Sensitive Receptors And Substantial Pollutant Concentrations

The proposed Project would generate both short-term construction emissions and long-term operational emissions that could impact sensitive residential receptors located near the Project; however, as described in more detail below, the proposed Project would not generate short-term or long-term emissions that exceed SCAQMD-recommended localized significance thresholds or result in other substantial pollutant concentrations.

Localized Significance Thresholds Analysis

Construction Emissions

The Project's maximum daily construction emissions are compared against the SCAQMD's-recommended LSTs in Table 5-2. Consistent with the SCAQMD's LST methodology, the emissions included in the construction LST analysis are onsite emissions only, and the LST thresholds against which these onsite emissions are compared are based on the Project size, in acres, as determined using the specific equipment list generated by the CalEEMod project file and the SCAQMD's Fact Sheet for Applying CalEEMod to Localized Significance Thresholds (SCAQMD 2016c)[4]. The LST thresholds are for SRA 9 (East San Gabriel Valley), the SRA in which the proposed Project is located, and are based on a receptor distance of 25 meters (82 feet), the closest LST receptor distance threshold recommended for use by the SCAQMD.

The emissions presented in Table 5-75-6 incorporate certain best available control measures the Project would be subject to pursuant to SCAQMD Rule 403, Fugitive Dust. Specifically, the CalEEMod project file applies a 60% to 67% total reduction in PM10 and PM2.5 fugitive dust emissions through site watering (three times daily) and replacement of ground cover. These estimated reductions are consistent with the reductions realized by implementation of the numerous best available control measures contained in SCAQMD Rule 403 (also shown as standard condition SC AIR-3).

As shown in Table 5-7, the maximum daily onsite emissions generated during demolition, site preparation, and grading activities associated with the Project would not exceed the SCAQMD's recommended LST thresholds.

[4] According to the SCAQMD's *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds*, the maximum number of acres disturbed on the peak day of use per crawler tractor, grader, and rubber tired dozer is 0.5 acres per 8 hour day, while the maximum number of acres disturbed on the peak day of use per scraper is 1 acre per 8 hour day.

Table 5-7: LST Construction Analysis				
Construction Phase	Maximum Daily Emissions (Pounds per Day)(A)			
	NO_X	CO	PM_{10}(E)	$PM_{2.5}$(E)
Demolition	22.7	14.9	2.2	1.3
Site Preparation	21.5	11.9	1.5	0.9
Grading	22.7	10.2	3.6	2.3
Building Construction 2019	18.9	15.3	1.1	1.0
Building Construction 2020	17.4	14.9	0.9	0.9
Paving	11.6	11.8	0.7	0.6
Architectural Coating	1.6	1.8	0.1	0.1
SCAQMD LST Threshold (1.5-Acre)(B)	108.5	784.0	6.0	3.9
Threshold Exceeded?	No	No	No	No

Source: MIG 2019 (see Appendix A)

(A) Emissions presented are worst-case total emissions and may reflect summer or winter emissions levels.

(B) Grading would involve the use of one grader and one rubber-tired dozer, which equals a 1.5-acre project site for LST purposes (1*1.0)+(1*0.5)=1.5. Accordingly, a 1.5-acre LST threshold was developed using linear regression.

(C) PM emissions assume compliance with SCAQMD Rule 403 best available control measures for site watering and replacing ground cover.

Standard Conditions

SC AIR-3: Comply with South Coast Air Quality Management District Rule 403, Fugitive Dust, by incorporating best available control measures during construction.

Requirements and Timing: Standard condition shall be printed on construction drawings and included as a requirement in the construction contract.

Monitoring: City Planning staff shall conduct site inspections during construction to ensure that the standard condition is adhered to.

Operational Emissions

The Project's maximum daily operational emissions are compared against the SCAQMD's-recommended LSTs in Table 5-. Consistent with the SCAQMD's LST methodology, the emissions included in the operational LST analysis are onsite emissions only, and the LST thresholds against which these onsite emissions are compared are based on the Project size, in acres. The LST thresholds are for SRA 9 (East San Gabriel Valley), the SRA in which the Project is located and are based on a receptor distance of 25 meters (82 feet), the closest LST receptor distance threshold recommended for use by the SCAQMD.

Table 5-8: LST Operational Analysis				
Emissions	Maximum Onsite Pollutant Emissions (Pounds Per Day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Area Sources	4.5	26.8	0.5	0.5
Energy Sources	1.0	0.4	0.1	0.1
Mobile Sources(A)	0.1	0.7	0.2	0.1
Stationary Sources	<0.00(B)	<0.00(B)	<0.00(B)	<0.00(B)

Table 5-8: LST Operational Analysis				
Emissions	Maximum Onsite Pollutant Emissions (Pounds Per Day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Subtotal Emissions(C)	5.6	27.9	0.8	0.7
SCAQMD LST Threshold(D)	128	953	2	2
Threshold Exceeded?	No	No	No	No

Source: MIG 2019 (see Appendix A).

(A) Mobile source emissions estimates reflect potential onsite vehicle emissions only and were derived by assuming 2% of operational mobile source emissions in Table 5-6 will occur onsite.

(B) "<0.00" does not indicate the emissions are less than or equal to 0; rather, it indicates the emission is smaller than 0.01 but larger than 0.000.

(C) Emissions presented are worst-case emissions and may reflect summer or winter emissions levels. In general, due to rounding, there is no difference between summer and winter emissions levels for the purposes of this table.

(D) LST threshold is conservatively based on a 5.0-acre project size and 25-meter (82-foot) receptor distance.

As shown in Table 5-, the maximum daily onsite emissions generated during operation of the proposed Project would not exceed the SCAQMD's recommended LST thresholds.

Standard Conditions

Refer to standard condition SC AIR-2 above.

Carbon Monoxide Hot Spots

A CO hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near high volume intersections. Several screening procedures have been developed by air districts throughout the state to assess whether a project may result in a CO impact. For example, the Bay Area Air Quality Management District (BAAQMD) developed a screening threshold in 2010 which states that any project involving an intersection experiencing 44,000 vehicles per hour would require detailed analysis (BAAQMD, 2017 pg. 3-4). Additionally, the SCAQMD's 2003 AQMP and *1992 Federal Attainment Plan for Carbon Monoxide* demonstrated that CO levels were below the CAAQS at an intersection with a daily traffic volume of up to approximately 100,000 vehicles per day. According to the City's General Plan Circulation and Noise Elements, there are no roadways in the City that experience hourly volumes close to 44,000 vehicles or more or daily volumes of 100,000 vehicles or more. Based on the TIS prepared for the Project, the maximum number of vehicles moving through any study intersection would be substantially below the screening threshold of 44,000 vehicles per hour for a CO hotspot analysis. Therefore, the Project would not cause or significantly contribute to CO concentrations that exceed State or Federal ambient air quality standards for CO. This impact would be less than significant.

Construction Fugitive Dust and DPM Emissions

Construction activities associated with the proposed Project would result in demolition, site preparation, grading, and other activities that would generate fugitive dust; however, as shown under above, the total PM10 and PM2.5 emissions generated during construction of the Project would be below SCAQMD LST thresholds. The SCAQMD's LST thresholds represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable Federal or State AAQS. Thus, since Project construction emissions would not exceed applicable LST thresholds, the proposed Project would not expose sensitive receptors to substantial fugitive dust concentrations.

A portion of the PM_{10} and $PM_{2.5}$ emissions generated during construction of Project (Table 5-75-6) would be DPM. DPM is a TAC that can potentially cause substantial adverse health risks at concentrations lower than the ambient air quality standards for PM_{10} and $PM_{2.5}$ set by the Federal and State CAA. Equipment with diesel engines would be used during all phases of the proposed Project development, and some construction activities would occur as close as approximately 60 feet away from sensitive receptor locations (e.g., receptors across South Primrose Avenue and South Myrtle Avenue), although most construction activities on the interior of the proposed project site would occur 200 feet or more from sensitive receptor locations.

Furthermore, implementation of idling restrictions under mitigation measure MM AIR-1 would minimize DPM emissions from construction equipment. Second, as shown in Figure 2-1, the prevailing daytime wind direction is from the west/southwest at the nearest meteorological station maintained by the SCAQMD in Azusa (less than five miles east of the Project area). Wind conditions at this location are considered representative of wind conditions in the Project area, meaning that DPM emissions generated by construction equipment would generally be pushed to the east/northeast, away from the closest sensitive residential receptors, and pollutants would quickly disperse over distance. Finally, potential long-term adverse health risks from DPM are evaluated assuming a constant exposure to emissions over a 70-year lifetime, 24 hours a day, seven days a week, with increased risks generally associated with increased proximity to emissions sources. Since construction activities would only generate DPM emissions on an interim, short-term basis, DPM emissions from construction activities would be unlikely to result in adverse health effects to existing sensitive receptors that exceed the SCAQMD's significance criteria[5]. Therefore, construction activities associated with buildout of the Project would not expose nearby sensitive receptors to substantial levels of DPM that would pose a significant adverse health risk.

Operational – Health Risks Related to Exposure from I-210 Emissions

The proposed Project would be exposed to emissions of DPM from vehicles travelling along the I-210 freeway in both directions. Diesel vehicles include trucks, motorcycles, recreational vehicles, and buses[6] MIG has prepared an operational health risk assessment for the proposed Project consistent with SCAQMD guidance (MIG, 2019). The risk assessment evaluated the maximum increase in cancer risk at the point of maximum impact, maximum exposed individual receptor, and maximum exposed individual worker. The health risk assessment determined the maximum exposed individual receptor is located at the northeast corner of the project boundary. The incremental increase in cancer risk at this location is approximately 35.2 in one million. This value is above the SCAQMD's cancer risk threshold of 10.0 in one million; however, this is not an impact under CEQA. The non-cancer hazard index at all properties from long-term exposure to DPM emissions would be less than SCAQMD threshold of 1.0. Pursuant to the California Supreme Court's Decision in CBIA v. BAAQMD, CEQA review is focused on a project's impact

[5] The SCAQMD has established the following thresholds of significance for TAC emissions: Maximum Incremental Cancer Risk ≥ 10 in 1 million; Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million); Chronic & Acute Hazard Index ≥ 1.0 (project increment).

[6] Gasoline and diesel-fueled vehicles travelling on the I-210 would emit other TACs besides DPM; however, these other TACs would be emitted in much lower quantities than DPM. Accordingly, this analysis focuses on the risk from DPM emitted by vehicles travelling on the I-210 as an overall indicator of potential adverse health risks from mobile sources operating near the site.

on the environment "and not the environment's impact on the project." Therefore, the health risks associated with the I-210 are evaluated and presented for information purposes only.

As described above, the proposed project would be exposed to DPM emissions and associated adverse health risks from vehicle traffic on the adjacent I-210. Although the potential effect of I-210 emissions on the future residential receptors associated with the proposed project is not considered an impact of the project for the purposes of CEQA, the project's potential to exacerbate existing I-210 DPM emissions and corresponding adverse health hazards is within the scope of CEQA and is evaluated below.

According to Caltrans traffic data, the segment of the I-210 adjacent to the proposed project area carries approximately 252,000 vehicles per day. Based on CARB's EMFAC2017 model, approximately 3.8% of all vehicles in the Los Angeles (South Coast) region are diesel vehicles, meaning there are approximately 9,585 diesel vehicles that pass by the project area on a daily basis, emit DPM, and contribute to potential existing adverse health risks (MIG, 2019.) The proposed project would not significantly exacerbate I-210 emissions for several reasons. First, according to the Traffic Impact Analysis prepared for the project, the proposed project would generate 1,107 net new total daily vehicle trips, of which approximately 55 (3.8%) would be diesel trips (based on the regional percentage of diesel vehicles in the Los Angeles sub-region). Even if all project trips were added to the I-210 (which would not be the case), the project would increase diesel vehicle trips on the I-210 by less than 0.6% on a daily basis. Furthermore, the HRA prepared for the project indicates the predominant vehicle types that contribute to diesel emission on the I-210 are trucks and buses. Automobiles and light duty trucks that are most likely to be generated by the project represent less than 3% of the total daily DPM emissions (and associated risk) generated by vehicle traffic on the I-210 adjacent to the project area. This means that the proposed Project could, at worst case, change DPM emissions adjacent to the project area by no more than approximately 2%[7]. This change is not considered a significant exacerbation of the existing conditions and, therefore, is a less than significant impact.

5.3.4 Odors

According to the SCAQMD CEQA Air Quality Handbook, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc.). The proposed Project does not include such sources but would result in the construction of a new apartment complex and parking garage that could generate odors related to vehicle parking and refuse collection (e.g. oils, lubricants, fuel vapors, short-term waste odors). These activities would not generate sustained odors that would affect substantial numbers of people. In addition, although industrial land uses are present east of the Project area, these sources are unlikely to generate objectionable odors in the Project area given the typical meteorological patterns present (see Figure 2-1).

[7] This estimates assumes the project results in a 0.6% increase in traffic associated with approximately 3% of the daily DPM emissions shown in 7-13.

6 GREENHOUSE GAS IMPACT ANALYSIS

This chapter evaluates the GHG impacts that could result from implementation of the proposed Project. Unlike air quality, which is influenced by local and regional factors and is therefore considered on the local or regional scale, the effects of global climate change are the result of GHG emissions worldwide; individual projects do not generate enough GHG emissions to influence global climate change. Thus, the analysis of GHG emissions is by nature a cumulative analysis focused on whether an individual project's contribution to global climate change is cumulatively considerable.

6.1 SIGNIFICANCE CRITERIA

In accordance with Appendix G of the State CEQA Guidelines, the proposed Project could result in potentially significant GHG impacts if it would:

(a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

(b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG; or

To date, the SCAQMD has not adopted a numerical threshold for determining the significance of GHG emissions in the Basin; however, to provide guidance to local lead agencies on determining the significance of GHG emissions in their CEQA documents, the SCAQMD convened a GHG Significance Threshold Working Group (Working Group) meeting on April 30, 2008. In December, 2008, the SCAQMD Governing Board adopted a GHG significance threshold of 10,000 MTCO2e for industrial projects where the SCAQMD is lead agency; however, the City would be the lead agency for the proposed Project. The SCAQMD has not formally adopted GHG thresholds for local lead agency consideration; however, to date, the Working Group has convened a total of 15 times, with the last meeting taking place on September 28, 2010. At this last meeting, SCAQMD presented their proposed GHG thresholds for use by local lead agencies. The proposed thresholds are tiered as follows:

- Tier 1 consists of evaluating whether or not the project qualifies for applicable CEQA exemptions.
- Tier 2 consists of determining whether or not a project is consistent with a greenhouse gas reduction plan. If a project is consistent with a greenhouse gas reduction plan, it would not have a significant impact.
- Tier 3 consists of using screening values at the discretion of the Lead Agency; however, the Lead Agency should be consistent for all projects within its jurisdiction. The following thresholds were proposed for consideration:
  - 3,000 MTCO2e/year for all land use types; or
  - 3,500 MTCO2e/year for residential; 1,400 MTCO2e/year for commercial; 3,000 MTCO2e/year for mixed-use projects.
- Tier 4 has three options for projects that exceed the screening values identified in Tier 3:
  - Option 1: Reduce emissions from business as usual by a certain percentage (currently undefined)
  - Option 2: Early implementation of applicable AB 32 Scoping Measures
  - Option 3: For plan-level analyses, analyze a project's emissions against an efficiency value of 6.6 MTCO2e/year/SP in 2020 and 4.1 MTCO2e/year/SP by 2035. For project-level

analyses, analyze a project's emissions against an efficiency value of 4.8 and 3.0 MTCO2e/year/SP for the 2020 and 2035 calendar years, respectively.

6.2 Analysis Methodology

Tier 3 threshold was used as significance criteria in this analysis to determine if GHG emissions under the proposed Project would have a significant effect on the environment.

6.3 Environmental Impacts

6.3.1 Generation of Greenhouse Gas Emissions

Construction Emissions. Construction activities would generate GHG emissions primarily from equipment fuel combustion as well as worker, vendor, and haul trips to and from the Project site during demolition, site preparation, grading, building construction, paving, and architectural coating activities. Construction activities would cease to emit GHG upon completion, unlike operational emissions that would be continuous year after year until the Project is decommissioned. Accordingly, the SCAQMD recommends amortizing construction GHG emissions over a 30-year period. This normalizes construction emissions so that they can be grouped with operational emissions and compared to appropriate thresholds, plans, etc. GHG emissions from construction of the proposed Project were estimated using CalEEMod, Version 2016.3.2, based on the anticipated construction schedule and construction activities described earlier in this report. The estimated construction GHG emissions resulting from the Project are presented below in Table 6-1.

Table 6-1: Estimated Construction GHG Emissions

Construction Year	GHG Emissions (Metric Tons / Year)			
	CO_2	CH_4	N_2O	Total $MTCO_2e$
2019	191.2	0.02	0.00	191.7
2020	659.7	0.06	0.00	661.2
Total	850.9	0.1	0.00	852.9
Total Amortized Emissions(A)	28.4	<0.00(B)	0.00	28.4

Source: MIG 2019 (see Appendix C1).

(A) Emissions amortized over 30 year-period for inclusion in total GHG emissions.

(B) "<0.0" does not indicate the emissions are less than or equal to 0; rather, it indicates the emission is smaller than 0.01, but larger than 0.000.

Operational Emissions. Once operational, the Project would result in continuous GHG emissions from mobile, energy, and area sources. Mobile sources would result primarily in emissions of CO_2, with emissions of CH_4 and NO_2 also occurring in minor amounts. In addition to mobile sources, GHG emissions would also be generated from natural gas usage, electricity use, water conveyance and use, wastewater treatment, and solid waste disposal. Natural gas use would result in the emission of two GHGs: CH_4 (the major component of natural gas) and CO_2 (from the combustion of natural gas). Electricity use associated with both the physical usage of the development, as well as the energy needed to transport water/wastewater, would result in the production of GHGs if the electricity is generated through non-renewable sources (i.e., combustion of fossil fuels). Solid waste generated by the proposed Project, would contribute to GHG emissions in a variety of ways. Landfilling and other methods of disposal use energy

when transporting and managing the waste. In addition, landfilling, the most common waste management practice, results in the release of CH_4 from the decomposition of organic materials.

Potential operational GHG emissions resulting from the Project were modeled using CalEEMod, Version 2016.3.2. The total GHG emissions associated with the Project are presented below in Table 6-2, based on an operational year of 2022. To account for all potential GHG emissions generated through construction and operational activities, the amortized construction emissions calculated in Table 6-1 have been added to Project operational GHG emissions estimate.

As shown in Table 6-2, construction and operation of the Project would result in a net increase in GHG emissions equal to 1,848 $MTCO_2e$ per year. This net emissions increase is below the SCAQMD Tier 3 "bright-line" threshold of 3,000 $MTCO_2e$.

Table 6-2: Estimated Operational GHG Emissions

Emission Source	GHG Emissions ($MTCO_2e$ / Year)		
	Existing[A]	Proposed	Net Change
Area	2.70	67.2	+64.5
Energy	190.9	671.6	+480.7
Mobile[B]	456.3	1,632.5	+1,176.2
Stationary	–	0.3	+0.3
Waste	32.1	73.7	+41.6
Water	49.8	106.2	+56.4
Amortized Construction	–	28.4	+28.4
Total[C]	731.8	2,579.9	+1,848.1
SCAQMD Tier 3 Screening Threshold	–	–	3,000
SCAQMD Tier 3 Threshold Exceeded?	–	–	No

Source: MIG 2019 (see Appendix A).
Notes:
(A) See Table 3-3 for existing GHG emissions in Project Plan area.
(B) Totals may not equal due to rounding.

6.3.2 Consistency With GHG Reduction Plans

The proposed Project would not conflict with CARB's Scoping Plan, the regional SCS, the City's General Plan, or the City's Energy Plan. The Project's consistency with these plans is described in more detail below.

CARB Scoping Plan

As discussed under Section 3.4.2, the 2017 Climate Change Scoping Plan is CARB's primary document used to ensure State GHG reduction goals are met. The *2017 Climate Change Scoping Plan's* primary objective is to identify the measures needed to achieve the 2030 reduction target established under Executive Order B-30-15 and SB 32. The major elements of the plan are generally geared toward actions either CARB or other state entities will pursue, such as, but not limited to:

- Implementing the LCFS, with an increased stringency (18 percent by 2030);
- Implementation of SB 350, which expands the RPS to 50 percent and doubles energy efficiency savings; and

- Implementing the proposed Short-Lived Climate Pollutant Strategy, which focuses on reducing CH_4 and hydrocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by the year 2030.

Although most of these measures would be implemented at the State level, the GHG reductions achieved by these state measures would be realized at the local level. For example, regardless of actions taken by the City, emissions generated through gasoline combustion in motor vehicles within Monrovia would produce less GHG in 2030 than they do now.

In addition to State measures, Appendix B to CARB's *2017 Climate Change Scoping Plan* identifies potential actions that could be undertaken at a local level to support the State's climate goals. This appendix is organized into two categories. Category A applies to code and broad planning documents and is not applicable to a Specific Plan. Category B includes measures that could be considered for individual projects. The Project is consistent with many of the suggested measures in Appendix B through required compliance with SCAQMD rules and the California Green Building Standards Code. The proposed Project, therefore, would not conflict with the goals of the *2017 Climate Change Scoping Plan.*

Southern California Association of Governments RTP/SCS

As described in Section 3.4.2, the 2016 RTP/SCS is a growth strategy and transportation plan whose primary intent is to demonstrate how the SCAG region will meet its GHG reduction target through the year 2040. Many of the measures included in the RTP/SCS are focused on: the expansion of, and access to, mass transit (e.g., light rail, commuter rail, bus rapid transit, etc.); planning growth around livable corridors; and locating new housing and job growth in high quality transit areas. Approval of the proposed Project would support these goals, because it (1) results in and encourages infill development and/or involves the revitalization of already developed areas, (2) has existing, supporting transit infrastructure and enhances the use of this infrastructure (the METRO Station is a 0.2-mile walk from to the east of the Project boundary), and (3) encourages the use of non-vehicular modes of transportation.

Under California law, SCAG is required to implement strategies that reduce per capita GHG emissions in the region by eight percent by 2020—compared with 2005 levels—and by 13 percent by 2035 (SCAG 2016). Although the existing emissions in the Project area have not been estimated for Year 2005, it is very likely that 2005 GHG emissions levels (and efficiency metrics) would be higher than the Year 2018 existing conditions presented in Table 3-3. As shown in Table 6-5, the Project is anticipated to reduce per capita GHG emissions by approximately 75 percent from existing conditions, which exceeds the progress needed to achieve the mandated reduction in GHG emissions of 13 percent by 2035. One of the reasons the Project results in such low GHG emissions is the Project area's proximity to the Monrovia METRO Station. The proximity of this transit station to the Project is estimated to reduce Project-related trips by 20%.

Since the implementation of the proposed Project would result in transit-oriented development, support the use of mass transit, and result in vehicle trips that are approximately 20% lower than standard values due to the proximity of the Monrovia METRO station, the proposed Project would be consistent with the SCAG 2016 RTP/SCS.

City of Monrovia Energy Action Plan

The City of Monrovia has an *Energy Action Plan* that seeks to decrease energy use and dependence. The plan suggests the need for citizen involvement and focuses heavily on actionable items related to managing City facilities and vehicles. Additionally, the City requires consistency with energy

saving strategies (such as Title 24 which requires energy efficient practices). The Project is consistent with Title 24 building codes, and therefore is consistent with the goals of the Energy Action Plan.

6.3.3 Energy Consumption and Conflict with Renewable Energy Plans

Short-term energy demand would result from construction activities occurring as a result of buildout of the Project. Short-term demand would include energy needed to power worker and vendor vehicle trips as well as construction equipment. Long-term energy demand would result from operation of businesses and land uses within the Project area, which would include activities such as lighting, heating and cooling of structures, etc. Operational energy demands would typically result from vehicle trips, electricity and natural gas usage, and water and wastewater conveyance.

As estimated by the TIS prepared for the Project and the emissions modeling conducted using CalEEMod defaults, buildout of the proposed Project is anticipated to result in an increase in trip generation by approximately 1,107 trips per weekday, natural gas consumption by 3,533,135 kBTU annually, and electricity consumption by 1,124,187 kWh annually. Although trip generation and energy consumption would increase under implementation of the proposed project, consumption rates per service population would decrease. Buildout of the Project would result in a trip generation decrease from 6.15 weekday trips/service population to 2.14 weekday trips/service population. Natural gas consumption would also reduce from 10,502 kBtu/service population/year to 6,213 kBtu/service population/year, and annual electricity consumption would decrease from 19,473 kWh/service population/year to 3,620 kWh/service population/year.[8]

Although implementation of the Project may increase overall VMT through additional trips and energy and natural gas usage compared to current conditions, increased density would provide for more efficient use of resources within the City, thus ensuring that the proposed Project would not result in the wasteful or inefficient use of energy resources. This would be a less than significant impact.

As discussed in Section 6.3.2, the Project would be consistent with CARB's Scoping Plan and SCAG's RTP/SCS, which incorporate goals for use of renewable energy and efficient energy use as well as for reducing GHG emissions. The proposed Project also would not interfere with the installation of any renewable energy system. Therefore, the Project would be consistent with applicable State and local plans for promoting use of renewable energy and energy efficiency.

[8] Calculations based on a service population of 634. Approximately 611 of the service population would be residents (see Section 17.2.3) and12,500 square feet for retail would result in employment of 23 people, based on a rate of one employee per 550 square feet of retail (GBC 2008).

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7 REPORT PREPARERS AND REFERENCES

This report was prepared by MIG under contract to Evergreen Investment Partners, LLC. This report reflects the independent, objective, professional opinion of MIG.

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7.1 REFERENCES

Bay Area Air Quality Management District (BAAQMD) 2017. *California Environmental Quality Act Air Quality Guidelines*. San Francisco, CA. June 2010, updated May 2017.

California Air Resources Board (CARB) 2007. *Staff Report California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit.* Sacramento, CA. November 16, 2007. <http://www.arb.ca.gov/cc/inventory/pubs/reports/staff_report_1990_level.pdf>

_____2009a. "History of Sulfates Air Quality Standard" *California Ambient Air Quality Standards.* CARB, Air Quality Standards and Area Designations, Review of Ambient Air Quality Standards, California Ambient Air Quality Standards. November 24, 2009. Web. December 14, 2018. <http://www.arb.ca.gov/research/aaqs/caaqs/sulf-1/sulf-1.htm>

_____2009b. *Climate Change Scoping Plan – A Framework for Change*. Endorsed by ARB December 2008. Sacramento, CA. May 11, 2009. <http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>

_____2010. "AB 32 Climate change, Scoping Plan Progress Report." Sacramento, CA. September 2010.

_____2011. *Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document.* Released August 19, 2011. Sacramento, CA. Approved August 24, 2011. http://www.arb.ca.gov/cc/scopingplan/fed.htm.

_____2014. *First Update to the Climate Change Scoping Plan*. Sacramento, CA. May 2014

_____2016a. *Ambient Air Quality Standards.* Sacramento, CA. May 4, 2016. Available online at: <https://www.arb.ca.gov/research/aaqs/aaqs2.pdf>

_____2016b. *SIP Emission Projection Data, 2012 Estimated Annual Average Emissions, South Coast Air Basin.* Sacramento, CA. 2016.

_____2017. *2017 Climate Change Scoping Plan.* Sacramento, CA. November 2017.

_____2018a. *California Greenhouse Gas Emission by Scoping Plan Category (2017 Edition: 2000 to 2016).* Sacramento, CA. July 11, 2018.

_____2018b. *Greenhouse Gas Emission Inventory – Query Tool for years 2000 to 2016 (11th Edition).* <https://www.arb.ca.gov/app/ghg/2000_2016/ghg_sector.php> Accessed December 17, 2018.

_____2018c. *Greenhouse Gas Emission Inventory – Query Tool for years 2000 to 2016 (11th Edition).* <https://www.arb.ca.gov/app/ghg/2000_2016/ghg_sector.php> Accessed December 17, 2018.

_____2018d. Updated Final Staff Report Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets, Appendix A: MPO Target Recommendations and CARB Staff Recommendations. February 2018.

_____2018e. Staff Report: Initial Statement of Reasons for the Proposed Amendments to the Low Carbon Fuel Standard Regulation. Sacramento, CA. March, 2018.

_____2018f. *Draft Environmental Analysis Prepared for the Proposed Amendments to the Low Carbon Fuel Standard and the Alternative Diesel Fuels Regulation.* Sacramento, CA. March, 2018.

California Energy Commission (CEC) 2011. Integrate Energy Policy Report. Publication Number: CEC-100-2011-011-CMF. Accessed July 25, 2015. <http://www.energy.ca.gov/2014publications/CEC-100-2011-001/CEC-100-2011-001-CMF.pdf>

_____2015a. Integrated Energy Policy Report. Publication Number: CEC-100-2015-001-CMF. Accessed September 26, 2017. <http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-01/TN212017_20160629T154354_2015_Integrated_Energy_Policy_Report_Small_File_Size.pdf>

_____2015b. "2016 Building Energy Efficiency Standards Adoption Hearing Presentation". June 10, 2015. Accessed April 17, 2017. <http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/2015-06-10_hearing/2015-06-10_Adoption_Hearing_Presentation.pdf>

_____2017a. *California Energy Commission – Tracking Progress*. "Renewable Energy – Overview." Updated August 2017.

_____2017b. "Electricity Consumption by County". <http://ecdms.energy.ca.gov/elecbycounty.aspx>

_____2017c. "Natural Gas Consumption by County". <http://ecdms.energy.ca.gov/gasbycounty.aspx>

California Natural Resources Agency (CNRA) 2009. *California Climate Adaptation Strategy.* Sacramento, CA. 2009.

City of Monrovia 2008. *Monrovia General Plan Proposed Land Use and Circulation Elements SCH No. 2007021135.* City of Monrovia. January 2008.

_____2008. *Energy Action Plan.* City of Monrovia. June 2008.

_____2017. *Cumulative Project List – Land Development Projects*. Monrovia, December 2017.

Linscott, Law, and Greenspan 2018. Transportation Impact Study, 123 W. Pomona Project. City of Monrovia. November.

Loxham, M., M.J. Cooper, M.E. Gerlofs-Nijland, F. R. Cassee, D.E. Davies, M.R. Palmer, and D.A.H. Teagle. 2013. Physicochemical characterization of airborne particulate matter at a mainline underground railway station. Environmental Science and Technology, Apr. 16: 47(8): 3614-3622.

MIG 2019. Arroyo at Monrovia Station Project Operational Health Risk Assessment. Pasadena, CA. February 2019.

National Oceanic and Atmospheric Administration (NOAA) 2017. "Recent Monthly Average Mauna Loa CO_2." *Trends in Atmospheric Carbon Dioxide*. NOAA, Earth System Research Laboratory, Global

Monitoring Division. November 5, 2018. Web. December 14, 2018. <http://www.esrl.noaa.gov/gmd/ccgg/trends/>

Office of Environmental Health Hazard Assessment (OEHHA) 2015. *Air Toxics Hot Spots Program Guidance Manual*. Sacramento, CA. February 2015.

_____2017a. CalEnviroScreen 3,0 Report. January 2017.

_____2017b, *Disadvantaged Communities Map.* June 2017. Available online at: <https://oehha.ca.gov/calenviroscreen/sb535>

_____2018. *CalEnviroScreen 3.0 Map.* June 2018. Available online at: <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>

South Coast Air Quality Management District (SCAQMD) 2003. *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution.* Diamond Bar, CA. August 2003.

_____2008. *Final Localized Significance Threshold Methodology*. Diamond Bar, CA. 2008. Available online at: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2>

_____2010. *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15*. Diamond Bar, CA. September 28, 2010. Available online at: < http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf>

_____2014. *2014 Air Quality South Coast Air Quality Management District.* Diamond Bar, CA. 2014.

_____2015a. *2015 Air Quality South Coast Air Quality Management District.* Diamond Bar, CA. 2015.

_____2015b. *SCAQMD Air Quality Significance Thresholds*. Diamond Bar, CA. March 2015. Available online at: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>

_____2015c. Multiple Air Toxics Exposure Study IV (MATES IV). Available online at: <http://www.aqmd.gov/docs/default-source/air-quality/air-toxic-studies/mates-iv/mates-iv-final-draft-report-4-1-15.pdf?sfvrsn=7>

_____2016a. *NAAQS and CAAQS Attainment Status for South Coast Air Basin*. Diamond Bar, CA. February 2016. Available online at: <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2>

_____2016b. *Draft 2016 Air Quality South Coast Air Quality Management District.* Diamond Bar, CA. 2016.

_____2016c. *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds.* Diamond Bar, CA. February 2016. Available online at: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2>

_____2017. *Final 2016 Air Quality Management Plan*. Diamond Bar, CA. March 2017.

_____2018. "Air Quality Analysis Handbook." *Air Quality Analysis Handbook.* SCAQMD, Regulations, CEQA. , n.d. Web. December 14, 2018. <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook>

_____2018a-c. Historical Data by Year for 2014, 2015, and 2016. <http://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year>

_____2018d. *Mates IV Estimated Risk.* Web. 2018. Available online at: <https://scaqmd-online.maps.arcgis.com/apps/webappviewer/index.html?id=470c30bc6daf4ef6a43f0082973ff45f>

_____2018e. *Meteorological Stations and Years of Meteorological Data Available.* Web 2018. Available online at: <https://www.aqmd.gov/home/air-quality/air-quality-data-studies/meteorological-data/aermod-table-1>

Southern California Association of Governments (SCAG) 2016. *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).* Adopted April 7, 2016.

Southern California Edison (SCE) 2016. "Corporate Responsibility and Sustainability Report." Rosemead, CA. 2016. <https://www.edison.com/content/dam/eix/documents/investors/corporate_responsibility/2016-eix-corporate-responsibility-and-sustainability-report.pdf>

UC Davis, Institute of Transportation Studies (UCD ITS). 1997. Transportation Project-Level Carbon Monoxide Protocol- Revised 1997. USD-ITS-RR-99-21. Davis, CA.

U.S. Census Bureau 2017. *Quick Facts Monrovia City, California – Population Estimates.* <https://www.census.gov/quickfacts/fact/table/monroviacitycalifornia/PST045217> July 1, 2017. Accessed July 2018.

United States Environmental Protection Agency (U.S. EPA) 2002. *Health Assessment Document for Diesel Engine Exhaust*. Washington, D.C. May 2002.

_____2016a. "Particulate Matter (PM) Basics." U.S. EPA, Environmental Topics [Air], Particulate Matter (PM), What is PM, and how does it get into the air?. September 12, 2016. Web. December 14, 2018. <https://www.epa.gov/pm-pollution/particulate-matter-pm-basics#PM>

_____2016b. "Carbon Monoxide (CO) Pollution in Outdoor Air." U.S. EPA, Environmental Topics [Air], Carbon Monoxide (CO), What is CO?. September 12, 2016. Web. December 14, 2018. <https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution#What%20is%20CO>

_____2016c. "Basic Information About NO_2." U.S. EPA, Environmental Topics [Air], Nitrogen Dioxide (NO_2), What is NO_2, and how does it get into the air? September 8, 2016. Web. December 14, 2018. <https://www.epa.gov/no2-pollution/basic-information-about-no2#What%20is%20NO2>

_____2016d. "Sulfur Dioxide Basics." U.S. EPA, Environmental Topics [Air], Sulfur Dioxide (SO_2), What is SO_2, and how does it get into the air? August 16, 2016. Web. December 14, 2018. <https://www.epa.gov/so2-pollution/sulfur-dioxide-basics#what%20is%20so2>

_____2017a. "Ozone Basics." U.S. EPA, Environmental Topics [Air], Ground Level Ozone, What is "good"" versus "bad" ozone. April 5, 2017. Web. December 14, 2018. <https://www.epa.gov/ozone-pollution/ozone-basics#what%20where%20how>

_____2017b. "Basic Information About Lead Air Pollution." U.S. EPA, Environmental Topics [Air], Lead, How does lead get in the air? March 17, 2017. Web. December 14, 2018. <https://www.epa.gov/lead-air-pollution/basic-information-about-lead-air-pollution#how>

APPENDIX A: CalEEMod Output Files

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Arroyo at Monrovia (existing conditions)

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 Light Industry	44.24	1000sqft	1.02	44,240.00	0
Single Family Housing	8.00	Dwelling Unit	2.60	7,612.00	22

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	537.06	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Arroyo at Monrovia (existing conditions) - Los Angeles-South Coast County, Annual

Project Characteristics - SCE intensity factors updated for 2019

Land Use - lot acreae and sf from project description

Construction Phase - no construction modeled

Off-road Equipment - no construction modeled

Trips and VMT - no construction modeled

Grading - no construction modeled

Architectural Coating - no construction modeled

Vehicle Trips - WkDy trip rate obtained from TIA

Energy Use -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	0.00
tblArchitecturalCoating	EF_Parking	100.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	50.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	0.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	8.00	0.00
tblConstructionPhase	NumDays	230.00	0.00
tblConstructionPhase	NumDays	18.00	0.00
tblConstructionPhase	NumDays	18.00	0.00
tblConstructionPhase	PhaseEndDate	2/7/2019	1/10/2019
tblConstructionPhase	PhaseEndDate	2/14/2019	2/7/2019
tblConstructionPhase	PhaseEndDate	2/26/2019	2/14/2019
tblConstructionPhase	PhaseEndDate	1/14/2020	2/26/2019
tblConstructionPhase	PhaseEndDate	2/7/2020	1/14/2020

tblConstructionPhase	PhaseEndDate	3/4/2020	2/7/2020
tblLandUse	LandUseSquareFeet	14,400.00	7,612.00
tblLandUse	Population	23.00	22.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.033
tblProjectCharacteristics	CO2IntensityFactor	702.44	537.06
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	21.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	4.00	0.00
tblVehicleTrips	DV_TP	11.00	8.00
tblVehicleTrips	HO_TTP	40.60	40.00
tblVehicleTrips	HS_TTP	19.20	20.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	PB_TP	3.00	5.00
tblVehicleTrips	PR_TP	86.00	87.00
tblVehicleTrips	WD_TR	6.97	4.95

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					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2391	3.0400e-003	0.1343	1.3000e-004		8.1000e-003	8.1000e-003		8.1000e-003	8.1000e-003	0.8498	1.7688	2.6186	2.6700e-003	6.0000e-005	2.7025
Energy	5.5000e-003	0.0494	0.0373	3.0000e-004		3.8000e-003	3.8000e-003		3.8000e-003	3.8000e-003	0.0000	190.0830	190.0830	9.3800e-003	2.0100e-003	190.9159
Mobile	0.1068	0.5668	1.5874	4.9500e-003	0.3822	5.7600e-003	0.3879	0.1025	5.4100e-003	0.1079	0.0000	455.6075	455.6075	0.0263	0.0000	456.2645
Waste						0.0000	0.0000		0.0000	0.0000	12.9671	0.0000	12.9671	0.7663	0.0000	32.1254
Water						0.0000	0.0000		0.0000	0.0000	3.4110	34.9938	38.4049	0.3525	8.5300e-003	49.7601
Total	**0.3513**	**0.6192**	**1.7590**	**5.3800e-003**	**0.3822**	**0.0177**	**0.3998**	**0.1025**	**0.0173**	**0.1198**	**17.2278**	**682.4530**	**699.6809**	**1.1572**	**0.0106**	**731.7683**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2391	3.0400e-003	0.1343	1.3000e-004		8.1000e-003	8.1000e-003		8.1000e-003	8.1000e-003	0.8498	1.7688	2.6186	2.6700e-003	6.0000e-005	2.7025
Energy	5.5000e-003	0.0494	0.0373	3.0000e-004		3.8000e-003	3.8000e-003		3.8000e-003	3.8000e-003	0.0000	190.0830	190.0830	9.3800e-003	2.0100e-003	190.9159
Mobile	0.1068	0.5668	1.5874	4.9500e-003	0.3822	5.7600e-003	0.3879	0.1025	5.4100e-003	0.1079	0.0000	455.6075	455.6075	0.0263	0.0000	456.2645
Waste						0.0000	0.0000		0.0000	0.0000	12.9671	0.0000	12.9671	0.7663	0.0000	32.1254
Water						0.0000	0.0000		0.0000	0.0000	3.4110	34.9938	38.4049	0.3525	8.5300e-003	49.7601
Total	**0.3513**	**0.6192**	**1.7590**	**5.3800e-003**	**0.3822**	**0.0177**	**0.3998**	**0.1025**	**0.0173**	**0.1198**	**17.2278**	**682.4530**	**699.6809**	**1.1572**	**0.0106**	**731.7683**

	ROG	NOx	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

Arroyo at Monrovia (existing conditions) - 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	1/11/2019	1/10/2019	5	0	
2	Site Preparation	Site Preparation	2/8/2019	2/7/2019	5	0	
3	Grading	Grading	2/15/2019	2/14/2019	5	0	
4	Building Construction	Building Construction	2/27/2019	2/26/2019	5	0	
5	Paving	Paving	1/15/2020	1/14/2020	5	0	
6	Architectural Coating	Architectural Coating	2/8/2020	2/7/2020	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 15,414; Residential Outdoor: 5,138; Non-Residential Indoor: 66,360; Non-Residential Outdoor: 22,120; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Arroyo at Monrovia (existing conditions) - 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	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	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	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
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	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	0.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

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

3.2 Demolition - 2019

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

3.2 Demolition - 2019

Mitigated Construction Off-Site

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

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

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

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

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

3.4 Grading - 2019

Unmitigated Construction On-Site

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

3.4 Grading - 2019

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

3.4 Grading - 2019

Mitigated Construction Off-Site

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

3.5 Building Construction - 2019

Unmitigated Construction On-Site

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

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

3.5 Building Construction - 2019

Mitigated Construction Off-Site

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

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2020

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2020

Mitigated Construction Off-Site

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

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1068	0.5668	1.5874	4.9500e-003	0.3822	5.7600e-003	0.3879	0.1025	5.4100e-003	0.1079	0.0000	455.6075	455.6075	0.0263	0.0000	456.2645
Unmitigated	0.1068	0.5668	1.5874	4.9500e-003	0.3822	5.7600e-003	0.3879	0.1025	5.4100e-003	0.1079	0.0000	455.6075	455.6075	0.0263	0.0000	456.2645

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	218.99	58.40	30.08	748,645	748,645
Single Family Housing	76.16	79.28	68.96	258,199	258,199
Total	295.15	137.68	99.04	1,006,843	1,006,843

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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Single Family Housing	14.70	5.90	8.70	40.00	20.00	40.00	87	8	5

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.548007	0.045751	0.200309	0.124119	0.017133	0.006025	0.018861	0.028423	0.002391	0.002469	0.004915	0.000672	0.000925
Single Family Housing	0.548007	0.045751	0.200309	0.124119	0.017133	0.006025	0.018861	0.028423	0.002391	0.002469	0.004915	0.000672	0.000925

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	135.6230	135.6230	8.3300e-003	1.0100e-003	136.1324
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	135.6230	135.6230	8.3300e-003	1.0100e-003	136.1324
NaturalGas Mitigated	5.5000e-003	0.0494	0.0373	3.0000e-004		3.8000e-003	3.8000e-003		3.8000e-003	3.8000e-003	0.0000	54.4599	54.4599	1.0400e-003	1.0000e-003	54.7836
NaturalGas Unmitigated	5.5000e-003	0.0494	0.0373	3.0000e-004		3.8000e-003	3.8000e-003		3.8000e-003	3.8000e-003	0.0000	54.4599	54.4599	1.0400e-003	1.0000e-003	54.7836

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					
General Light Industry	800744	4.3200e-003	0.0393	0.0330	2.4000e-004		2.9800e-003	2.9800e-003		2.9800e-003	2.9800e-003	0.0000	42.7308	42.7308	8.2000e-004	7.8000e-004	42.9847
Single Family Housing	219797	1.1900e-003	0.0101	4.3100e-003	6.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	11.7292	11.7292	2.2000e-004	2.2000e-004	11.7989
Total		**5.5100e-003**	**0.0494**	**0.0373**	**3.0000e-004**		**3.8000e-003**	**3.8000e-003**		**3.8000e-003**	**3.8000e-003**	**0.0000**	**54.4599**	**54.4599**	**1.0400e-003**	**1.0000e-003**	**54.7836**

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					
General Light Industry	800744	4.3200e-003	0.0393	0.0330	2.4000e-004		2.9800e-003	2.9800e-003		2.9800e-003	2.9800e-003	0.0000	42.7308	42.7308	8.2000e-004	7.8000e-004	42.9847
Single Family Housing	219797	1.1900e-003	0.0101	4.3100e-003	6.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	11.7292	11.7292	2.2000e-004	2.2000e-004	11.7989
Total		**5.5100e-003**	**0.0494**	**0.0373**	**3.0000e-004**		**3.8000e-003**	**3.8000e-003**		**3.8000e-003**	**3.8000e-003**	**0.0000**	**54.4599**	**54.4599**	**1.0400e-003**	**1.0000e-003**	**54.7836**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	491064	119.6263	7.3500e-003	8.9000e-004	120.0756
Single Family Housing	65666.3	15.9967	9.8000e-004	1.2000e-004	16.0568
Total		**135.6230**	**8.3300e-003**	**1.0100e-003**	**136.1324**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	491064	119.6263	7.3500e-003	8.9000e-004	120.0756
Single Family Housing	65666.3	15.9967	9.8000e-004	1.2000e-004	16.0568
Total		**135.6230**	**8.3300e-003**	**1.0100e-003**	**136.1324**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2391	3.0400e-003	0.1343	1.3000e-004		8.1000e-003	8.1000e-003		8.1000e-003	8.1000e-003	0.8498	1.7688	2.6186	2.6700e-003	6.0000e-005	2.7025
Unmitigated	0.2391	3.0400e-003	0.1343	1.3000e-004		8.1000e-003	8.1000e-003		8.1000e-003	8.1000e-003	0.8498	1.7688	2.6186	2.6700e-003	6.0000e-005	2.7025

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	0.0229					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1874					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0262	2.0700e-003	0.0509	1.3000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003	0.8498	1.6329	2.4827	2.5300e-003	6.0000e-005	2.5632
Landscaping	2.5900e-003	9.7000e-004	0.0835	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	0.1359	0.1359	1.4000e-004	0.0000	0.1392
Total	**0.2391**	**3.0400e-003**	**0.1343**	**1.3000e-004**		**8.1000e-003**	**8.1000e-003**		**8.1000e-003**	**8.1000e-003**	**0.8498**	**1.7688**	**2.6186**	**2.6700e-003**	**6.0000e-005**	**2.7025**

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	0.0229					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1874					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0262	2.0700e-003	0.0509	1.3000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003	0.8498	1.6329	2.4827	2.5300e-003	6.0000e-005	2.5632
Landscaping	2.5900e-003	9.7000e-004	0.0835	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	0.1359	0.1359	1.4000e-004	0.0000	0.1392
Total	**0.2391**	**3.0400e-003**	**0.1343**	**1.3000e-004**		**8.1000e-003**	**8.1000e-003**		**8.1000e-003**	**8.1000e-003**	**0.8498**	**1.7688**	**2.6186**	**2.6700e-003**	**6.0000e-005**	**2.7025**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	38.4049	0.3525	8.5300e-003	49.7601
Unmitigated	38.4049	0.3525	8.5300e-003	49.7601

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	10.2305 / 0	35.6968	0.3354	8.1100e-003	46.4984
Single Family Housing	0.521232 / 0.328603	2.7081	0.0171	4.2000e-004	3.2617
Total		**38.4049**	**0.3525**	**8.5300e-003**	**49.7601**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	10.2305 / 0	35.6968	0.3354	8.1100e-003	46.4984
Single Family Housing	0.521232 / 0.328603	2.7081	0.0171	4.2000e-004	3.2617
Total		**38.4049**	**0.3525**	**8.5300e-003**	**49.7601**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.9671	0.7663	0.0000	32.1254
Unmitigated	12.9671	0.7663	0.0000	32.1254

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	54.86	11.1361	0.6581	0.0000	27.5892
Single Family Housing	9.02	1.8310	0.1082	0.0000	4.5362
Total		**12.9671**	**0.7663**	**0.0000**	**32.1254**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	54.86	11.1361	0.6581	0.0000	27.5892
Single Family Housing	9.02	1.8310	0.1082	0.0000	4.5362
Total		**12.9671**	**0.7663**	**0.0000**	**32.1254**

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

Arroyo at Monrovia (existing conditions)

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 Light Industry	44.24	1000sqft	1.02	44,240.00	0
Single Family Housing	8.00	Dwelling Unit	2.60	7,612.00	22

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	537.06	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Arroyo at Monrovia (existing conditions) - Los Angeles-South Coast County, Summer

Project Characteristics - SCE intensity factors updated for 2019

Land Use - lot acreae and sf from project description

Construction Phase - no construction modeled

Off-road Equipment - no construction modeled

Trips and VMT - no construction modeled

Grading - no construction modeled

Architectural Coating - no construction modeled

Vehicle Trips - WkDy trip rate obtained from TIA

Energy Use -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	0.00
tblArchitecturalCoating	EF_Parking	100.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	50.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	0.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	8.00	0.00
tblConstructionPhase	NumDays	230.00	0.00
tblConstructionPhase	NumDays	18.00	0.00
tblConstructionPhase	NumDays	18.00	0.00
tblConstructionPhase	PhaseEndDate	2/7/2019	1/10/2019
tblConstructionPhase	PhaseEndDate	2/14/2019	2/7/2019
tblConstructionPhase	PhaseEndDate	2/26/2019	2/14/2019
tblConstructionPhase	PhaseEndDate	1/14/2020	2/26/2019
tblConstructionPhase	PhaseEndDate	2/7/2020	1/14/2020

tblConstructionPhase	PhaseEndDate	3/4/2020	2/7/2020
tblLandUse	LandUseSquareFeet	14,400.00	7,612.00
tblLandUse	Population	23.00	22.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.033
tblProjectCharacteristics	CO2IntensityFactor	702.44	537.06
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	21.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	4.00	0.00
tblVehicleTrips	DV_TP	11.00	8.00
tblVehicleTrips	HO_TTP	40.60	40.00
tblVehicleTrips	HS_TTP	19.20	20.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	PB_TP	3.00	5.00
tblVehicleTrips	PR_TP	86.00	87.00
tblVehicleTrips	WD_TR	6.97	4.95

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					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	6.8784	0.0000	0.0000	6.3727	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.7618	0.0000	0.0000	0.7115	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**6.8784**	**0.0000**	**0.0000**	**6.3727**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	6.8784	0.0000	0.0000	6.3727	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.7618	0.0000	0.0000	0.7115	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**6.8784**	**0.0000**	**0.0000**	**6.3727**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.2691	0.1737	4.7363	0.0104		0.6148	0.6148		0.6148	0.6148	74.9354	145.1981	220.1335	0.2247	5.0900e-003	227.2657
Energy	0.0302	0.2706	0.2043	1.6400e-003		0.0208	0.0208		0.0208	0.0208		328.9414	328.9414	6.3000e-003	6.0300e-003	330.8961
Mobile	0.7530	3.6302	11.1817	0.0347	2.6383	0.0389	2.6772	0.7062	0.0366	0.7428		3,523.7538	3,523.7538	0.1980		3,528.7046
Total	**4.0523**	**4.0745**	**16.1223**	**0.0468**	**2.6383**	**0.6745**	**3.3128**	**0.7062**	**0.6722**	**1.3784**	**74.9354**	**3,997.8933**	**4,072.8287**	**0.4290**	**0.0111**	**4,086.8664**

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	3.2691	0.1737	4.7363	0.0104		0.6148	0.6148		0.6148	0.6148	74.9354	145.1981	220.1335	0.2247	5.0900e-003	227.2657
Energy	0.0302	0.2706	0.2043	1.6400e-003		0.0208	0.0208		0.0208	0.0208		328.9414	328.9414	6.3000e-003	6.0300e-003	330.8961
Mobile	0.7530	3.6302	11.1817	0.0347	2.6383	0.0389	2.6772	0.7062	0.0366	0.7428		3,523.7538	3,523.7538	0.1980		3,528.7046
Total	**4.0523**	**4.0745**	**16.1223**	**0.0468**	**2.6383**	**0.6745**	**3.3128**	**0.7062**	**0.6722**	**1.3784**	**74.9354**	**3,997.8933**	**4,072.8287**	**0.4290**	**0.0111**	**4,086.8664**

	ROG	NOx	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	1/11/2019	1/10/2019	5	0	
2	Site Preparation	Site Preparation	2/8/2019	2/7/2019	5	0	
3	Grading	Grading	2/15/2019	2/14/2019	5	0	
4	Building Construction	Building Construction	2/27/2019	2/26/2019	5	0	
5	Paving	Paving	1/15/2020	1/14/2020	5	0	
6	Architectural Coating	Architectural Coating	2/8/2020	2/7/2020	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 15,414; Residential Outdoor: 5,138; Non-Residential Indoor: 66,360; Non-Residential Outdoor: 22,120; 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	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	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	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
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	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	0.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

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

3.2 Demolition - 2019

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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

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

3.2 Demolition - 2019

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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

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

3.3 Site Preparation - 2019

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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

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

3.3 Site Preparation - 2019

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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2019

Unmitigated Construction On-Site

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

3.4 Grading - 2019

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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

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

3.4 Grading - 2019

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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

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

3.5 Building Construction - 2019

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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

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

3.5 Building Construction - 2019

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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2020

Unmitigated Construction On-Site

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

3.6 Paving - 2020

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

3.6 Paving - 2020

Mitigated Construction Off-Site

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

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

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

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

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

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.7530	3.6302	11.1817	0.0347	2.6383	0.0389	2.6772	0.7062	0.0366	0.7428		3,523.7538	3,523.7538	0.1980		3,528.7046
Unmitigated	0.7530	3.6302	11.1817	0.0347	2.6383	0.0389	2.6772	0.7062	0.0366	0.7428		3,523.7538	3,523.7538	0.1980		3,528.7046

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	218.99	58.40	30.08	748,645	748,645
Single Family Housing	76.16	79.28	68.96	258,199	258,199
Total	295.15	137.68	99.04	1,006,843	1,006,843

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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Single Family Housing	14.70	5.90	8.70	40.00	20.00	40.00	87	8	5

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.548007	0.045751	0.200309	0.124119	0.017133	0.006025	0.018861	0.028423	0.002391	0.002469	0.004915	0.000672	0.000925
Single Family Housing	0.548007	0.045751	0.200309	0.124119	0.017133	0.006025	0.018861	0.028423	0.002391	0.002469	0.004915	0.000672	0.000925

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0302	0.2706	0.2043	1.6400e-003		0.0208	0.0208		0.0208	0.0208		328.9414	328.9414	6.3000e-003	6.0300e-003	330.8961
NaturalGas Unmitigated	0.0302	0.2706	0.2043	1.6400e-003		0.0208	0.0208		0.0208	0.0208		328.9414	328.9414	6.3000e-003	6.0300e-003	330.8961

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					
General Light Industry	2193.82	0.0237	0.2151	0.1807	1.2900e-003		0.0164	0.0164		0.0164	0.0164		258.0964	258.0964	4.9500e-003	4.7300e-003	259.6301
Single Family Housing	602.183	6.4900e-003	0.0555	0.0236	3.5000e-004		4.4900e-003	4.4900e-003		4.4900e-003	4.4900e-003		70.8450	70.8450	1.3600e-003	1.3000e-003	71.2660
Total		**0.0302**	**0.2706**	**0.2043**	**1.6400e-003**		**0.0208**	**0.0208**		**0.0208**	**0.0208**		**328.9414**	**328.9414**	**6.3100e-003**	**6.0300e-003**	**330.8961**

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					
General Light Industry	2.19382	0.0237	0.2151	0.1807	1.2900e-003		0.0164	0.0164		0.0164	0.0164		258.0964	258.0964	4.9500e-003	4.7300e-003	259.6301
Single Family Housing	0.602183	6.4900e-003	0.0555	0.0236	3.5000e-004		4.4900e-003	4.4900e-003		4.4900e-003	4.4900e-003		70.8450	70.8450	1.3600e-003	1.3000e-003	71.2660
Total		**0.0302**	**0.2706**	**0.2043**	**1.6400e-003**		**0.0208**	**0.0208**		**0.0208**	**0.0208**		**328.9414**	**328.9414**	**6.3100e-003**	**6.0300e-003**	**330.8961**

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	3.2691	0.1737	4.7363	0.0104		0.6148	0.6148		0.6148	0.6148	74.9354	145.1981	220.1335	0.2247	5.0900e-003	227.2657
Unmitigated	3.2691	0.1737	4.7363	0.0104		0.6148	0.6148		0.6148	0.6148	74.9354	145.1981	220.1335	0.2247	5.0900e-003	227.2657

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1254					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0267					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.0963	0.1660	4.0684	0.0104		0.6111	0.6111		0.6111	0.6111	74.9354	144.0000	218.9354	0.2235	5.0900e-003	226.0378
Landscaping	0.0207	7.7200e-003	0.6678	4.0000e-005		3.6500e-003	3.6500e-003		3.6500e-003	3.6500e-003		1.1981	1.1981	1.1900e-003		1.2279
Total	**3.2691**	**0.1737**	**4.7363**	**0.0104**		**0.6148**	**0.6148**		**0.6148**	**0.6148**	**74.9354**	**145.1981**	**220.1335**	**0.2247**	**5.0900e-003**	**227.2657**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1254					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0267					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.0963	0.1660	4.0684	0.0104		0.6111	0.6111		0.6111	0.6111	74.9354	144.0000	218.9354	0.2235	5.0900e-003	226.0378
Landscaping	0.0207	7.7200e-003	0.6678	4.0000e-005		3.6500e-003	3.6500e-003		3.6500e-003	3.6500e-003		1.1981	1.1981	1.1900e-003		1.2279
Total	**3.2691**	**0.1737**	**4.7363**	**0.0104**		**0.6148**	**0.6148**		**0.6148**	**0.6148**	**74.9354**	**145.1981**	**220.1335**	**0.2247**	**5.0900e-003**	**227.2657**

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

Arroyo at Monrovia (existing conditions)

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 Light Industry	44.24	1000sqft	1.02	44,240.00	0
Single Family Housing	8.00	Dwelling Unit	2.60	7,612.00	22

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	537.06	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Arroyo at Monrovia (existing conditions) - Los Angeles-South Coast County, Winter

Project Characteristics - SCE intensity factors updated for 2019

Land Use - lot acreae and sf from project description

Construction Phase - no construction modeled

Off-road Equipment - no construction modeled

Trips and VMT - no construction modeled

Grading - no construction modeled

Architectural Coating - no construction modeled

Vehicle Trips - WkDy trip rate obtained from TIA

Energy Use -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	0.00
tblArchitecturalCoating	EF_Parking	100.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	50.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	0.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	8.00	0.00
tblConstructionPhase	NumDays	230.00	0.00
tblConstructionPhase	NumDays	18.00	0.00
tblConstructionPhase	NumDays	18.00	0.00
tblConstructionPhase	PhaseEndDate	2/7/2019	1/10/2019
tblConstructionPhase	PhaseEndDate	2/14/2019	2/7/2019
tblConstructionPhase	PhaseEndDate	2/26/2019	2/14/2019
tblConstructionPhase	PhaseEndDate	1/14/2020	2/26/2019
tblConstructionPhase	PhaseEndDate	2/7/2020	1/14/2020

tblConstructionPhase	PhaseEndDate	3/4/2020	2/7/2020
tblLandUse	LandUseSquareFeet	14,400.00	7,612.00
tblLandUse	Population	23.00	22.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.033
tblProjectCharacteristics	CO2IntensityFactor	702.44	537.06
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	21.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	4.00	0.00
tblVehicleTrips	DV_TP	11.00	8.00
tblVehicleTrips	HO_TTP	40.60	40.00
tblVehicleTrips	HS_TTP	19.20	20.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	PB_TP	3.00	5.00
tblVehicleTrips	PR_TP	86.00	87.00
tblVehicleTrips	WD_TR	6.97	4.95

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					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	6.8785	0.0000	0.0000	6.3728	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.7618	0.0000	0.0000	0.7115	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**6.8785**	**0.0000**	**0.0000**	**6.3728**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	6.8785	0.0000	0.0000	6.3728	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.7618	0.0000	0.0000	0.7115	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**6.8785**	**0.0000**	**0.0000**	**6.3728**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.2691	0.1737	4.7363	0.0104		0.6148	0.6148		0.6148	0.6148	74.9354	145.1981	220.1335	0.2247	5.0900e-003	227.2657
Energy	0.0302	0.2706	0.2043	1.6400e-003		0.0208	0.0208		0.0208	0.0208		328.9414	328.9414	6.3000e-003	6.0300e-003	330.8961
Mobile	0.7342	3.7527	10.5602	0.0330	2.6383	0.0391	2.6774	0.7062	0.0368	0.7430		3,352.8575	3,352.8575	0.1961		3,357.7596
Total	**4.0334**	**4.1970**	**15.5008**	**0.0451**	**2.6383**	**0.6747**	**3.3130**	**0.7062**	**0.6724**	**1.3786**	**74.9354**	**3,826.9970**	**3,901.9324**	**0.4270**	**0.0111**	**3,915.9215**

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	3.2691	0.1737	4.7363	0.0104		0.6148	0.6148		0.6148	0.6148	74.9354	145.1981	220.1335	0.2247	5.0900e-003	227.2657
Energy	0.0302	0.2706	0.2043	1.6400e-003		0.0208	0.0208		0.0208	0.0208		328.9414	328.9414	6.3000e-003	6.0300e-003	330.8961
Mobile	0.7342	3.7527	10.5602	0.0330	2.6383	0.0391	2.6774	0.7062	0.0368	0.7430		3,352.8575	3,352.8575	0.1961		3,357.7596
Total	**4.0334**	**4.1970**	**15.5008**	**0.0451**	**2.6383**	**0.6747**	**3.3130**	**0.7062**	**0.6724**	**1.3786**	**74.9354**	**3,826.9970**	**3,901.9324**	**0.4270**	**0.0111**	**3,915.9215**

	ROG	NOx	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	1/11/2019	1/10/2019	5	0	
2	Site Preparation	Site Preparation	2/8/2019	2/7/2019	5	0	
3	Grading	Grading	2/15/2019	2/14/2019	5	0	
4	Building Construction	Building Construction	2/27/2019	2/26/2019	5	0	
5	Paving	Paving	1/15/2020	1/14/2020	5	0	
6	Architectural Coating	Architectural Coating	2/8/2020	2/7/2020	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 15,414; Residential Outdoor: 5,138; Non-Residential Indoor: 66,360; Non-Residential Outdoor: 22,120; 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	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	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	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
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	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	0.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

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

3.2 Demolition - 2019

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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

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

3.2 Demolition - 2019

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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

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

3.3 Site Preparation - 2019

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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

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

3.3 Site Preparation - 2019

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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2019

Unmitigated Construction On-Site

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

3.4 Grading - 2019

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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

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

3.4 Grading - 2019

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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

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

3.5 Building Construction - 2019

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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

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

3.5 Building Construction - 2019

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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2020

Unmitigated Construction On-Site

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

3.6 Paving - 2020

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

3.6 Paving - 2020

Mitigated Construction Off-Site

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

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

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

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

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

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.7342	3.7527	10.5602	0.0330	2.6383	0.0391	2.6774	0.7062	0.0368	0.7430		3,352.8575	3,352.8575	0.1961		3,357.7596
Unmitigated	0.7342	3.7527	10.5602	0.0330	2.6383	0.0391	2.6774	0.7062	0.0368	0.7430		3,352.8575	3,352.8575	0.1961		3,357.7596

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	218.99	58.40	30.08	748,645	748,645
Single Family Housing	76.16	79.28	68.96	258,199	258,199
Total	295.15	137.68	99.04	1,006,843	1,006,843

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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Single Family Housing	14.70	5.90	8.70	40.00	20.00	40.00	87	8	5

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.548007	0.045751	0.200309	0.124119	0.017133	0.006025	0.018861	0.028423	0.002391	0.002469	0.004915	0.000672	0.000925
Single Family Housing	0.548007	0.045751	0.200309	0.124119	0.017133	0.006025	0.018861	0.028423	0.002391	0.002469	0.004915	0.000672	0.000925

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0302	0.2706	0.2043	1.6400e-003		0.0208	0.0208		0.0208	0.0208		328.9414	328.9414	6.3000e-003	6.0300e-003	330.8961
NaturalGas Unmitigated	0.0302	0.2706	0.2043	1.6400e-003		0.0208	0.0208		0.0208	0.0208		328.9414	328.9414	6.3000e-003	6.0300e-003	330.8961

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					
General Light Industry	2193.82	0.0237	0.2151	0.1807	1.2900e-003		0.0164	0.0164		0.0164	0.0164		258.0964	258.0964	4.9500e-003	4.7300e-003	259.6301
Single Family Housing	602.183	6.4900e-003	0.0555	0.0236	3.5000e-004		4.4900e-003	4.4900e-003		4.4900e-003	4.4900e-003		70.8450	70.8450	1.3600e-003	1.3000e-003	71.2660
Total		**0.0302**	**0.2706**	**0.2043**	**1.6400e-003**		**0.0208**	**0.0208**		**0.0208**	**0.0208**		**328.9414**	**328.9414**	**6.3100e-003**	**6.0300e-003**	**330.8961**

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					
General Light Industry	2.19382	0.0237	0.2151	0.1807	1.2900e-003		0.0164	0.0164		0.0164	0.0164		258.0964	258.0964	4.9500e-003	4.7300e-003	259.6301
Single Family Housing	0.602183	6.4900e-003	0.0555	0.0236	3.5000e-004		4.4900e-003	4.4900e-003		4.4900e-003	4.4900e-003		70.8450	70.8450	1.3600e-003	1.3000e-003	71.2660
Total		**0.0302**	**0.2706**	**0.2043**	**1.6400e-003**		**0.0208**	**0.0208**		**0.0208**	**0.0208**		**328.9414**	**328.9414**	**6.3100e-003**	**6.0300e-003**	**330.8961**

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	3.2691	0.1737	4.7363	0.0104		0.6148	0.6148		0.6148	0.6148	74.9354	145.1981	220.1335	0.2247	5.0900e-003	227.2657
Unmitigated	3.2691	0.1737	4.7363	0.0104		0.6148	0.6148		0.6148	0.6148	74.9354	145.1981	220.1335	0.2247	5.0900e-003	227.2657

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1254					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0267					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.0963	0.1660	4.0684	0.0104		0.6111	0.6111		0.6111	0.6111	74.9354	144.0000	218.9354	0.2235	5.0900e-003	226.0378
Landscaping	0.0207	7.7200e-003	0.6678	4.0000e-005		3.6500e-003	3.6500e-003		3.6500e-003	3.6500e-003		1.1981	1.1981	1.1900e-003		1.2279
Total	**3.2691**	**0.1737**	**4.7363**	**0.0104**		**0.6148**	**0.6148**		**0.6148**	**0.6148**	**74.9354**	**145.1981**	**220.1335**	**0.2247**	**5.0900e-003**	**227.2657**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1254					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0267					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.0963	0.1660	4.0684	0.0104		0.6111	0.6111		0.6111	0.6111	74.9354	144.0000	218.9354	0.2235	5.0900e-003	226.0378
Landscaping	0.0207	7.7200e-003	0.6678	4.0000e-005		3.6500e-003	3.6500e-003		3.6500e-003	3.6500e-003		1.1981	1.1981	1.1900e-003		1.2279
Total	**3.2691**	**0.1737**	**4.7363**	**0.0104**		**0.6148**	**0.6148**		**0.6148**	**0.6148**	**74.9354**	**145.1981**	**220.1335**	**0.2247**	**5.0900e-003**	**227.2657**

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

Arroyo at Monrovia Station

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	192.22	1000sqft	0.54	192,220.00	0
Other Asphalt Surfaces	23.28	1000sqft	0.53	23,280.00	0
Other Non-Asphalt Surfaces	12.86	1000sqft	0.30	12,860.00	0
Apartments Mid Rise	302.00	Dwelling Unit	1.53	329,955.00	630
Regional Shopping Center	7.08	1000sqft	0.00	7,080.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	427.1	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 and CH4 intensity updated for 2022

Land Use - lot acreage and SF from site plan and project description
Retail footrpint added to residenital footprint

Demolition -

Grading -

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Trip rates obtained from the TIS; commercial pass-by trips removed per TIS and added to primary and diverted trip types.

Woodstoves - SCAQMD Rule 445

Consumer Products -

Area Coating - SCAQMD Rule 1113

Energy Use - Reduce commercial lighting by 30% per 2019 Cal Green

Solid Waste - Adjusted solid waste values of 34.73 (residential) and 1.86 (commercial) multiplied by 4 to remove 75% waste diversion assumption in original model run.

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Mobile Land Use Mitigation -

Fleet Mix - No trips associated with HHD; OBUS; UBUS; SBUS; MH. These trips re allocated to LDA

Stationary Sources - Emergency Generators and Fire Pumps -

Trips and VMT -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55
tblEnergyUse	LightingElect	1.75	1.23
tblEnergyUse	LightingElect	6.26	4.38
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	15.10	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00

tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00

tblFleetMix	UBUS	2.2010e-003	0.00
tblGrading	MaterialExported	0.00	3,430.00
tblLandUse	LandUseSquareFeet	302,000.00	329,955.00
tblLandUse	LotAcreage	4.41	0.54
tblLandUse	LotAcreage	7.95	1.53
tblLandUse	LotAcreage	0.16	0.00
tblLandUse	Population	864.00	630.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.033
tblProjectCharacteristics	CO2IntensityFactor	702.44	427.1
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblSolidWaste	SolidWasteGenerationRate	138.92	139.00
tblSolidWaste	SolidWasteGenerationRate	7.43	7.50
tblVehicleTrips	DV_TP	35.00	39.00
tblVehicleTrips	HO_TTP	40.60	40.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	41.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	54.00	61.00
tblVehicleTrips	ST_TR	6.39	3.92
tblVehicleTrips	ST_TR	49.97	28.09
tblVehicleTrips	SU_TR	5.86	3.59
tblVehicleTrips	SU_TR	25.24	14.19
tblVehicleTrips	WD_TR	6.65	4.08
tblVehicleTrips	WD_TR	42.70	24.01
tblWoodstoves	NumberCatalytic	15.10	0.00
tblWoodstoves	NumberNoncatalytic	15.10	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					
2019	4.4317	44.6804	32.6711	0.0821	7.9789	1.3008	9.1332	3.7496	1.2155	4.8145	0.0000	8,343.8082	8,343.8082	1.0757	0.0000	8,370.7006
2020	219.9074	26.0206	30.7119	0.0808	3.9867	1.0133	4.9999	1.0676	0.9701	2.0377	0.0000	7,972.2797	7,972.2797	0.7017	0.0000	7,989.8234
Maximum	**219.9074**	**44.6804**	**32.6711**	**0.0821**	**7.9789**	**1.3008**	**9.1332**	**3.7496**	**1.2155**	**4.8145**	**0.0000**	**8,343.8082**	**8,343.8082**	**1.0757**	**0.0000**	**8,370.7006**

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					
2019	4.4317	44.6804	32.6711	0.0821	3.9867	1.3008	5.1597	1.6641	1.2155	2.7290	0.0000	8,343.8082	8,343.8082	1.0757	0.0000	8,370.7006
2020	219.9074	26.0206	30.7119	0.0808	3.9867	1.0133	4.9999	1.0676	0.9701	2.0377	0.0000	7,972.2797	7,972.2797	0.7017	0.0000	7,989.8234
Maximum	**219.9074**	**44.6804**	**32.6711**	**0.0821**	**3.9867**	**1.3008**	**5.1597**	**1.6641**	**1.2155**	**2.7290**	**0.0000**	**8,343.8082**	**8,343.8082**	**1.0757**	**0.0000**	**8,370.7006**

	ROG	NOx	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**	**33.36**	**0.00**	**28.11**	**43.29**	**0.00**	**30.44**	**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	8.6091	4.5461	26.7783	0.0285		0.4822	0.4822		0.4822	0.4822	0.0000	5,480.9143	5,480.9143	0.1476	0.0997	5,514.3032
Energy	0.1199	1.0246	0.4373	6.5400e-003		0.0828	0.0828		0.0828	0.0828		1,307.7372	1,307.7372	0.0251	0.0240	1,315.5084
Mobile	2.3191	4.0893	32.4911	0.1069	9.9230	0.0777	10.0007	2.6431	0.0719	2.7149		10,696.2958	10,696.2958	0.3220		10,704.3452
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**11.0480**	**9.6599**	**59.7066**	**0.1420**	**9.9230**	**0.6427**	**10.5657**	**2.6431**	**0.6369**	**3.2799**	**0.0000**	**17,484.9473**	**17,484.9473**	**0.4947**	**0.1236**	**17,534.1568**

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	lb/day										lb/day					
Area	8.6091	4.5461	26.7783	0.0285		0.4822	0.4822		0.4822	0.4822	0.0000	5,480.9143	5,480.9143	0.1476	0.0997	5,514.3032
Energy	0.1199	1.0246	0.4373	6.5400e-003		0.0828	0.0828		0.0828	0.0828		1,307.7372	1,307.7372	0.0251	0.0240	1,315.5084
Mobile	2.3191	4.0893	32.4911	0.1069	9.9230	0.0777	10.0007	2.6431	0.0719	2.7149		10,696.2958	10,696.2958	0.3220		10,704.3452
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**11.0480**	**9.6599**	**59.7066**	**0.1420**	**9.9230**	**0.6427**	**10.5657**	**2.6431**	**0.6369**	**3.2799**	**0.0000**	**17,484.9473**	**17,484.9473**	**0.4947**	**0.1236**	**17,534.1568**

	ROG	NOx	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

Arroyo at Monrovia Station - Los Angeles-South Coast County, Summer

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2019	10/28/2019	5	20	
2	Site Preparation	Site Preparation	10/29/2019	10/31/2019	5	3	
3	Grading	Grading	11/1/2019	11/8/2019	5	6	
4	Building Construction	Building Construction	11/9/2019	9/11/2020	5	220	
5	Paving	Paving	9/12/2020	9/25/2020	5	10	
6	Architectural Coating	Architectural Coating	9/26/2020	10/9/2020	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 1.37

Residential Indoor: 668,159; Residential Outdoor: 222,720; Non-Residential Indoor: 10,620; Non-Residential Outdoor: 3,540; Striped Parking Area: 13,702 (Architectural Coating – sqft)

OffRoad Equipment

Arroyo at Monrovia Station - 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	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
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	5	13.00	0.00	235.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	429.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	316.00	71.00	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	63.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

3.2 Demolition - 2019

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					2.5465	0.0000	2.5465	0.3856	0.0000	0.3856			0.0000			0.0000
Off-Road	2.2950	22.6751	14.8943	0.0241		1.2863	1.2863		1.2017	1.2017		2,360.7198	2,360.7198	0.6011		2,375.7475
Total	**2.2950**	**22.6751**	**14.8943**	**0.0241**	**2.5465**	**1.2863**	**3.8328**	**0.3856**	**1.2017**	**1.5873**		**2,360.7198**	**2,360.7198**	**0.6011**		**2,375.7475**

3.2 Demolition - 2019

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	0.1104	3.5988	0.7673	9.3900e-003	0.2054	0.0132	0.2186	0.0563	0.0126	0.0690		1,015.8013	1,015.8013	0.0700		1,017.5502
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	0.0477	0.6268	1.5800e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		157.6839	157.6839	5.4200e-003		157.8193
Total	**0.1754**	**3.6466**	**1.3941**	**0.0110**	**0.3507**	**0.0145**	**0.3652**	**0.0949**	**0.0138**	**0.1086**		**1,173.4852**	**1,173.4852**	**0.0754**		**1,175.3695**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9741	0.0000	0.9741	0.1475	0.0000	0.1475			0.0000			0.0000
Off-Road	2.2950	22.6751	14.8943	0.0241		1.2863	1.2863		1.2017	1.2017	0.0000	2,360.7197	2,360.7197	0.6011		2,375.7475
Total	**2.2950**	**22.6751**	**14.8943**	**0.0241**	**0.9741**	**1.2863**	**2.2603**	**0.1475**	**1.2017**	**1.3492**	**0.0000**	**2,360.7197**	**2,360.7197**	**0.6011**		**2,375.7475**

3.2 Demolition - 2019

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	0.1104	3.5988	0.7673	9.3900e-003	0.2054	0.0132	0.2186	0.0563	0.0126	0.0690		1,015.8013	1,015.8013	0.0700		1,017.5502
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	0.0477	0.6268	1.5800e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		157.6839	157.6839	5.4200e-003		157.8193
Total	**0.1754**	**3.6466**	**1.3941**	**0.0110**	**0.3507**	**0.0145**	**0.3652**	**0.0949**	**0.0138**	**0.1086**		**1,173.4852**	**1,173.4852**	**0.0754**		**1,175.3695**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.7557	21.5386	11.9143	0.0245		0.8537	0.8537		0.7854	0.7854		2,426.5408	2,426.5408	0.7677		2,445.7341
Total	**1.7557**	**21.5386**	**11.9143**	**0.0245**	**1.5908**	**0.8537**	**2.4445**	**0.1718**	**0.7854**	**0.9572**		**2,426.5408**	**2,426.5408**	**0.7677**		**2,445.7341**

3.3 Site Preparation - 2019

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	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196
Total	**0.0400**	**0.0294**	**0.3857**	**9.7000e-004**	**0.0894**	**7.7000e-004**	**0.0902**	**0.0237**	**7.1000e-004**	**0.0244**		**97.0362**	**97.0362**	**3.3300e-003**		**97.1196**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6085	0.0000	0.6085	0.0657	0.0000	0.0657			0.0000			0.0000
Off-Road	1.7557	21.5386	11.9143	0.0245		0.8537	0.8537		0.7854	0.7854	0.0000	2,426.5408	2,426.5408	0.7677		2,445.7341
Total	**1.7557**	**21.5386**	**11.9143**	**0.0245**	**0.6085**	**0.8537**	**1.4622**	**0.0657**	**0.7854**	**0.8511**	**0.0000**	**2,426.5408**	**2,426.5408**	**0.7677**		**2,445.7341**

3.3 Site Preparation - 2019

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	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196
Total	**0.0400**	**0.0294**	**0.3857**	**9.7000e-004**	**0.0894**	**7.7000e-004**	**0.0902**	**0.0237**	**7.1000e-004**	**0.0244**		**97.0362**	**97.0362**	**3.3300e-003**		**97.1196**

3.4 Grading - 2019

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					6.6170	0.0000	6.6170	3.3773	0.0000	3.3773			0.0000			0.0000
Off-Road	2.0287	22.7444	10.1518	0.0206		1.0730	1.0730		0.9871	0.9871		2,041.2539	2,041.2539	0.6458		2,057.3997
Total	**2.0287**	**22.7444**	**10.1518**	**0.0206**	**6.6170**	**1.0730**	**7.6900**	**3.3773**	**0.9871**	**4.3644**		**2,041.2539**	**2,041.2539**	**0.6458**		**2,057.3997**

3.4 Grading - 2019

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	0.6719	21.8992	4.6691	0.0571	1.2501	0.0804	1.3305	0.3427	0.0769	0.4195		6,181.2590	6,181.2590	0.4257		6,191.9014
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	0.0500	0.0367	0.4822	1.2200e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		121.2953	121.2953	4.1700e-003		121.3995
Total	**0.7218**	**21.9360**	**5.1513**	**0.0584**	**1.3619**	**0.0813**	**1.4432**	**0.3723**	**0.0778**	**0.4501**		**6,302.5543**	**6,302.5543**	**0.4299**		**6,313.3009**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5310	0.0000	2.5310	1.2918	0.0000	1.2918			0.0000			0.0000
Off-Road	2.0287	22.7444	10.1518	0.0206		1.0730	1.0730		0.9871	0.9871	0.0000	2,041.2539	2,041.2539	0.6458		2,057.3997
Total	**2.0287**	**22.7444**	**10.1518**	**0.0206**	**2.5310**	**1.0730**	**3.6040**	**1.2918**	**0.9871**	**2.2789**	**0.0000**	**2,041.2539**	**2,041.2539**	**0.6458**		**2,057.3997**

3.4 Grading - 2019

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	0.6719	21.8992	4.6691	0.0571	1.2501	0.0804	1.3305	0.3427	0.0769	0.4195		6,181.2590	6,181.2590	0.4257		6,191.9014
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	0.0500	0.0367	0.4822	1.2200e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		121.2953	121.2953	4.1700e-003		121.3995
Total	**0.7218**	**21.9360**	**5.1513**	**0.0584**	**1.3619**	**0.0813**	**1.4432**	**0.3723**	**0.0778**	**0.4501**		**6,302.5543**	**6,302.5543**	**0.4299**		**6,313.3009**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5581	18.9103	15.2545	0.0250		1.0901	1.0901		1.0449	1.0449		2,312.1454	2,312.1454	0.4810		2,324.1705
Total	**2.5581**	**18.9103**	**15.2545**	**0.0250**		**1.0901**	**1.0901**		**1.0449**	**1.0449**		**2,312.1454**	**2,312.1454**	**0.4810**		**2,324.1705**

3.5 Building Construction - 2019

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	0.2950	8.2168	2.1803	0.0186	0.4545	0.0524	0.5069	0.1309	0.0501	0.1810		1,979.5838	1,979.5838	0.1269		1,982.7552
Worker	1.5786	1.1602	15.2364	0.0385	3.5321	0.0305	3.5626	0.9367	0.0281	0.9648		3,832.9311	3,832.9311	0.1317		3,836.2225
Total	**1.8736**	**9.3770**	**17.4166**	**0.0571**	**3.9867**	**0.0829**	**4.0695**	**1.0676**	**0.0782**	**1.1458**		**5,812.5149**	**5,812.5149**	**0.2585**		**5,818.9777**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5581	18.9103	15.2545	0.0250		1.0901	1.0901		1.0449	1.0449	0.0000	2,312.1454	2,312.1454	0.4810		2,324.1705
Total	**2.5581**	**18.9103**	**15.2545**	**0.0250**		**1.0901**	**1.0901**		**1.0449**	**1.0449**	**0.0000**	**2,312.1454**	**2,312.1454**	**0.4810**		**2,324.1705**

3.5 Building Construction - 2019

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	0.2950	8.2168	2.1803	0.0186	0.4545	0.0524	0.5069	0.1309	0.0501	0.1810		1,979.5838	1,979.5838	0.1269		1,982.7552
Worker	1.5786	1.1602	15.2364	0.0385	3.5321	0.0305	3.5626	0.9367	0.0281	0.9648		3,832.9311	3,832.9311	0.1317		3,836.2225
Total	**1.8736**	**9.3770**	**17.4166**	**0.0571**	**3.9867**	**0.0829**	**4.0695**	**1.0676**	**0.0782**	**1.1458**		**5,812.5149**	**5,812.5149**	**0.2585**		**5,818.9777**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2879	17.4336	14.8972	0.0250		0.9482	0.9482		0.9089	0.9089		2,288.8877	2,288.8877	0.4646		2,300.5014
Total	**2.2879**	**17.4336**	**14.8972**	**0.0250**		**0.9482**	**0.9482**		**0.9089**	**0.9089**		**2,288.8877**	**2,288.8877**	**0.4646**		**2,300.5014**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2525	7.5525	1.9788	0.0184	0.4545	0.0356	0.4901	0.1309	0.0340	0.1649		1,966.8753	1,966.8753	0.1200		1,969.8760
Worker	1.4542	1.0346	13.8359	0.0373	3.5321	0.0295	3.5617	0.9367	0.0272	0.9639		3,716.5167	3,716.5167	0.1172		3,719.4460
Total	**1.7068**	**8.5870**	**15.8147**	**0.0557**	**3.9867**	**0.0651**	**4.0518**	**1.0676**	**0.0612**	**1.1288**		**5,683.3920**	**5,683.3920**	**0.2372**		**5,689.3220**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2879	17.4336	14.8972	0.0250		0.9482	0.9482		0.9089	0.9089	0.0000	2,288.8877	2,288.8877	0.4646		2,300.5014
Total	**2.2879**	**17.4336**	**14.8972**	**0.0250**		**0.9482**	**0.9482**		**0.9089**	**0.9089**	**0.0000**	**2,288.8877**	**2,288.8877**	**0.4646**		**2,300.5014**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2525	7.5525	1.9788	0.0184	0.4545	0.0356	0.4901	0.1309	0.0340	0.1649		1,966.8753	1,966.8753	0.1200		1,969.8760
Worker	1.4542	1.0346	13.8359	0.0373	3.5321	0.0295	3.5617	0.9367	0.0272	0.9639		3,716.5167	3,716.5167	0.1172		3,719.4460
Total	**1.7068**	**8.5870**	**15.8147**	**0.0557**	**3.9867**	**0.0651**	**4.0518**	**1.0676**	**0.0612**	**1.1288**		**5,683.3920**	**5,683.3920**	**0.2372**		**5,689.3220**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1547	11.5873	11.8076	0.0178		0.6565	0.6565		0.6051	0.6051		1,709.2180	1,709.2180	0.5417		1,722.7605
Paving	0.1389					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2935**	**11.5873**	**11.8076**	**0.0178**		**0.6565**	**0.6565**		**0.6051**	**0.6051**		**1,709.2180**	**1,709.2180**	**0.5417**		**1,722.7605**

3.6 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0690	0.0491	0.6568	1.7700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		176.4169	176.4169	5.5600e-003		176.5560
Total	**0.0690**	**0.0491**	**0.6568**	**1.7700e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**176.4169**	**176.4169**	**5.5600e-003**		**176.5560**

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	1.1547	11.5873	11.8076	0.0178		0.6565	0.6565		0.6051	0.6051	0.0000	1,709.2180	1,709.2180	0.5417		1,722.7605
Paving	0.1389					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2935**	**11.5873**	**11.8076**	**0.0178**		**0.6565**	**0.6565**		**0.6051**	**0.6051**	**0.0000**	**1,709.2180**	**1,709.2180**	**0.5417**		**1,722.7605**

3.6 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0690	0.0491	0.6568	1.7700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		176.4169	176.4169	5.5600e-003		176.5560
Total	**0.0690**	**0.0491**	**0.6568**	**1.7700e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**176.4169**	**176.4169**	**5.5600e-003**		**176.5560**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	219.3753					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**219.6174**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2899	0.2063	2.7584	7.4400e-003	0.7042	5.8900e-003	0.7101	0.1868	5.4200e-003	0.1922		740.9511	740.9511	0.0234		741.5351
Total	**0.2899**	**0.2063**	**2.7584**	**7.4400e-003**	**0.7042**	**5.8900e-003**	**0.7101**	**0.1868**	**5.4200e-003**	**0.1922**		**740.9511**	**740.9511**	**0.0234**		**741.5351**

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	219.3753					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**219.6174**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2899	0.2063	2.7584	7.4400e-003	0.7042	5.8900e-003	0.7101	0.1868	5.4200e-003	0.1922		740.9511	740.9511	0.0234		741.5351
Total	**0.2899**	**0.2063**	**2.7584**	**7.4400e-003**	**0.7042**	**5.8900e-003**	**0.7101**	**0.1868**	**5.4200e-003**	**0.1922**		**740.9511**	**740.9511**	**0.0234**		**741.5351**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.3191	4.0893	32.4911	0.1069	9.9230	0.0777	10.0007	2.6431	0.0719	2.7149		10,696.2958	10,696.2958	0.3220		10,704.3452
Unmitigated	2.3191	4.0893	32.4911	0.1069	9.9230	0.0777	10.0007	2.6431	0.0719	2.7149		10,696.2958	10,696.2958	0.3220		10,704.3452

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,232.16	1,183.84	1084.18	4,135,501	4,135,501
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Regional Shopping Center	169.99	198.88	100.47	399,638	399,638
Total	1,402.15	1,382.72	1,184.65	4,535,139	4,535,139

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	41.00	19.00	40.00	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	61	39	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Enclosed Parking with Elevator	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Other Asphalt Surfaces	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Other Non-Asphalt Surfaces	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Regional Shopping Center	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1199	1.0246	0.4373	6.5400e-003		0.0828	0.0828		0.0828	0.0828		1,307.7372	1,307.7372	0.0251	0.0240	1,315.5084
NaturalGas Unmitigated	0.1199	1.0246	0.4373	6.5400e-003		0.0828	0.0828		0.0828	0.0828		1,307.7372	1,307.7372	0.0251	0.0240	1,315.5084

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	11084	0.1195	1.0215	0.4347	6.5200e-003		0.0826	0.0826		0.0826	0.0826		1,303.9946	1,303.9946	0.0250	0.0239	1,311.7436
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	31.8115	3.4000e-004	3.1200e-003	2.6200e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		3.7425	3.7425	7.0000e-005	7.0000e-005	3.7648
Total		**0.1199**	**1.0246**	**0.4373**	**6.5400e-003**		**0.0828**	**0.0828**		**0.0828**	**0.0828**		**1,307.7372**	**1,307.7372**	**0.0251**	**0.0240**	**1,315.5084**

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 Mid Rise	11.084	0.1195	1.0215	0.4347	6.5200e-003		0.0826	0.0826		0.0826	0.0826		1,303.9946	1,303.9946	0.0250	0.0239	1,311.7436
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.0318115	3.4000e-004	3.1200e-003	2.6200e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		3.7425	3.7425	7.0000e-005	7.0000e-005	3.7648
Total		**0.1199**	**1.0246**	**0.4373**	**6.5400e-003**		**0.0828**	**0.0828**		**0.0828**	**0.0828**		**1,307.7372**	**1,307.7372**	**0.0251**	**0.0240**	**1,315.5084**

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	8.6091	4.5461	26.7783	0.0285		0.4822	0.4822		0.4822	0.4822	0.0000	5,480.9143	5,480.9143	0.1476	0.0997	5,514.3032
Unmitigated	8.6091	4.5461	26.7783	0.0285		0.4822	0.4822		0.4822	0.4822	0.0000	5,480.9143	5,480.9143	0.1476	0.0997	5,514.3032

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6010					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7542					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4983	4.2582	1.8120	0.0272		0.3443	0.3443		0.3443	0.3443	0.0000	5,436.0000	5,436.0000	0.1042	0.0997	5,468.3034
Landscaping	0.7556	0.2879	24.9663	1.3200e-003		0.1379	0.1379		0.1379	0.1379		44.9143	44.9143	0.0434		45.9998
Total	**8.6091**	**4.5461**	**26.7783**	**0.0285**		**0.4822**	**0.4822**		**0.4822**	**0.4822**	**0.0000**	**5,480.9143**	**5,480.9143**	**0.1476**	**0.0997**	**5,514.3032**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6010					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7542					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4983	4.2582	1.8120	0.0272		0.3443	0.3443		0.3443	0.3443	0.0000	5,436.0000	5,436.0000	0.1042	0.0997	5,468.3034
Landscaping	0.7556	0.2879	24.9663	1.3200e-003		0.1379	0.1379		0.1379	0.1379		44.9143	44.9143	0.0434		45.9998
Total	**8.6091**	**4.5461**	**26.7783**	**0.0285**		**0.4822**	**0.4822**		**0.4822**	**0.4822**	**0.0000**	**5,480.9143**	**5,480.9143**	**0.1476**	**0.0997**	**5,514.3032**

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
Emergency Generator	1	0	12	50	0.73	Diesel
Fire Pump	1	0	6	50	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (50 - 75 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Fire Pump - Diesel (50 - 75 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

11.0 Vegetation

Arroyo at Monrovia Station

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	192.22	1000sqft	0.54	192,220.00	0
Other Asphalt Surfaces	23.28	1000sqft	0.53	23,280.00	0
Other Non-Asphalt Surfaces	12.86	1000sqft	0.30	12,860.00	0
Apartments Mid Rise	302.00	Dwelling Unit	1.53	329,955.00	630
Regional Shopping Center	7.08	1000sqft	0.00	7,080.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	427.1	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 and CH4 intensity updated for 2022

Land Use - lot acreage and SF from site plan and project description
Retail footrpint added to residenital footprint

Demolition -

Grading -

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Trip rates obtained from the TIS; commercial pass-by trips removed per TIS and added to primary and diverted trip types.

Woodstoves - SCAQMD Rule 445

Consumer Products -

Area Coating - SCAQMD Rule 1113

Energy Use - Reduce commercial lighting by 30% per 2019 Cal Green

Solid Waste - Adjusted solid waste values of 34.73 (residential) and 1.86 (commercial) multiplied by 4 to remove 75% waste diversion assumption in original model run.

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Mobile Land Use Mitigation -

Fleet Mix - No trips associated with HHD; OBUS; UBUS; SBUS; MH. These trips re allocated to LDA

Stationary Sources - Emergency Generators and Fire Pumps -

Trips and VMT -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55
tblEnergyUse	LightingElect	1.75	1.23
tblEnergyUse	LightingElect	6.26	4.38
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	15.10	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00

tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00

Arroyo at Monrovia Station - Los Angeles-South Coast County, Winter

tblFleetMix	UBUS	2.2010e-003	0.00
tblGrading	MaterialExported	0.00	3,430.00
tblLandUse	LandUseSquareFeet	302,000.00	329,955.00
tblLandUse	LotAcreage	4.41	0.54
tblLandUse	LotAcreage	7.95	1.53
tblLandUse	LotAcreage	0.16	0.00
tblLandUse	Population	864.00	630.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.033
tblProjectCharacteristics	CO2IntensityFactor	702.44	427.1
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblSolidWaste	SolidWasteGenerationRate	138.92	139.00
tblSolidWaste	SolidWasteGenerationRate	7.43	7.50
tblVehicleTrips	DV_TP	35.00	39.00
tblVehicleTrips	HO_TTP	40.60	40.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	41.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	54.00	61.00
tblVehicleTrips	ST_TR	6.39	3.92
tblVehicleTrips	ST_TR	49.97	28.09
tblVehicleTrips	SU_TR	5.86	3.59
tblVehicleTrips	SU_TR	25.24	14.19
tblVehicleTrips	WD_TR	6.65	4.08
tblVehicleTrips	WD_TR	42.70	24.01
tblWoodstoves	NumberCatalytic	15.10	0.00
tblWoodstoves	NumberNoncatalytic	15.10	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					
2019	4.6157	44.9765	31.6399	0.0793	7.9789	1.3010	9.1347	3.7496	1.2158	4.8159	0.0000	8,231.8922	8,231.8922	1.0917	0.0000	8,259.1842
2020	219.9394	26.1299	29.7516	0.0781	3.9867	1.0138	5.0005	1.0676	0.9706	2.0382	0.0000	7,701.4245	7,701.4245	0.7028	0.0000	7,718.9938
Maximum	**219.9394**	**44.9765**	**31.6399**	**0.0793**	**7.9789**	**1.3010**	**9.1347**	**3.7496**	**1.2158**	**4.8159**	**0.0000**	**8,231.8922**	**8,231.8922**	**1.0917**	**0.0000**	**8,259.1842**

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					
2019	4.6157	44.9765	31.6399	0.0793	3.9867	1.3010	5.1605	1.6641	1.2158	2.7305	0.0000	8,231.8922	8,231.8922	1.0917	0.0000	8,259.1842
2020	219.9394	26.1299	29.7516	0.0781	3.9867	1.0138	5.0005	1.0676	0.9706	2.0382	0.0000	7,701.4245	7,701.4245	0.7028	0.0000	7,718.9938
Maximum	**219.9394**	**44.9765**	**31.6399**	**0.0793**	**3.9867**	**1.3010**	**5.1605**	**1.6641**	**1.2158**	**2.7305**	**0.0000**	**8,231.8922**	**8,231.8922**	**1.0917**	**0.0000**	**8,259.1842**

	ROG	NOx	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**	**33.36**	**0.00**	**28.12**	**43.29**	**0.00**	**30.43**	**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	8.6091	4.5461	26.7783	0.0285		0.4822	0.4822		0.4822	0.4822	0.0000	5,480.9143	5,480.9143	0.1476	0.0997	5,514.3032
Energy	0.1199	1.0246	0.4373	6.5400e-003		0.0828	0.0828		0.0828	0.0828		1,307.7372	1,307.7372	0.0251	0.0240	1,315.5084
Mobile	2.2337	4.3766	30.4959	0.1013	9.9230	0.0777	10.0007	2.6431	0.0719	2.7149		10,136.4169	10,136.4169	0.3116		10,144.2067
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**10.9627**	**9.9473**	**57.7115**	**0.1364**	**9.9230**	**0.6427**	**10.5657**	**2.6431**	**0.6369**	**3.2799**	**0.0000**	**16,925.0684**	**16,925.0684**	**0.4843**	**0.1236**	**16,974.0183**

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	lb/day										lb/day					
Area	8.6091	4.5461	26.7783	0.0285		0.4822	0.4822		0.4822	0.4822	0.0000	5,480.9143	5,480.9143	0.1476	0.0997	5,514.3032
Energy	0.1199	1.0246	0.4373	6.5400e-003		0.0828	0.0828		0.0828	0.0828		1,307.7372	1,307.7372	0.0251	0.0240	1,315.5084
Mobile	2.2337	4.3766	30.4959	0.1013	9.9230	0.0777	10.0007	2.6431	0.0719	2.7149		10,136.4169	10,136.4169	0.3116		10,144.2067
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**10.9627**	**9.9473**	**57.7115**	**0.1364**	**9.9230**	**0.6427**	**10.5657**	**2.6431**	**0.6369**	**3.2799**	**0.0000**	**16,925.0684**	**16,925.0684**	**0.4843**	**0.1236**	**16,974.0183**

	ROG	NOx	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

Arroyo at Monrovia Station - Los Angeles-South Coast County, Winter

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2019	10/28/2019	5	20	
2	Site Preparation	Site Preparation	10/29/2019	10/31/2019	5	3	
3	Grading	Grading	11/1/2019	11/8/2019	5	6	
4	Building Construction	Building Construction	11/9/2019	9/11/2020	5	220	
5	Paving	Paving	9/12/2020	9/25/2020	5	10	
6	Architectural Coating	Architectural Coating	9/26/2020	10/9/2020	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 1.37

Residential Indoor: 668,159; Residential Outdoor: 222,720; Non-Residential Indoor: 10,620; Non-Residential Outdoor: 3,540; Striped Parking Area: 13,702 (Architectural Coating – sqft)

OffRoad Equipment

Arroyo at Monrovia Station - 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	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
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	5	13.00	0.00	235.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	429.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	316.00	71.00	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	63.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

3.2 Demolition - 2019

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					2.5465	0.0000	2.5465	0.3856	0.0000	0.3856			0.0000			0.0000
Off-Road	2.2950	22.6751	14.8943	0.0241		1.2863	1.2863		1.2017	1.2017		2,360.7198	2,360.7198	0.6011		2,375.7475
Total	**2.2950**	**22.6751**	**14.8943**	**0.0241**	**2.5465**	**1.2863**	**3.8328**	**0.3856**	**1.2017**	**1.5873**		**2,360.7198**	**2,360.7198**	**0.6011**		**2,375.7475**

3.2 Demolition - 2019

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	0.1132	3.6469	0.8192	9.2300e-003	0.2054	0.0135	0.2189	0.0563	0.0129	0.0692		998.5734	998.5734	0.0726		1,000.3890
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	0.0720	0.0529	0.5752	1.4900e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		148.4770	148.4770	5.1100e-003		148.6047
Total	**0.1852**	**3.6997**	**1.3944**	**0.0107**	**0.3507**	**0.0147**	**0.3655**	**0.0949**	**0.0140**	**0.1089**		**1,147.0504**	**1,147.0504**	**0.0777**		**1,148.9937**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9741	0.0000	0.9741	0.1475	0.0000	0.1475			0.0000			0.0000
Off-Road	2.2950	22.6751	14.8943	0.0241		1.2863	1.2863		1.2017	1.2017	0.0000	2,360.7197	2,360.7197	0.6011		2,375.7475
Total	**2.2950**	**22.6751**	**14.8943**	**0.0241**	**0.9741**	**1.2863**	**2.2603**	**0.1475**	**1.2017**	**1.3492**	**0.0000**	**2,360.7197**	**2,360.7197**	**0.6011**		**2,375.7475**

3.2 Demolition - 2019

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	0.1132	3.6469	0.8192	9.2300e-003	0.2054	0.0135	0.2189	0.0563	0.0129	0.0692		998.5734	998.5734	0.0726		1,000.3890
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	0.0720	0.0529	0.5752	1.4900e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		148.4770	148.4770	5.1100e-003		148.6047
Total	**0.1852**	**3.6997**	**1.3944**	**0.0107**	**0.3507**	**0.0147**	**0.3655**	**0.0949**	**0.0140**	**0.1089**		**1,147.0504**	**1,147.0504**	**0.0777**		**1,148.9937**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.7557	21.5386	11.9143	0.0245		0.8537	0.8537		0.7854	0.7854		2,426.5408	2,426.5408	0.7677		2,445.7341
Total	**1.7557**	**21.5386**	**11.9143**	**0.0245**	**1.5908**	**0.8537**	**2.4445**	**0.1718**	**0.7854**	**0.9572**		**2,426.5408**	**2,426.5408**	**0.7677**		**2,445.7341**

3.3 Site Preparation - 2019

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	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491
Total	**0.0443**	**0.0325**	**0.3540**	**9.2000e-004**	**0.0894**	**7.7000e-004**	**0.0902**	**0.0237**	**7.1000e-004**	**0.0244**		**91.3705**	**91.3705**	**3.1400e-003**		**91.4491**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6085	0.0000	0.6085	0.0657	0.0000	0.0657			0.0000			0.0000
Off-Road	1.7557	21.5386	11.9143	0.0245		0.8537	0.8537		0.7854	0.7854	0.0000	2,426.5408	2,426.5408	0.7677		2,445.7341
Total	**1.7557**	**21.5386**	**11.9143**	**0.0245**	**0.6085**	**0.8537**	**1.4622**	**0.0657**	**0.7854**	**0.8511**	**0.0000**	**2,426.5408**	**2,426.5408**	**0.7677**		**2,445.7341**

3.3 Site Preparation - 2019

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	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491
Total	**0.0443**	**0.0325**	**0.3540**	**9.2000e-004**	**0.0894**	**7.7000e-004**	**0.0902**	**0.0237**	**7.1000e-004**	**0.0244**		**91.3705**	**91.3705**	**3.1400e-003**		**91.4491**

3.4 Grading - 2019

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					6.6170	0.0000	6.6170	3.3773	0.0000	3.3773			0.0000			0.0000
Off-Road	2.0287	22.7444	10.1518	0.0206		1.0730	1.0730		0.9871	0.9871		2,041.2539	2,041.2539	0.6458		2,057.3997
Total	**2.0287**	**22.7444**	**10.1518**	**0.0206**	**6.6170**	**1.0730**	**7.6900**	**3.3773**	**0.9871**	**4.3644**		**2,041.2539**	**2,041.2539**	**0.6458**		**2,057.3997**

3.4 Grading - 2019

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	0.6887	22.1915	4.9847	0.0562	1.2501	0.0819	1.3320	0.3427	0.0783	0.4210		6,076.4252	6,076.4252	0.4419		6,087.4732
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	0.0554	0.0407	0.4425	1.1500e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		114.2131	114.2131	3.9300e-003		114.3113
Total	**0.7441**	**22.2321**	**5.4271**	**0.0573**	**1.3619**	**0.0828**	**1.4447**	**0.3723**	**0.0792**	**0.4515**		**6,190.6383**	**6,190.6383**	**0.4459**		**6,201.7845**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5310	0.0000	2.5310	1.2918	0.0000	1.2918			0.0000			0.0000
Off-Road	2.0287	22.7444	10.1518	0.0206		1.0730	1.0730		0.9871	0.9871	0.0000	2,041.2539	2,041.2539	0.6458		2,057.3997
Total	**2.0287**	**22.7444**	**10.1518**	**0.0206**	**2.5310**	**1.0730**	**3.6040**	**1.2918**	**0.9871**	**2.2789**	**0.0000**	**2,041.2539**	**2,041.2539**	**0.6458**		**2,057.3997**

3.4 Grading - 2019

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	0.6887	22.1915	4.9847	0.0562	1.2501	0.0819	1.3320	0.3427	0.0783	0.4210		6,076.4252	6,076.4252	0.4419		6,087.4732
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	0.0554	0.0407	0.4425	1.1500e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		114.2131	114.2131	3.9300e-003		114.3113
Total	**0.7441**	**22.2321**	**5.4271**	**0.0573**	**1.3619**	**0.0828**	**1.4447**	**0.3723**	**0.0792**	**0.4515**		**6,190.6383**	**6,190.6383**	**0.4459**		**6,201.7845**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5581	18.9103	15.2545	0.0250		1.0901	1.0901		1.0449	1.0449		2,312.1454	2,312.1454	0.4810		2,324.1705
Total	**2.5581**	**18.9103**	**15.2545**	**0.0250**		**1.0901**	**1.0901**		**1.0449**	**1.0449**		**2,312.1454**	**2,312.1454**	**0.4810**		**2,324.1705**

3.5 Building Construction - 2019

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	0.3077	8.2278	2.4032	0.0181	0.4545	0.0533	0.5078	0.1309	0.0509	0.1818		1,926.0675	1,926.0675	0.1353		1,929.4501
Worker	1.7499	1.2848	13.9822	0.0363	3.5321	0.0305	3.5626	0.9367	0.0281	0.9648		3,609.1334	3,609.1334	0.1242		3,612.2373
Total	**2.0576**	**9.5126**	**16.3854**	**0.0543**	**3.9867**	**0.0837**	**4.0704**	**1.0676**	**0.0790**	**1.1466**		**5,535.2009**	**5,535.2009**	**0.2595**		**5,541.6874**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5581	18.9103	15.2545	0.0250		1.0901	1.0901		1.0449	1.0449	0.0000	2,312.1454	2,312.1454	0.4810		2,324.1705
Total	**2.5581**	**18.9103**	**15.2545**	**0.0250**		**1.0901**	**1.0901**		**1.0449**	**1.0449**	**0.0000**	**2,312.1454**	**2,312.1454**	**0.4810**		**2,324.1705**

3.5 Building Construction - 2019

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	0.3077	8.2278	2.4032	0.0181	0.4545	0.0533	0.5078	0.1309	0.0509	0.1818		1,926.0675	1,926.0675	0.1353		1,929.4501
Worker	1.7499	1.2848	13.9822	0.0363	3.5321	0.0305	3.5626	0.9367	0.0281	0.9648		3,609.1334	3,609.1334	0.1242		3,612.2373
Total	**2.0576**	**9.5126**	**16.3854**	**0.0543**	**3.9867**	**0.0837**	**4.0704**	**1.0676**	**0.0790**	**1.1466**		**5,535.2009**	**5,535.2009**	**0.2595**		**5,541.6874**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2879	17.4336	14.8972	0.0250		0.9482	0.9482		0.9089	0.9089		2,288.8877	2,288.8877	0.4646		2,300.5014
Total	**2.2879**	**17.4336**	**14.8972**	**0.0250**		**0.9482**	**0.9482**		**0.9089**	**0.9089**		**2,288.8877**	**2,288.8877**	**0.4646**		**2,300.5014**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2640	7.5509	2.1824	0.0179	0.4545	0.0361	0.4907	0.1309	0.0345	0.1654		1,913.0884	1,913.0884	0.1279		1,916.2865
Worker	1.6148	1.1454	12.6719	0.0351	3.5321	0.0295	3.5617	0.9367	0.0272	0.9639		3,499.4484	3,499.4484	0.1103		3,502.2059
Total	**1.8788**	**8.6963**	**14.8544**	**0.0531**	**3.9867**	**0.0656**	**4.0523**	**1.0676**	**0.0617**	**1.1294**		**5,412.5368**	**5,412.5368**	**0.2382**		**5,418.4924**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2879	17.4336	14.8972	0.0250		0.9482	0.9482		0.9089	0.9089	0.0000	2,288.8877	2,288.8877	0.4646		2,300.5014
Total	**2.2879**	**17.4336**	**14.8972**	**0.0250**		**0.9482**	**0.9482**		**0.9089**	**0.9089**	**0.0000**	**2,288.8877**	**2,288.8877**	**0.4646**		**2,300.5014**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2640	7.5509	2.1824	0.0179	0.4545	0.0361	0.4907	0.1309	0.0345	0.1654		1,913.0884	1,913.0884	0.1279		1,916.2865
Worker	1.6148	1.1454	12.6719	0.0351	3.5321	0.0295	3.5617	0.9367	0.0272	0.9639		3,499.4484	3,499.4484	0.1103		3,502.2059
Total	**1.8788**	**8.6963**	**14.8544**	**0.0531**	**3.9867**	**0.0656**	**4.0523**	**1.0676**	**0.0617**	**1.1294**		**5,412.5368**	**5,412.5368**	**0.2382**		**5,418.4924**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1547	11.5873	11.8076	0.0178		0.6565	0.6565		0.6051	0.6051		1,709.2180	1,709.2180	0.5417		1,722.7605
Paving	0.1389					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2935**	**11.5873**	**11.8076**	**0.0178**		**0.6565**	**0.6565**		**0.6051**	**0.6051**		**1,709.2180**	**1,709.2180**	**0.5417**		**1,722.7605**

3.6 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0767	0.0544	0.6015	1.6700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		166.1131	166.1131	5.2400e-003		166.2440
Total	**0.0767**	**0.0544**	**0.6015**	**1.6700e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**166.1131**	**166.1131**	**5.2400e-003**		**166.2440**

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	1.1547	11.5873	11.8076	0.0178		0.6565	0.6565		0.6051	0.6051	0.0000	1,709.2180	1,709.2180	0.5417		1,722.7605
Paving	0.1389					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2935**	**11.5873**	**11.8076**	**0.0178**		**0.6565**	**0.6565**		**0.6051**	**0.6051**	**0.0000**	**1,709.2180**	**1,709.2180**	**0.5417**		**1,722.7605**

3.6 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0767	0.0544	0.6015	1.6700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		166.1131	166.1131	5.2400e-003		166.2440
Total	**0.0767**	**0.0544**	**0.6015**	**1.6700e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**166.1131**	**166.1131**	**5.2400e-003**		**166.2440**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	219.3753					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**219.6174**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3219	0.2284	2.5264	7.0000e-003	0.7042	5.8900e-003	0.7101	0.1868	5.4200e-003	0.1922		697.6748	697.6748	0.0220		698.2246
Total	**0.3219**	**0.2284**	**2.5264**	**7.0000e-003**	**0.7042**	**5.8900e-003**	**0.7101**	**0.1868**	**5.4200e-003**	**0.1922**		**697.6748**	**697.6748**	**0.0220**		**698.2246**

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	219.3753					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**219.6174**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3219	0.2284	2.5264	7.0000e-003	0.7042	5.8900e-003	0.7101	0.1868	5.4200e-003	0.1922		697.6748	697.6748	0.0220		698.2246
Total	**0.3219**	**0.2284**	**2.5264**	**7.0000e-003**	**0.7042**	**5.8900e-003**	**0.7101**	**0.1868**	**5.4200e-003**	**0.1922**		**697.6748**	**697.6748**	**0.0220**		**698.2246**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.2337	4.3766	30.4959	0.1013	9.9230	0.0777	10.0007	2.6431	0.0719	2.7149		10,136.4169	10,136.4169	0.3116		10,144.2067
Unmitigated	2.2337	4.3766	30.4959	0.1013	9.9230	0.0777	10.0007	2.6431	0.0719	2.7149		10,136.4169	10,136.4169	0.3116		10,144.2067

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,232.16	1,183.84	1084.18	4,135,501	4,135,501
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Regional Shopping Center	169.99	198.88	100.47	399,638	399,638
Total	1,402.15	1,382.72	1,184.65	4,535,139	4,535,139

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	41.00	19.00	40.00	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	61	39	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Enclosed Parking with Elevator	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Other Asphalt Surfaces	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Other Non-Asphalt Surfaces	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Regional Shopping Center	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1199	1.0246	0.4373	6.5400e-003		0.0828	0.0828		0.0828	0.0828		1,307.7372	1,307.7372	0.0251	0.0240	1,315.5084
NaturalGas Unmitigated	0.1199	1.0246	0.4373	6.5400e-003		0.0828	0.0828		0.0828	0.0828		1,307.7372	1,307.7372	0.0251	0.0240	1,315.5084

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	11084	0.1195	1.0215	0.4347	6.5200e-003		0.0826	0.0826		0.0826	0.0826		1,303.9946	1,303.9946	0.0250	0.0239	1,311.7436
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	31.8115	3.4000e-004	3.1200e-003	2.6200e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		3.7425	3.7425	7.0000e-005	7.0000e-005	3.7648
Total		**0.1199**	**1.0246**	**0.4373**	**6.5400e-003**		**0.0828**	**0.0828**		**0.0828**	**0.0828**		**1,307.7372**	**1,307.7372**	**0.0251**	**0.0240**	**1,315.5084**

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 Mid Rise	11.084	0.1195	1.0215	0.4347	6.5200e-003		0.0826	0.0826		0.0826	0.0826		1,303.9946	1,303.9946	0.0250	0.0239	1,311.7436
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.0318115	3.4000e-004	3.1200e-003	2.6200e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		3.7425	3.7425	7.0000e-005	7.0000e-005	3.7648
Total		**0.1199**	**1.0246**	**0.4373**	**6.5400e-003**		**0.0828**	**0.0828**		**0.0828**	**0.0828**		**1,307.7372**	**1,307.7372**	**0.0251**	**0.0240**	**1,315.5084**

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	8.6091	4.5461	26.7783	0.0285		0.4822	0.4822		0.4822	0.4822	0.0000	5,480.9143	5,480.9143	0.1476	0.0997	5,514.3032
Unmitigated	8.6091	4.5461	26.7783	0.0285		0.4822	0.4822		0.4822	0.4822	0.0000	5,480.9143	5,480.9143	0.1476	0.0997	5,514.3032

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6010					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7542					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4983	4.2582	1.8120	0.0272		0.3443	0.3443		0.3443	0.3443	0.0000	5,436.0000	5,436.0000	0.1042	0.0997	5,468.3034
Landscaping	0.7556	0.2879	24.9663	1.3200e-003		0.1379	0.1379		0.1379	0.1379		44.9143	44.9143	0.0434		45.9998
Total	**8.6091**	**4.5461**	**26.7783**	**0.0285**		**0.4822**	**0.4822**		**0.4822**	**0.4822**	**0.0000**	**5,480.9143**	**5,480.9143**	**0.1476**	**0.0997**	**5,514.3032**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6010					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7542					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4983	4.2582	1.8120	0.0272		0.3443	0.3443		0.3443	0.3443	0.0000	5,436.0000	5,436.0000	0.1042	0.0997	5,468.3034
Landscaping	0.7556	0.2879	24.9663	1.3200e-003		0.1379	0.1379		0.1379	0.1379		44.9143	44.9143	0.0434		45.9998
Total	**8.6091**	**4.5461**	**26.7783**	**0.0285**		**0.4822**	**0.4822**		**0.4822**	**0.4822**	**0.0000**	**5,480.9143**	**5,480.9143**	**0.1476**	**0.0997**	**5,514.3032**

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
Emergency Generator	1	0	12	50	0.73	Diesel
Fire Pump	1	0	6	50	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (50 - 75 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Fire Pump - Diesel (50 - 75 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

11.0 Vegetation

Arroyo at Monrovia Station

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	192.22	1000sqft	0.54	192,220.00	0
Other Asphalt Surfaces	23.28	1000sqft	0.53	23,280.00	0
Other Non-Asphalt Surfaces	12.86	1000sqft	0.30	12,860.00	0
Apartments Mid Rise	302.00	Dwelling Unit	1.53	329,955.00	630
Regional Shopping Center	7.08	1000sqft	0.00	7,080.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	427.1	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 and CH4 intensity updated for 2022

Land Use - lot acreage and SF from site plan and project description; project specific population entered
Retail footprint added to residenital footprint

Demolition -

Grading -

Architectural Coating - SCAQMD Rule 1113 "super compliant" coatings

Vehicle Trips - Trip rates obtained from the TIS; commercial pass-by trips removed per TIS and added to primary and diverted trip types.

Woodstoves - SCAQMD Rule 445

Consumer Products -

Area Coating - SCAQMD Rule 1113

Energy Use - Reduce commercial lighting by 30% per 2019 Cal Green

Solid Waste - Adjusted solid waste values of 34.73 (residential) and 1.86 (commercial) multiplied by 4 to remove 75% waste diversion assumption in original model run.

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Mobile Land Use Mitigation -

Fleet Mix - No trips associated with HHD; OBUS; UBUS; SBUS; MH. These trips re allocated to LDA

Stationary Sources - Emergency Generators and Fire Pumps -

Trips and VMT - Hauling trips updated to reflect 51,740 sf of demolition

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	10.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	10.00
tblArchitecturalCoating	EF_Parking	100.00	10.00
tblArchitecturalCoating	EF_Residential_Exterior	50.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	10.00
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55
tblEnergyUse	LightingElect	1.75	1.23

tblEnergyUse	LightingElect	6.26	4.38
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	15.10	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00

tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblGrading	MaterialExported	0.00	3,430.00
tblLandUse	LandUseSquareFeet	302,000.00	329,955.00
tblLandUse	LotAcreage	4.41	0.54
tblLandUse	LotAcreage	7.95	1.53
tblLandUse	LotAcreage	0.16	0.00
tblLandUse	Population	864.00	630.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.033
tblProjectCharacteristics	CO2IntensityFactor	702.44	427.1
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblSolidWaste	SolidWasteGenerationRate	138.92	139.00
tblSolidWaste	SolidWasteGenerationRate	7.43	7.50
tblTripsAndVMT	HaulingTripNumber	214.00	235.00
tblVehicleTrips	DV_TP	35.00	39.00
tblVehicleTrips	HO_TTP	40.60	40.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	41.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	54.00	61.00
tblVehicleTrips	ST_TR	6.39	3.92
tblVehicleTrips	ST_TR	49.97	28.09
tblVehicleTrips	SU_TR	5.86	3.59

tblVehicleTrips	SU_TR	25.24	14.19
tblVehicleTrips	WD_TR	6.65	4.08
tblVehicleTrips	WD_TR	42.70	24.01
tblWoodstoves	NumberCatalytic	15.10	0.00
tblWoodstoves	NumberNoncatalytic	15.10	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					
2019	0.1179	0.9625	0.8174	2.1100e-003	0.1276	0.0395	0.1671	0.0357	0.0373	0.0730	0.0000	191.1674	191.1674	0.0225	0.0000	191.7305
2020	0.5888	2.4746	2.8281	7.3700e-003	0.3620	0.0966	0.4586	0.0971	0.0924	0.1895	0.0000	659.7108	659.7108	0.0608	0.0000	661.2309
Maximum	**0.5888**	**2.4746**	**2.8281**	**7.3700e-003**	**0.3620**	**0.0966**	**0.4586**	**0.0971**	**0.0924**	**0.1895**	**0.0000**	**659.7108**	**659.7108**	**0.0608**	**0.0000**	**661.2309**

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					
2019	0.1179	0.9625	0.8174	2.1100e-003	0.0982	0.0395	0.1376	0.0269	0.0373	0.0642	0.0000	191.1673	191.1673	0.0225	0.0000	191.7304
2020	0.5888	2.4746	2.8281	7.3700e-003	0.3620	0.0966	0.4586	0.0971	0.0924	0.1895	0.0000	659.7105	659.7105	0.0608	0.0000	661.2306
Maximum	**0.5888**	**2.4746**	**2.8281**	**7.3700e-003**	**0.3620**	**0.0966**	**0.4586**	**0.0971**	**0.0924**	**0.1895**	**0.0000**	**659.7105**	**659.7105**	**0.0608**	**0.0000**	**661.2306**

	ROG	NOx	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**	**6.02**	**0.00**	**4.71**	**6.62**	**0.00**	**3.35**	**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	10-1-2019	12-31-2019	1.0754	1.0754
2	1-1-2020	3-31-2020	0.9846	0.9846
3	4-1-2020	6-30-2020	0.9755	0.9755
4	7-1-2020	9-30-2020	0.9279	0.9279
		Highest	1.0754	1.0754

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.4430	0.0892	3.1434	5.0000e-004		0.0215	0.0215		0.0215	0.0215	0.0000	66.7364	66.7364	6.1000e-003	1.1300e-003	67.2258
Energy	0.0219	0.1870	0.0798	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	668.1462	668.1462	0.0391	8.2000e-003	671.5657
Mobile	0.3805	0.7789	5.4341	0.0180	1.7029	0.0136	1.7165	0.4543	0.0126	0.4668	0.0000	1,631.2078	1,631.2078	0.0499	0.0000	1,632.4543
Stationary	7.4000e-004	2.4100e-003	2.6800e-003	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.3427	0.3427	5.0000e-005	0.0000	0.3439
Waste						0.0000	0.0000		0.0000	0.0000	29.7382	0.0000	29.7382	1.7575	0.0000	73.6751
Water						0.0000	0.0000		0.0000	0.0000	6.4088	78.3489	84.7577	0.6643	0.0163	106.2156
Total	**1.8461**	**1.0575**	**8.6600**	**0.0197**	**1.7029**	**0.0504**	**1.7533**	**0.4543**	**0.0494**	**0.5036**	**36.1470**	**2,444.7820**	**2,480.9290**	**2.5168**	**0.0256**	**2,551.4804**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.4430	0.0892	3.1434	5.0000e-004		0.0215	0.0215		0.0215	0.0215	0.0000	66.7364	66.7364	6.1000e-003	1.1300e-003	67.2258
Energy	0.0219	0.1870	0.0798	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	668.1462	668.1462	0.0391	8.2000e-003	671.5657
Mobile	0.3805	0.7789	5.4341	0.0180	1.7029	0.0136	1.7165	0.4543	0.0126	0.4668	0.0000	1,631.2078	1,631.2078	0.0499	0.0000	1,632.4543
Stationary	7.4000e-004	2.4100e-003	2.6800e-003	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.3427	0.3427	5.0000e-005	0.0000	0.3439
Waste						0.0000	0.0000		0.0000	0.0000	29.7382	0.0000	29.7382	1.7575	0.0000	73.6751
Water						0.0000	0.0000		0.0000	0.0000	6.4088	78.3489	84.7577	0.6643	0.0163	106.2156
Total	**1.8461**	**1.0575**	**8.6600**	**0.0197**	**1.7029**	**0.0504**	**1.7533**	**0.4543**	**0.0494**	**0.5036**	**36.1470**	**2,444.7820**	**2,480.9290**	**2.5168**	**0.0256**	**2,551.4804**

	ROG	NOx	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	10/1/2019	10/28/2019	5	20	
2	Site Preparation	Site Preparation	10/29/2019	10/31/2019	5	3	
3	Grading	Grading	11/1/2019	11/8/2019	5	6	
4	Building Construction	Building Construction	11/9/2019	9/11/2020	5	220	
5	Paving	Paving	9/12/2020	9/25/2020	5	10	
6	Architectural Coating	Architectural Coating	9/26/2020	10/9/2020	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 1.37

Residential Indoor: 668,159; Residential Outdoor: 222,720; Non-Residential Indoor: 10,620; Non-Residential Outdoor: 3,540; Striped Parking Area: 13,702 (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	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
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	5	13.00	0.00	235.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	429.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	316.00	71.00	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	63.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

3.2 Demolition - 2019

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					0.0255	0.0000	0.0255	3.8600e-003	0.0000	3.8600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0230	0.2268	0.1489	2.4000e-004		0.0129	0.0129		0.0120	0.0120	0.0000	21.4161	21.4161	5.4500e-003	0.0000	21.5524
Total	**0.0230**	**0.2268**	**0.1489**	**2.4000e-004**	**0.0255**	**0.0129**	**0.0383**	**3.8600e-003**	**0.0120**	**0.0159**	**0.0000**	**21.4161**	**21.4161**	**5.4500e-003**	**0.0000**	**21.5524**

3.2 Demolition - 2019

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	1.1200e-003	0.0372	7.9000e-003	9.0000e-005	2.0200e-003	1.3000e-004	2.1500e-003	5.5000e-004	1.3000e-004	6.8000e-004	0.0000	9.1496	9.1496	6.5000e-004	0.0000	9.1657
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	5.4000e-004	5.9000e-003	2.0000e-005	1.4200e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.3694	1.3694	5.0000e-005	0.0000	1.3705
Total	**1.7700e-003**	**0.0377**	**0.0138**	**1.1000e-004**	**3.4400e-003**	**1.4000e-004**	**3.5900e-003**	**9.3000e-004**	**1.4000e-004**	**1.0700e-003**	**0.0000**	**10.5189**	**10.5189**	**7.0000e-004**	**0.0000**	**10.5362**

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					9.7400e-003	0.0000	9.7400e-003	1.4700e-003	0.0000	1.4700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0230	0.2268	0.1489	2.4000e-004		0.0129	0.0129		0.0120	0.0120	0.0000	21.4161	21.4161	5.4500e-003	0.0000	21.5524
Total	**0.0230**	**0.2268**	**0.1489**	**2.4000e-004**	**9.7400e-003**	**0.0129**	**0.0226**	**1.4700e-003**	**0.0120**	**0.0135**	**0.0000**	**21.4161**	**21.4161**	**5.4500e-003**	**0.0000**	**21.5524**

3.2 Demolition - 2019

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	1.1200e-003	0.0372	7.9000e-003	9.0000e-005	2.0200e-003	1.3000e-004	2.1500e-003	5.5000e-004	1.3000e-004	6.8000e-004	0.0000	9.1496	9.1496	6.5000e-004	0.0000	9.1657
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	5.4000e-004	5.9000e-003	2.0000e-005	1.4200e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.3694	1.3694	5.0000e-005	0.0000	1.3705
Total	**1.7700e-003**	**0.0377**	**0.0138**	**1.1000e-004**	**3.4400e-003**	**1.4000e-004**	**3.5900e-003**	**9.3000e-004**	**1.4000e-004**	**1.0700e-003**	**0.0000**	**10.5189**	**10.5189**	**7.0000e-004**	**0.0000**	**10.5362**

3.3 Site Preparation - 2019

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6300e-003	0.0323	0.0179	4.0000e-005		1.2800e-003	1.2800e-003		1.1800e-003	1.1800e-003	0.0000	3.3020	3.3020	1.0400e-003	0.0000	3.3281
Total	**2.6300e-003**	**0.0323**	**0.0179**	**4.0000e-005**	**2.3900e-003**	**1.2800e-003**	**3.6700e-003**	**2.6000e-004**	**1.1800e-003**	**1.4400e-003**	**0.0000**	**3.3020**	**3.3020**	**1.0400e-003**	**0.0000**	**3.3281**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	5.0000e-005	5.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1264	0.1264	0.0000	0.0000	0.1265
Total	**6.0000e-005**	**5.0000e-005**	**5.4000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1264**	**0.1264**	**0.0000**	**0.0000**	**0.1265**

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					9.1000e-004	0.0000	9.1000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6300e-003	0.0323	0.0179	4.0000e-005		1.2800e-003	1.2800e-003		1.1800e-003	1.1800e-003	0.0000	3.3020	3.3020	1.0400e-003	0.0000	3.3281
Total	**2.6300e-003**	**0.0323**	**0.0179**	**4.0000e-005**	**9.1000e-004**	**1.2800e-003**	**2.1900e-003**	**1.0000e-004**	**1.1800e-003**	**1.2800e-003**	**0.0000**	**3.3020**	**3.3020**	**1.0400e-003**	**0.0000**	**3.3281**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	5.0000e-005	5.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1264	0.1264	0.0000	0.0000	0.1265
Total	**6.0000e-005**	**5.0000e-005**	**5.4000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1264**	**0.1264**	**0.0000**	**0.0000**	**0.1265**

3.4 Grading - 2019

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					0.0199	0.0000	0.0199	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0900e-003	0.0682	0.0305	6.0000e-005		3.2200e-003	3.2200e-003		2.9600e-003	2.9600e-003	0.0000	5.5554	5.5554	1.7600e-003	0.0000	5.5993
Total	**6.0900e-003**	**0.0682**	**0.0305**	**6.0000e-005**	**0.0199**	**3.2200e-003**	**0.0231**	**0.0101**	**2.9600e-003**	**0.0131**	**0.0000**	**5.5554**	**5.5554**	**1.7600e-003**	**0.0000**	**5.5993**

3.4 Grading - 2019

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	2.0400e-003	0.0679	0.0144	1.7000e-004	3.6900e-003	2.4000e-004	3.9300e-003	1.0100e-003	2.3000e-004	1.2400e-003	0.0000	16.7028	16.7028	1.1800e-003	0.0000	16.7323
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	1.5000e-004	1.3000e-004	1.3600e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3160	0.3160	1.0000e-005	0.0000	0.3163
Total	**2.1900e-003**	**0.0680**	**0.0158**	**1.7000e-004**	**4.0200e-003**	**2.4000e-004**	**4.2600e-003**	**1.1000e-003**	**2.3000e-004**	**1.3300e-003**	**0.0000**	**17.0188**	**17.0188**	**1.1900e-003**	**0.0000**	**17.0485**

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					7.5900e-003	0.0000	7.5900e-003	3.8800e-003	0.0000	3.8800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0900e-003	0.0682	0.0305	6.0000e-005		3.2200e-003	3.2200e-003		2.9600e-003	2.9600e-003	0.0000	5.5554	5.5554	1.7600e-003	0.0000	5.5993
Total	**6.0900e-003**	**0.0682**	**0.0305**	**6.0000e-005**	**7.5900e-003**	**3.2200e-003**	**0.0108**	**3.8800e-003**	**2.9600e-003**	**6.8400e-003**	**0.0000**	**5.5554**	**5.5554**	**1.7600e-003**	**0.0000**	**5.5993**

3.4 Grading - 2019

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	2.0400e-003	0.0679	0.0144	1.7000e-004	3.6900e-003	2.4000e-004	3.9300e-003	1.0100e-003	2.3000e-004	1.2400e-003	0.0000	16.7028	16.7028	1.1800e-003	0.0000	16.7323
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	1.5000e-004	1.3000e-004	1.3600e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3160	0.3160	1.0000e-005	0.0000	0.3163
Total	**2.1900e-003**	**0.0680**	**0.0158**	**1.7000e-004**	**4.0200e-003**	**2.4000e-004**	**4.2600e-003**	**1.1000e-003**	**2.3000e-004**	**1.3300e-003**	**0.0000**	**17.0188**	**17.0188**	**1.1900e-003**	**0.0000**	**17.0485**

3.5 Building Construction - 2019

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	0.0473	0.3498	0.2822	4.6000e-004		0.0202	0.0202		0.0193	0.0193	0.0000	38.8046	38.8046	8.0700e-003	0.0000	39.0064
Total	**0.0473**	**0.3498**	**0.2822**	**4.6000e-004**		**0.0202**	**0.0202**		**0.0193**	**0.0193**	**0.0000**	**38.8046**	**38.8046**	**8.0700e-003**	**0.0000**	**39.0064**

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5600e-003	0.1552	0.0424	3.4000e-004	8.2700e-003	9.8000e-004	9.2500e-003	2.3900e-003	9.3000e-004	3.3200e-003	0.0000	32.8460	32.8460	2.1900e-003	0.0000	32.9008
Worker	0.0293	0.0244	0.2654	6.8000e-004	0.0641	5.6000e-004	0.0646	0.0170	5.2000e-004	0.0175	0.0000	61.5793	61.5793	2.1200e-003	0.0000	61.6322
Total	**0.0348**	**0.1796**	**0.3078**	**1.0200e-003**	**0.0723**	**1.5400e-003**	**0.0739**	**0.0194**	**1.4500e-003**	**0.0209**	**0.0000**	**94.4252**	**94.4252**	**4.3100e-003**	**0.0000**	**94.5330**

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	0.0473	0.3498	0.2822	4.6000e-004		0.0202	0.0202		0.0193	0.0193	0.0000	38.8045	38.8045	8.0700e-003	0.0000	39.0063
Total	**0.0473**	**0.3498**	**0.2822**	**4.6000e-004**		**0.0202**	**0.0202**		**0.0193**	**0.0193**	**0.0000**	**38.8045**	**38.8045**	**8.0700e-003**	**0.0000**	**39.0063**

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5600e-003	0.1552	0.0424	3.4000e-004	8.2700e-003	9.8000e-004	9.2500e-003	2.3900e-003	9.3000e-004	3.3200e-003	0.0000	32.8460	32.8460	2.1900e-003	0.0000	32.9008
Worker	0.0293	0.0244	0.2654	6.8000e-004	0.0641	5.6000e-004	0.0646	0.0170	5.2000e-004	0.0175	0.0000	61.5793	61.5793	2.1200e-003	0.0000	61.6322
Total	**0.0348**	**0.1796**	**0.3078**	**1.0200e-003**	**0.0723**	**1.5400e-003**	**0.0739**	**0.0194**	**1.4500e-003**	**0.0209**	**0.0000**	**94.4252**	**94.4252**	**4.3100e-003**	**0.0000**	**94.5330**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2093	1.5952	1.3631	2.2900e-003		0.0868	0.0868		0.0832	0.0832	0.0000	189.9946	189.9946	0.0386	0.0000	190.9587
Total	**0.2093**	**1.5952**	**1.3631**	**2.2900e-003**		**0.0868**	**0.0868**		**0.0832**	**0.0832**	**0.0000**	**189.9946**	**189.9946**	**0.0386**	**0.0000**	**190.9587**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0236	0.7040	0.1906	1.6700e-003	0.0409	3.2700e-003	0.0442	0.0118	3.1300e-003	0.0149	0.0000	161.3901	161.3901	0.0103	0.0000	161.6465
Worker	0.1335	0.1076	1.1902	3.2700e-003	0.3168	2.7000e-003	0.3195	0.0842	2.4900e-003	0.0866	0.0000	295.3133	295.3133	9.3100e-003	0.0000	295.5460
Total	**0.1570**	**0.8116**	**1.3808**	**4.9400e-003**	**0.3578**	**5.9700e-003**	**0.3637**	**0.0960**	**5.6200e-003**	**0.1016**	**0.0000**	**456.7034**	**456.7034**	**0.0196**	**0.0000**	**457.1924**

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	0.2093	1.5952	1.3631	2.2900e-003		0.0868	0.0868		0.0832	0.0832	0.0000	189.9944	189.9944	0.0386	0.0000	190.9584
Total	**0.2093**	**1.5952**	**1.3631**	**2.2900e-003**		**0.0868**	**0.0868**		**0.0832**	**0.0832**	**0.0000**	**189.9944**	**189.9944**	**0.0386**	**0.0000**	**190.9584**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0236	0.7040	0.1906	1.6700e-003	0.0409	3.2700e-003	0.0442	0.0118	3.1300e-003	0.0149	0.0000	161.3901	161.3901	0.0103	0.0000	161.6465
Worker	0.1335	0.1076	1.1902	3.2700e-003	0.3168	2.7000e-003	0.3195	0.0842	2.4900e-003	0.0866	0.0000	295.3133	295.3133	9.3100e-003	0.0000	295.5460
Total	**0.1570**	**0.8116**	**1.3808**	**4.9400e-003**	**0.3578**	**5.9700e-003**	**0.3637**	**0.0960**	**5.6200e-003**	**0.1016**	**0.0000**	**456.7034**	**456.7034**	**0.0196**	**0.0000**	**457.1924**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.7700e-003	0.0579	0.0590	9.0000e-005		3.2800e-003	3.2800e-003		3.0300e-003	3.0300e-003	0.0000	7.7529	7.7529	2.4600e-003	0.0000	7.8143
Paving	6.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4600e-003**	**0.0579**	**0.0590**	**9.0000e-005**		**3.2800e-003**	**3.2800e-003**		**3.0300e-003**	**3.0300e-003**	**0.0000**	**7.7529**	**7.7529**	**2.4600e-003**	**0.0000**	**7.8143**

3.6 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.8000e-004	3.0900e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7660	0.7660	2.0000e-005	0.0000	0.7666
Total	**3.5000e-004**	**2.8000e-004**	**3.0900e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.7660**	**0.7660**	**2.0000e-005**	**0.0000**	**0.7666**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.7700e-003	0.0579	0.0590	9.0000e-005		3.2800e-003	3.2800e-003		3.0300e-003	3.0300e-003	0.0000	7.7529	7.7529	2.4600e-003	0.0000	7.8143
Paving	6.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4600e-003**	**0.0579**	**0.0590**	**9.0000e-005**		**3.2800e-003**	**3.2800e-003**		**3.0300e-003**	**3.0300e-003**	**0.0000**	**7.7529**	**7.7529**	**2.4600e-003**	**0.0000**	**7.8143**

3.6 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.8000e-004	3.0900e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7660	0.7660	2.0000e-005	0.0000	0.7666
Total	**3.5000e-004**	**2.8000e-004**	**3.0900e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.7660**	**0.7660**	**2.0000e-005**	**0.0000**	**0.7666**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2129					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
Total	**0.2141**	**8.4200e-003**	**9.1600e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2791**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4500e-003	1.1700e-003	0.0130	4.0000e-005	3.4500e-003	3.0000e-005	3.4800e-003	9.2000e-004	3.0000e-005	9.4000e-004	0.0000	3.2173	3.2173	1.0000e-004	0.0000	3.2198
Total	**1.4500e-003**	**1.1700e-003**	**0.0130**	**4.0000e-005**	**3.4500e-003**	**3.0000e-005**	**3.4800e-003**	**9.2000e-004**	**3.0000e-005**	**9.4000e-004**	**0.0000**	**3.2173**	**3.2173**	**1.0000e-004**	**0.0000**	**3.2198**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2129					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
Total	**0.2141**	**8.4200e-003**	**9.1600e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2791**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4500e-003	1.1700e-003	0.0130	4.0000e-005	3.4500e-003	3.0000e-005	3.4800e-003	9.2000e-004	3.0000e-005	9.4000e-004	0.0000	3.2173	3.2173	1.0000e-004	0.0000	3.2198
Total	**1.4500e-003**	**1.1700e-003**	**0.0130**	**4.0000e-005**	**3.4500e-003**	**3.0000e-005**	**3.4800e-003**	**9.2000e-004**	**3.0000e-005**	**9.4000e-004**	**0.0000**	**3.2173**	**3.2173**	**1.0000e-004**	**0.0000**	**3.2198**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3805	0.7789	5.4341	0.0180	1.7029	0.0136	1.7165	0.4543	0.0126	0.4668	0.0000	1,631.2078	1,631.2078	0.0499	0.0000	1,632.4543
Unmitigated	0.3805	0.7789	5.4341	0.0180	1.7029	0.0136	1.7165	0.4543	0.0126	0.4668	0.0000	1,631.2078	1,631.2078	0.0499	0.0000	1,632.4543

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,232.16	1,183.84	1084.18	4,135,501	4,135,501
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Regional Shopping Center	169.99	198.88	100.47	399,638	399,638
Total	1,402.15	1,382.72	1,184.65	4,535,139	4,535,139

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	41.00	19.00	40.00	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	61	39	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Enclosed Parking with Elevator	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Other Asphalt Surfaces	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Other Non-Asphalt Surfaces	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Regional Shopping Center	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	451.6357	451.6357	0.0349	4.2300e-003	453.7685
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	451.6357	451.6357	0.0349	4.2300e-003	453.7685
NaturalGas Mitigated	0.0219	0.1870	0.0798	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	216.5106	216.5106	4.1500e-003	3.9700e-003	217.7972
NaturalGas Unmitigated	0.0219	0.1870	0.0798	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	216.5106	216.5106	4.1500e-003	3.9700e-003	217.7972

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	4.04564e+006	0.0218	0.1864	0.0793	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	215.8909	215.8909	4.1400e-003	3.9600e-003	217.1739
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	11611.2	6.0000e-005	5.7000e-004	4.8000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.6196	0.6196	1.0000e-005	1.0000e-005	0.6233
Total		**0.0219**	**0.1870**	**0.0798**	**1.1900e-003**		**0.0151**	**0.0151**		**0.0151**	**0.0151**	**0.0000**	**216.5106**	**216.5106**	**4.1500e-003**	**3.9700e-003**	**217.7972**

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 Mid Rise	4.04564e+006	0.0218	0.1864	0.0793	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	215.8909	215.8909	4.1400e-003	3.9600e-003	217.1739
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	11611.2	6.0000e-005	5.7000e-004	4.8000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.6196	0.6196	1.0000e-005	1.0000e-005	0.6233
Total		**0.0219**	**0.1870**	**0.0798**	**1.1900e-003**		**0.0151**	**0.0151**		**0.0151**	**0.0151**	**0.0000**	**216.5106**	**216.5106**	**4.1500e-003**	**3.9700e-003**	**217.7972**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.22255e+006	236.8432	0.0183	2.2200e-003	237.9618
Enclosed Parking with Elevator	1.02645e+006	198.8544	0.0154	1.8600e-003	199.7935
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	82269.6	15.9380	1.2300e-003	1.5000e-004	16.0133
Total		**451.6356**	**0.0349**	**4.2300e-003**	**453.7685**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.22255e+006	236.8432	0.0183	2.2200e-003	237.9618
Enclosed Parking with Elevator	1.02645e+006	198.8544	0.0154	1.8600e-003	199.7935
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	82269.6	15.9380	1.2300e-003	1.5000e-004	16.0133
Total		**451.6356**	**0.0349**	**4.2300e-003**	**453.7685**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.4430	0.0892	3.1434	5.0000e-004		0.0215	0.0215		0.0215	0.0215	0.0000	66.7364	66.7364	6.1000e-003	1.1300e-003	67.2258
Unmitigated	1.4430	0.0892	3.1434	5.0000e-004		0.0215	0.0215		0.0215	0.0215	0.0000	66.7364	66.7364	6.1000e-003	1.1300e-003	67.2258

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	0.1097					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2326					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.2300e-003	0.0532	0.0227	3.4000e-004		4.3000e-003	4.3000e-003		4.3000e-003	4.3000e-003	0.0000	61.6432	61.6432	1.1800e-003	1.1300e-003	62.0095
Landscaping	0.0945	0.0360	3.1208	1.6000e-004		0.0172	0.0172		0.0172	0.0172	0.0000	5.0932	5.0932	4.9200e-003	0.0000	5.2163
Total	**1.4430**	**0.0892**	**3.1434**	**5.0000e-004**		**0.0215**	**0.0215**		**0.0215**	**0.0215**	**0.0000**	**66.7364**	**66.7364**	**6.1000e-003**	**1.1300e-003**	**67.2258**

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	0.1097					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2326					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.2300e-003	0.0532	0.0227	3.4000e-004		4.3000e-003	4.3000e-003		4.3000e-003	4.3000e-003	0.0000	61.6432	61.6432	1.1800e-003	1.1300e-003	62.0095
Landscaping	0.0945	0.0360	3.1208	1.6000e-004		0.0172	0.0172		0.0172	0.0172	0.0000	5.0932	5.0932	4.9200e-003	0.0000	5.2163
Total	**1.4430**	**0.0892**	**3.1434**	**5.0000e-004**		**0.0215**	**0.0215**		**0.0215**	**0.0215**	**0.0000**	**66.7364**	**66.7364**	**6.1000e-003**	**1.1300e-003**	**67.2258**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	84.7577	0.6643	0.0163	106.2156
Unmitigated	84.7577	0.6643	0.0163	106.2156

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	19.6765 / 12.4048	82.5766	0.6471	0.0159	103.4776
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.524433 / 0.321427	2.1811	0.0172	4.2000e-004	2.7381
Total		**84.7577**	**0.6643**	**0.0163**	**106.2156**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	19.6765 / 12.4048	82.5766	0.6471	0.0159	103.4776
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.524433 / 0.321427	2.1811	0.0172	4.2000e-004	2.7381
Total		**84.7577**	**0.6643**	**0.0163**	**106.2156**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	29.7382	1.7575	0.0000	73.6751
Unmitigated	29.7382	1.7575	0.0000	73.6751

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	139	28.2157	1.6675	0.0000	69.9033
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	7.5	1.5224	0.0900	0.0000	3.7718
Total		**29.7382**	**1.7575**	**0.0000**	**73.6751**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	139	28.2157	1.6675	0.0000	69.9033
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	7.5	1.5224	0.0900	0.0000	3.7718
Total		**29.7382**	**1.7575**	**0.0000**	**73.6751**

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
Emergency Generator	1	0	12	50	0.73	Diesel
Fire Pump	1	0	6	50	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (50 - 75 HP)	4.9000e-004	1.6100e-003	1.7900e-003	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2285	0.2285	3.0000e-005	0.0000	0.2293
Fire Pump - Diesel (50 - 75 HP)	2.5000e-004	8.0000e-004	8.9000e-004	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.1142	0.1142	2.0000e-005	0.0000	0.1146
Total	**7.4000e-004**	**2.4100e-003**	**2.6800e-003**	**0.0000**		**1.4000e-004**	**1.4000e-004**		**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.3427**	**0.3427**	**5.0000e-005**	**0.0000**	**0.3439**

11.0 Vegetation

Arroyo at Monrovia Station

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	192.22	1000sqft	0.54	192,220.00	0
Other Asphalt Surfaces	23.28	1000sqft	0.53	23,280.00	0
Other Non-Asphalt Surfaces	12.86	1000sqft	0.30	12,860.00	0
Apartments Mid Rise	302.00	Dwelling Unit	1.53	329,955.00	630
Regional Shopping Center	7.08	1000sqft	0.00	7,080.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	427.1	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Arroyo at Monrovia Station - Los Angeles-South Coast County, Summer

Project Characteristics - CO2 and CH4 intensity updated for 2022

Land Use - lot acreage and SF from site plan and project description; project specific population entered
Retail footprint added to residenital footprint

Demolition -

Grading -

Architectural Coating - SCAQMD Rule 1113 "super compliant" coatings

Vehicle Trips - Trip rates obtained from the TIS; commercial pass-by trips removed per TIS and added to primary and diverted trip types.

Woodstoves - SCAQMD Rule 445

Consumer Products -

Area Coating - SCAQMD Rule 1113

Energy Use - Reduce commercial lighting by 30% per 2019 Cal Green

Solid Waste - Adjusted solid waste values of 34.73 (residential) and 1.86 (commercial) multiplied by 4 to remove 75% waste diversion assumption in original model run.

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Mobile Land Use Mitigation -

Fleet Mix - No trips associated with HHD; OBUS; UBUS; SBUS; MH. These trips re allocated to LDA

Stationary Sources - Emergency Generators and Fire Pumps -

Trips and VMT - Hauling trips updated to reflect 51,740 sf of demolition

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	10.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	10.00
tblArchitecturalCoating	EF_Parking	100.00	10.00
tblArchitecturalCoating	EF_Residential_Exterior	50.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	10.00
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55
tblEnergyUse	LightingElect	1.75	1.23

tblEnergyUse	LightingElect	6.26	4.38
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	15.10	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00

tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblGrading	MaterialExported	0.00	3,430.00
tblLandUse	LandUseSquareFeet	302,000.00	329,955.00
tblLandUse	LotAcreage	4.41	0.54
tblLandUse	LotAcreage	7.95	1.53
tblLandUse	LotAcreage	0.16	0.00
tblLandUse	Population	864.00	630.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.033
tblProjectCharacteristics	CO2IntensityFactor	702.44	427.1
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblSolidWaste	SolidWasteGenerationRate	138.92	139.00
tblSolidWaste	SolidWasteGenerationRate	7.43	7.50
tblTripsAndVMT	HaulingTripNumber	214.00	235.00
tblVehicleTrips	DV_TP	35.00	39.00
tblVehicleTrips	HO_TTP	40.60	40.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	41.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	54.00	61.00
tblVehicleTrips	ST_TR	6.39	3.92
tblVehicleTrips	ST_TR	49.97	28.09
tblVehicleTrips	SU_TR	5.86	3.59

tblVehicleTrips	SU_TR	25.24	14.19
tblVehicleTrips	WD_TR	6.65	4.08
tblVehicleTrips	WD_TR	42.70	24.01
tblWoodstoves	NumberCatalytic	15.10	0.00
tblWoodstoves	NumberNoncatalytic	15.10	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					
2019	4.4317	44.6804	32.6711	0.0821	7.9789	1.3008	9.1332	3.7496	1.2155	4.8145	0.0000	8,343.8082	8,343.8082	1.0757	0.0000	8,370.7006
2020	43.1158	26.0206	30.7119	0.0808	3.9867	1.0133	4.9999	1.0676	0.9701	2.0377	0.0000	7,972.2797	7,972.2797	0.7017	0.0000	7,989.8234
Maximum	**43.1158**	**44.6804**	**32.6711**	**0.0821**	**7.9789**	**1.3008**	**9.1332**	**3.7496**	**1.2155**	**4.8145**	**0.0000**	**8,343.8082**	**8,343.8082**	**1.0757**	**0.0000**	**8,370.7006**

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					
2019	4.4317	44.6804	32.6711	0.0821	3.9867	1.3008	5.1597	1.6641	1.2155	2.7290	0.0000	8,343.8082	8,343.8082	1.0757	0.0000	8,370.7006
2020	43.1158	26.0206	30.7119	0.0808	3.9867	1.0133	4.9999	1.0676	0.9701	2.0377	0.0000	7,972.2797	7,972.2797	0.7017	0.0000	7,989.8234
Maximum	**43.1158**	**44.6804**	**32.6711**	**0.0821**	**3.9867**	**1.3008**	**5.1597**	**1.6641**	**1.2155**	**2.7290**	**0.0000**	**8,343.8082**	**8,343.8082**	**1.0757**	**0.0000**	**8,370.7006**

	ROG	NOx	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**	**33.36**	**0.00**	**28.11**	**43.29**	**0.00**	**30.44**	**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	8.6091	4.5461	26.7783	0.0285		0.4822	0.4822		0.4822	0.4822	0.0000	5,480.9143	5,480.9143	0.1476	0.0997	5,514.3032
Energy	0.1199	1.0246	0.4373	6.5400e-003		0.0828	0.0828		0.0828	0.0828		1,307.7372	1,307.7372	0.0251	0.0240	1,315.5084
Mobile	2.3191	4.0893	32.4911	0.1069	9.9230	0.0777	10.0007	2.6431	0.0719	2.7149		10,696.2958	10,696.2958	0.3220		10,704.3452
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**11.0480**	**9.6599**	**59.7066**	**0.1420**	**9.9230**	**0.6427**	**10.5657**	**2.6431**	**0.6369**	**3.2799**	**0.0000**	**17,484.9473**	**17,484.9473**	**0.4947**	**0.1236**	**17,534.1568**

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	lb/day										lb/day					
Area	8.6091	4.5461	26.7783	0.0285		0.4822	0.4822		0.4822	0.4822	0.0000	5,480.9143	5,480.9143	0.1476	0.0997	5,514.3032
Energy	0.1199	1.0246	0.4373	6.5400e-003		0.0828	0.0828		0.0828	0.0828		1,307.7372	1,307.7372	0.0251	0.0240	1,315.5084
Mobile	2.3191	4.0893	32.4911	0.1069	9.9230	0.0777	10.0007	2.6431	0.0719	2.7149		10,696.2958	10,696.2958	0.3220		10,704.3452
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**11.0480**	**9.6599**	**59.7066**	**0.1420**	**9.9230**	**0.6427**	**10.5657**	**2.6431**	**0.6369**	**3.2799**	**0.0000**	**17,484.9473**	**17,484.9473**	**0.4947**	**0.1236**	**17,534.1568**

	ROG	NOx	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	10/1/2019	10/28/2019	5	20	
2	Site Preparation	Site Preparation	10/29/2019	10/31/2019	5	3	
3	Grading	Grading	11/1/2019	11/8/2019	5	6	
4	Building Construction	Building Construction	11/9/2019	9/11/2020	5	220	
5	Paving	Paving	9/12/2020	9/25/2020	5	10	
6	Architectural Coating	Architectural Coating	9/26/2020	10/9/2020	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 1.37

Residential Indoor: 668,159; Residential Outdoor: 222,720; Non-Residential Indoor: 10,620; Non-Residential Outdoor: 3,540; Striped Parking Area: 13,702 (Architectural Coating – sqft)

OffRoad Equipment

Arroyo at Monrovia Station - 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	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
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	5	13.00	0.00	235.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	429.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	316.00	71.00	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	63.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

3.2 Demolition - 2019

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					2.5465	0.0000	2.5465	0.3856	0.0000	0.3856			0.0000			0.0000
Off-Road	2.2950	22.6751	14.8943	0.0241		1.2863	1.2863		1.2017	1.2017		2,360.7198	2,360.7198	0.6011		2,375.7475
Total	**2.2950**	**22.6751**	**14.8943**	**0.0241**	**2.5465**	**1.2863**	**3.8328**	**0.3856**	**1.2017**	**1.5873**		**2,360.7198**	**2,360.7198**	**0.6011**		**2,375.7475**

3.2 Demolition - 2019

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	0.1104	3.5988	0.7673	9.3900e-003	0.2054	0.0132	0.2186	0.0563	0.0126	0.0690		1,015.8013	1,015.8013	0.0700		1,017.5502
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	0.0477	0.6268	1.5800e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		157.6839	157.6839	5.4200e-003		157.8193
Total	**0.1754**	**3.6466**	**1.3941**	**0.0110**	**0.3507**	**0.0145**	**0.3652**	**0.0949**	**0.0138**	**0.1086**		**1,173.4852**	**1,173.4852**	**0.0754**		**1,175.3695**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9741	0.0000	0.9741	0.1475	0.0000	0.1475			0.0000			0.0000
Off-Road	2.2950	22.6751	14.8943	0.0241		1.2863	1.2863		1.2017	1.2017	0.0000	2,360.7197	2,360.7197	0.6011		2,375.7475
Total	**2.2950**	**22.6751**	**14.8943**	**0.0241**	**0.9741**	**1.2863**	**2.2603**	**0.1475**	**1.2017**	**1.3492**	**0.0000**	**2,360.7197**	**2,360.7197**	**0.6011**		**2,375.7475**

3.2 Demolition - 2019

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	0.1104	3.5988	0.7673	9.3900e-003	0.2054	0.0132	0.2186	0.0563	0.0126	0.0690		1,015.8013	1,015.8013	0.0700		1,017.5502
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	0.0477	0.6268	1.5800e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		157.6839	157.6839	5.4200e-003		157.8193
Total	**0.1754**	**3.6466**	**1.3941**	**0.0110**	**0.3507**	**0.0145**	**0.3652**	**0.0949**	**0.0138**	**0.1086**		**1,173.4852**	**1,173.4852**	**0.0754**		**1,175.3695**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.7557	21.5386	11.9143	0.0245		0.8537	0.8537		0.7854	0.7854		2,426.5408	2,426.5408	0.7677		2,445.7341
Total	**1.7557**	**21.5386**	**11.9143**	**0.0245**	**1.5908**	**0.8537**	**2.4445**	**0.1718**	**0.7854**	**0.9572**		**2,426.5408**	**2,426.5408**	**0.7677**		**2,445.7341**

3.3 Site Preparation - 2019

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	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196
Total	**0.0400**	**0.0294**	**0.3857**	**9.7000e-004**	**0.0894**	**7.7000e-004**	**0.0902**	**0.0237**	**7.1000e-004**	**0.0244**		**97.0362**	**97.0362**	**3.3300e-003**		**97.1196**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6085	0.0000	0.6085	0.0657	0.0000	0.0657			0.0000			0.0000
Off-Road	1.7557	21.5386	11.9143	0.0245		0.8537	0.8537		0.7854	0.7854	0.0000	2,426.5408	2,426.5408	0.7677		2,445.7341
Total	**1.7557**	**21.5386**	**11.9143**	**0.0245**	**0.6085**	**0.8537**	**1.4622**	**0.0657**	**0.7854**	**0.8511**	**0.0000**	**2,426.5408**	**2,426.5408**	**0.7677**		**2,445.7341**

3.3 Site Preparation - 2019

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	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196
Total	**0.0400**	**0.0294**	**0.3857**	**9.7000e-004**	**0.0894**	**7.7000e-004**	**0.0902**	**0.0237**	**7.1000e-004**	**0.0244**		**97.0362**	**97.0362**	**3.3300e-003**		**97.1196**

3.4 Grading - 2019

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					6.6170	0.0000	6.6170	3.3773	0.0000	3.3773			0.0000			0.0000
Off-Road	2.0287	22.7444	10.1518	0.0206		1.0730	1.0730		0.9871	0.9871		2,041.2539	2,041.2539	0.6458		2,057.3997
Total	**2.0287**	**22.7444**	**10.1518**	**0.0206**	**6.6170**	**1.0730**	**7.6900**	**3.3773**	**0.9871**	**4.3644**		**2,041.2539**	**2,041.2539**	**0.6458**		**2,057.3997**

3.4 Grading - 2019

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	0.6719	21.8992	4.6691	0.0571	1.2501	0.0804	1.3305	0.3427	0.0769	0.4195		6,181.2590	6,181.2590	0.4257		6,191.9014
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	0.0500	0.0367	0.4822	1.2200e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		121.2953	121.2953	4.1700e-003		121.3995
Total	**0.7218**	**21.9360**	**5.1513**	**0.0584**	**1.3619**	**0.0813**	**1.4432**	**0.3723**	**0.0778**	**0.4501**		**6,302.5543**	**6,302.5543**	**0.4299**		**6,313.3009**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5310	0.0000	2.5310	1.2918	0.0000	1.2918			0.0000			0.0000
Off-Road	2.0287	22.7444	10.1518	0.0206		1.0730	1.0730		0.9871	0.9871	0.0000	2,041.2539	2,041.2539	0.6458		2,057.3997
Total	**2.0287**	**22.7444**	**10.1518**	**0.0206**	**2.5310**	**1.0730**	**3.6040**	**1.2918**	**0.9871**	**2.2789**	**0.0000**	**2,041.2539**	**2,041.2539**	**0.6458**		**2,057.3997**

3.4 Grading - 2019

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	0.6719	21.8992	4.6691	0.0571	1.2501	0.0804	1.3305	0.3427	0.0769	0.4195		6,181.2590	6,181.2590	0.4257		6,191.9014
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	0.0500	0.0367	0.4822	1.2200e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		121.2953	121.2953	4.1700e-003		121.3995
Total	**0.7218**	**21.9360**	**5.1513**	**0.0584**	**1.3619**	**0.0813**	**1.4432**	**0.3723**	**0.0778**	**0.4501**		**6,302.5543**	**6,302.5543**	**0.4299**		**6,313.3009**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5581	18.9103	15.2545	0.0250		1.0901	1.0901		1.0449	1.0449		2,312.1454	2,312.1454	0.4810		2,324.1705
Total	**2.5581**	**18.9103**	**15.2545**	**0.0250**		**1.0901**	**1.0901**		**1.0449**	**1.0449**		**2,312.1454**	**2,312.1454**	**0.4810**		**2,324.1705**

3.5 Building Construction - 2019

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	0.2950	8.2168	2.1803	0.0186	0.4545	0.0524	0.5069	0.1309	0.0501	0.1810		1,979.5838	1,979.5838	0.1269		1,982.7552
Worker	1.5786	1.1602	15.2364	0.0385	3.5321	0.0305	3.5626	0.9367	0.0281	0.9648		3,832.9311	3,832.9311	0.1317		3,836.2225
Total	**1.8736**	**9.3770**	**17.4166**	**0.0571**	**3.9867**	**0.0829**	**4.0695**	**1.0676**	**0.0782**	**1.1458**		**5,812.5149**	**5,812.5149**	**0.2585**		**5,818.9777**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5581	18.9103	15.2545	0.0250		1.0901	1.0901		1.0449	1.0449	0.0000	2,312.1454	2,312.1454	0.4810		2,324.1705
Total	**2.5581**	**18.9103**	**15.2545**	**0.0250**		**1.0901**	**1.0901**		**1.0449**	**1.0449**	**0.0000**	**2,312.1454**	**2,312.1454**	**0.4810**		**2,324.1705**

3.5 Building Construction - 2019

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	0.2950	8.2168	2.1803	0.0186	0.4545	0.0524	0.5069	0.1309	0.0501	0.1810		1,979.5838	1,979.5838	0.1269		1,982.7552
Worker	1.5786	1.1602	15.2364	0.0385	3.5321	0.0305	3.5626	0.9367	0.0281	0.9648		3,832.9311	3,832.9311	0.1317		3,836.2225
Total	**1.8736**	**9.3770**	**17.4166**	**0.0571**	**3.9867**	**0.0829**	**4.0695**	**1.0676**	**0.0782**	**1.1458**		**5,812.5149**	**5,812.5149**	**0.2585**		**5,818.9777**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2879	17.4336	14.8972	0.0250		0.9482	0.9482		0.9089	0.9089		2,288.8877	2,288.8877	0.4646		2,300.5014
Total	**2.2879**	**17.4336**	**14.8972**	**0.0250**		**0.9482**	**0.9482**		**0.9089**	**0.9089**		**2,288.8877**	**2,288.8877**	**0.4646**		**2,300.5014**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2525	7.5525	1.9788	0.0184	0.4545	0.0356	0.4901	0.1309	0.0340	0.1649		1,966.8753	1,966.8753	0.1200		1,969.8760
Worker	1.4542	1.0346	13.8359	0.0373	3.5321	0.0295	3.5617	0.9367	0.0272	0.9639		3,716.5167	3,716.5167	0.1172		3,719.4460
Total	**1.7068**	**8.5870**	**15.8147**	**0.0557**	**3.9867**	**0.0651**	**4.0518**	**1.0676**	**0.0612**	**1.1288**		**5,683.3920**	**5,683.3920**	**0.2372**		**5,689.3220**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2879	17.4336	14.8972	0.0250		0.9482	0.9482		0.9089	0.9089	0.0000	2,288.8877	2,288.8877	0.4646		2,300.5014
Total	**2.2879**	**17.4336**	**14.8972**	**0.0250**		**0.9482**	**0.9482**		**0.9089**	**0.9089**	**0.0000**	**2,288.8877**	**2,288.8877**	**0.4646**		**2,300.5014**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2525	7.5525	1.9788	0.0184	0.4545	0.0356	0.4901	0.1309	0.0340	0.1649		1,966.8753	1,966.8753	0.1200		1,969.8760
Worker	1.4542	1.0346	13.8359	0.0373	3.5321	0.0295	3.5617	0.9367	0.0272	0.9639		3,716.5167	3,716.5167	0.1172		3,719.4460
Total	**1.7068**	**8.5870**	**15.8147**	**0.0557**	**3.9867**	**0.0651**	**4.0518**	**1.0676**	**0.0612**	**1.1288**		**5,683.3920**	**5,683.3920**	**0.2372**		**5,689.3220**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1547	11.5873	11.8076	0.0178		0.6565	0.6565		0.6051	0.6051		1,709.2180	1,709.2180	0.5417		1,722.7605
Paving	0.1389					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2935**	**11.5873**	**11.8076**	**0.0178**		**0.6565**	**0.6565**		**0.6051**	**0.6051**		**1,709.2180**	**1,709.2180**	**0.5417**		**1,722.7605**

3.6 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0690	0.0491	0.6568	1.7700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		176.4169	176.4169	5.5600e-003		176.5560
Total	**0.0690**	**0.0491**	**0.6568**	**1.7700e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**176.4169**	**176.4169**	**5.5600e-003**		**176.5560**

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	1.1547	11.5873	11.8076	0.0178		0.6565	0.6565		0.6051	0.6051	0.0000	1,709.2180	1,709.2180	0.5417		1,722.7605
Paving	0.1389					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2935**	**11.5873**	**11.8076**	**0.0178**		**0.6565**	**0.6565**		**0.6051**	**0.6051**	**0.0000**	**1,709.2180**	**1,709.2180**	**0.5417**		**1,722.7605**

3.6 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0690	0.0491	0.6568	1.7700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		176.4169	176.4169	5.5600e-003		176.5560
Total	**0.0690**	**0.0491**	**0.6568**	**1.7700e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**176.4169**	**176.4169**	**5.5600e-003**		**176.5560**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	42.5837					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**42.8258**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2899	0.2063	2.7584	7.4400e-003	0.7042	5.8900e-003	0.7101	0.1868	5.4200e-003	0.1922		740.9511	740.9511	0.0234		741.5351
Total	**0.2899**	**0.2063**	**2.7584**	**7.4400e-003**	**0.7042**	**5.8900e-003**	**0.7101**	**0.1868**	**5.4200e-003**	**0.1922**		**740.9511**	**740.9511**	**0.0234**		**741.5351**

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	42.5837					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**42.8258**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2899	0.2063	2.7584	7.4400e-003	0.7042	5.8900e-003	0.7101	0.1868	5.4200e-003	0.1922		740.9511	740.9511	0.0234		741.5351
Total	**0.2899**	**0.2063**	**2.7584**	**7.4400e-003**	**0.7042**	**5.8900e-003**	**0.7101**	**0.1868**	**5.4200e-003**	**0.1922**		**740.9511**	**740.9511**	**0.0234**		**741.5351**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.3191	4.0893	32.4911	0.1069	9.9230	0.0777	10.0007	2.6431	0.0719	2.7149		10,696.2958	10,696.2958	0.3220		10,704.3452
Unmitigated	2.3191	4.0893	32.4911	0.1069	9.9230	0.0777	10.0007	2.6431	0.0719	2.7149		10,696.2958	10,696.2958	0.3220		10,704.3452

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,232.16	1,183.84	1084.18	4,135,501	4,135,501
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Regional Shopping Center	169.99	198.88	100.47	399,638	399,638
Total	1,402.15	1,382.72	1,184.65	4,535,139	4,535,139

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	41.00	19.00	40.00	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	61	39	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Enclosed Parking with Elevator	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Other Asphalt Surfaces	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Other Non-Asphalt Surfaces	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Regional Shopping Center	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1199	1.0246	0.4373	6.5400e-003		0.0828	0.0828		0.0828	0.0828		1,307.7372	1,307.7372	0.0251	0.0240	1,315.5084
NaturalGas Unmitigated	0.1199	1.0246	0.4373	6.5400e-003		0.0828	0.0828		0.0828	0.0828		1,307.7372	1,307.7372	0.0251	0.0240	1,315.5084

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	11084	0.1195	1.0215	0.4347	6.5200e-003		0.0826	0.0826		0.0826	0.0826		1,303.9946	1,303.9946	0.0250	0.0239	1,311.7436
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	31.8115	3.4000e-004	3.1200e-003	2.6200e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		3.7425	3.7425	7.0000e-005	7.0000e-005	3.7648
Total		**0.1199**	**1.0246**	**0.4373**	**6.5400e-003**		**0.0828**	**0.0828**		**0.0828**	**0.0828**		**1,307.7372**	**1,307.7372**	**0.0251**	**0.0240**	**1,315.5084**

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 Mid Rise	11.084	0.1195	1.0215	0.4347	6.5200e-003		0.0826	0.0826		0.0826	0.0826		1,303.9946	1,303.9946	0.0250	0.0239	1,311.7436
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.0318115	3.4000e-004	3.1200e-003	2.6200e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		3.7425	3.7425	7.0000e-005	7.0000e-005	3.7648
Total		**0.1199**	**1.0246**	**0.4373**	**6.5400e-003**		**0.0828**	**0.0828**		**0.0828**	**0.0828**		**1,307.7372**	**1,307.7372**	**0.0251**	**0.0240**	**1,315.5084**

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	8.6091	4.5461	26.7783	0.0285		0.4822	0.4822		0.4822	0.4822	0.0000	5,480.9143	5,480.9143	0.1476	0.0997	5,514.3032
Unmitigated	8.6091	4.5461	26.7783	0.0285		0.4822	0.4822		0.4822	0.4822	0.0000	5,480.9143	5,480.9143	0.1476	0.0997	5,514.3032

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6010					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7542					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4983	4.2582	1.8120	0.0272		0.3443	0.3443		0.3443	0.3443	0.0000	5,436.0000	5,436.0000	0.1042	0.0997	5,468.3034
Landscaping	0.7556	0.2879	24.9663	1.3200e-003		0.1379	0.1379		0.1379	0.1379		44.9143	44.9143	0.0434		45.9998
Total	**8.6091**	**4.5461**	**26.7783**	**0.0285**		**0.4822**	**0.4822**		**0.4822**	**0.4822**	**0.0000**	**5,480.9143**	**5,480.9143**	**0.1476**	**0.0997**	**5,514.3032**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6010					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7542					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4983	4.2582	1.8120	0.0272		0.3443	0.3443		0.3443	0.3443	0.0000	5,436.0000	5,436.0000	0.1042	0.0997	5,468.3034
Landscaping	0.7556	0.2879	24.9663	1.3200e-003		0.1379	0.1379		0.1379	0.1379		44.9143	44.9143	0.0434		45.9998
Total	**8.6091**	**4.5461**	**26.7783**	**0.0285**		**0.4822**	**0.4822**		**0.4822**	**0.4822**	**0.0000**	**5,480.9143**	**5,480.9143**	**0.1476**	**0.0997**	**5,514.3032**

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
Emergency Generator	1	0	12	50	0.73	Diesel
Fire Pump	1	0	6	50	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (50 - 75 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Fire Pump - Diesel (50 - 75 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

11.0 Vegetation

Arroyo at Monrovia Station

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	192.22	1000sqft	0.54	192,220.00	0
Other Asphalt Surfaces	23.28	1000sqft	0.53	23,280.00	0
Other Non-Asphalt Surfaces	12.86	1000sqft	0.30	12,860.00	0
Apartments Mid Rise	302.00	Dwelling Unit	1.53	329,955.00	630
Regional Shopping Center	7.08	1000sqft	0.00	7,080.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	427.1	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Arroyo at Monrovia Station - Los Angeles-South Coast County, Winter

Project Characteristics - CO2 and CH4 intensity updated for 2022

Land Use - lot acreage and SF from site plan and project description; project specific population entered
Retail footprint added to residenital footprint

Demolition -

Grading -

Architectural Coating - SCAQMD Rule 1113 "super compliant" coatings

Vehicle Trips - Trip rates obtained from the TIS; commercial pass-by trips removed per TIS and added to primary and diverted trip types.

Woodstoves - SCAQMD Rule 445

Consumer Products -

Area Coating - SCAQMD Rule 1113

Energy Use - Reduce commercial lighting by 30% per 2019 Cal Green

Solid Waste - Adjusted solid waste values of 34.73 (residential) and 1.86 (commercial) multiplied by 4 to remove 75% waste diversion assumption in original model run.

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Mobile Land Use Mitigation -

Fleet Mix - No trips associated with HHD; OBUS; UBUS; SBUS; MH. These trips re allocated to LDA

Stationary Sources - Emergency Generators and Fire Pumps -

Trips and VMT - Hauling trips updated to reflect 51,740 sf of demolition

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	10.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	10.00
tblArchitecturalCoating	EF_Parking	100.00	10.00
tblArchitecturalCoating	EF_Residential_Exterior	50.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	10.00
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55
tblEnergyUse	LightingElect	1.75	1.23

tblEnergyUse	LightingElect	6.26	4.38
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	15.10	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00

tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblGrading	MaterialExported	0.00	3,430.00
tblLandUse	LandUseSquareFeet	302,000.00	329,955.00
tblLandUse	LotAcreage	4.41	0.54
tblLandUse	LotAcreage	7.95	1.53
tblLandUse	LotAcreage	0.16	0.00
tblLandUse	Population	864.00	630.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.033
tblProjectCharacteristics	CO2IntensityFactor	702.44	427.1
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblSolidWaste	SolidWasteGenerationRate	138.92	139.00
tblSolidWaste	SolidWasteGenerationRate	7.43	7.50
tblTripsAndVMT	HaulingTripNumber	214.00	235.00
tblVehicleTrips	DV_TP	35.00	39.00
tblVehicleTrips	HO_TTP	40.60	40.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	41.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	54.00	61.00
tblVehicleTrips	ST_TR	6.39	3.92
tblVehicleTrips	ST_TR	49.97	28.09
tblVehicleTrips	SU_TR	5.86	3.59

tblVehicleTrips	SU_TR	25.24	14.19
tblVehicleTrips	WD_TR	6.65	4.08
tblVehicleTrips	WD_TR	42.70	24.01
tblWoodstoves	NumberCatalytic	15.10	0.00
tblWoodstoves	NumberNoncatalytic	15.10	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					
2019	4.6157	44.9765	31.6399	0.0793	7.9789	1.3010	9.1347	3.7496	1.2158	4.8159	0.0000	8,231.8922	8,231.8922	1.0917	0.0000	8,259.1842
2020	43.1478	26.1299	29.7516	0.0781	3.9867	1.0138	5.0005	1.0676	0.9706	2.0382	0.0000	7,701.4245	7,701.4245	0.7028	0.0000	7,718.9938
Maximum	**43.1478**	**44.9765**	**31.6399**	**0.0793**	**7.9789**	**1.3010**	**9.1347**	**3.7496**	**1.2158**	**4.8159**	**0.0000**	**8,231.8922**	**8,231.8922**	**1.0917**	**0.0000**	**8,259.1842**

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					
2019	4.6157	44.9765	31.6399	0.0793	3.9867	1.3010	5.1605	1.6641	1.2158	2.7305	0.0000	8,231.8922	8,231.8922	1.0917	0.0000	8,259.1842
2020	43.1478	26.1299	29.7516	0.0781	3.9867	1.0138	5.0005	1.0676	0.9706	2.0382	0.0000	7,701.4245	7,701.4245	0.7028	0.0000	7,718.9938
Maximum	**43.1478**	**44.9765**	**31.6399**	**0.0793**	**3.9867**	**1.3010**	**5.1605**	**1.6641**	**1.2158**	**2.7305**	**0.0000**	**8,231.8922**	**8,231.8922**	**1.0917**	**0.0000**	**8,259.1842**

	ROG	NOx	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**	**33.36**	**0.00**	**28.12**	**43.29**	**0.00**	**30.43**	**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	8.6091	4.5461	26.7783	0.0285		0.4822	0.4822		0.4822	0.4822	0.0000	5,480.9143	5,480.9143	0.1476	0.0997	5,514.3032
Energy	0.1199	1.0246	0.4373	6.5400e-003		0.0828	0.0828		0.0828	0.0828		1,307.7372	1,307.7372	0.0251	0.0240	1,315.5084
Mobile	2.2337	4.3766	30.4959	0.1013	9.9230	0.0777	10.0007	2.6431	0.0719	2.7149		10,136.4169	10,136.4169	0.3116		10,144.2067
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**10.9627**	**9.9473**	**57.7115**	**0.1364**	**9.9230**	**0.6427**	**10.5657**	**2.6431**	**0.6369**	**3.2799**	**0.0000**	**16,925.0684**	**16,925.0684**	**0.4843**	**0.1236**	**16,974.0183**

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	lb/day										lb/day					
Area	8.6091	4.5461	26.7783	0.0285		0.4822	0.4822		0.4822	0.4822	0.0000	5,480.9143	5,480.9143	0.1476	0.0997	5,514.3032
Energy	0.1199	1.0246	0.4373	6.5400e-003		0.0828	0.0828		0.0828	0.0828		1,307.7372	1,307.7372	0.0251	0.0240	1,315.5084
Mobile	2.2337	4.3766	30.4959	0.1013	9.9230	0.0777	10.0007	2.6431	0.0719	2.7149		10,136.4169	10,136.4169	0.3116		10,144.2067
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**10.9627**	**9.9473**	**57.7115**	**0.1364**	**9.9230**	**0.6427**	**10.5657**	**2.6431**	**0.6369**	**3.2799**	**0.0000**	**16,925.0684**	**16,925.0684**	**0.4843**	**0.1236**	**16,974.0183**

	ROG	NOx	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

Arroyo at Monrovia Station - Los Angeles-South Coast County, Winter

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2019	10/28/2019	5	20	
2	Site Preparation	Site Preparation	10/29/2019	10/31/2019	5	3	
3	Grading	Grading	11/1/2019	11/8/2019	5	6	
4	Building Construction	Building Construction	11/9/2019	9/11/2020	5	220	
5	Paving	Paving	9/12/2020	9/25/2020	5	10	
6	Architectural Coating	Architectural Coating	9/26/2020	10/9/2020	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 1.37

Residential Indoor: 668,159; Residential Outdoor: 222,720; Non-Residential Indoor: 10,620; Non-Residential Outdoor: 3,540; Striped Parking Area: 13,702 (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	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
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	5	13.00	0.00	235.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	429.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	316.00	71.00	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	63.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

3.2 Demolition - 2019

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					2.5465	0.0000	2.5465	0.3856	0.0000	0.3856			0.0000			0.0000
Off-Road	2.2950	22.6751	14.8943	0.0241		1.2863	1.2863		1.2017	1.2017		2,360.7198	2,360.7198	0.6011		2,375.7475
Total	**2.2950**	**22.6751**	**14.8943**	**0.0241**	**2.5465**	**1.2863**	**3.8328**	**0.3856**	**1.2017**	**1.5873**		**2,360.7198**	**2,360.7198**	**0.6011**		**2,375.7475**

3.2 Demolition - 2019

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	0.1132	3.6469	0.8192	9.2300e-003	0.2054	0.0135	0.2189	0.0563	0.0129	0.0692		998.5734	998.5734	0.0726		1,000.3890
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	0.0720	0.0529	0.5752	1.4900e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		148.4770	148.4770	5.1100e-003		148.6047
Total	**0.1852**	**3.6997**	**1.3944**	**0.0107**	**0.3507**	**0.0147**	**0.3655**	**0.0949**	**0.0140**	**0.1089**		**1,147.0504**	**1,147.0504**	**0.0777**		**1,148.9937**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9741	0.0000	0.9741	0.1475	0.0000	0.1475			0.0000			0.0000
Off-Road	2.2950	22.6751	14.8943	0.0241		1.2863	1.2863		1.2017	1.2017	0.0000	2,360.7197	2,360.7197	0.6011		2,375.7475
Total	**2.2950**	**22.6751**	**14.8943**	**0.0241**	**0.9741**	**1.2863**	**2.2603**	**0.1475**	**1.2017**	**1.3492**	**0.0000**	**2,360.7197**	**2,360.7197**	**0.6011**		**2,375.7475**

3.2 Demolition - 2019

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	0.1132	3.6469	0.8192	9.2300e-003	0.2054	0.0135	0.2189	0.0563	0.0129	0.0692		998.5734	998.5734	0.0726		1,000.3890
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	0.0720	0.0529	0.5752	1.4900e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		148.4770	148.4770	5.1100e-003		148.6047
Total	**0.1852**	**3.6997**	**1.3944**	**0.0107**	**0.3507**	**0.0147**	**0.3655**	**0.0949**	**0.0140**	**0.1089**		**1,147.0504**	**1,147.0504**	**0.0777**		**1,148.9937**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.7557	21.5386	11.9143	0.0245		0.8537	0.8537		0.7854	0.7854		2,426.5408	2,426.5408	0.7677		2,445.7341
Total	**1.7557**	**21.5386**	**11.9143**	**0.0245**	**1.5908**	**0.8537**	**2.4445**	**0.1718**	**0.7854**	**0.9572**		**2,426.5408**	**2,426.5408**	**0.7677**		**2,445.7341**

3.3 Site Preparation - 2019

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	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491
Total	**0.0443**	**0.0325**	**0.3540**	**9.2000e-004**	**0.0894**	**7.7000e-004**	**0.0902**	**0.0237**	**7.1000e-004**	**0.0244**		**91.3705**	**91.3705**	**3.1400e-003**		**91.4491**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6085	0.0000	0.6085	0.0657	0.0000	0.0657			0.0000			0.0000
Off-Road	1.7557	21.5386	11.9143	0.0245		0.8537	0.8537		0.7854	0.7854	0.0000	2,426.5408	2,426.5408	0.7677		2,445.7341
Total	**1.7557**	**21.5386**	**11.9143**	**0.0245**	**0.6085**	**0.8537**	**1.4622**	**0.0657**	**0.7854**	**0.8511**	**0.0000**	**2,426.5408**	**2,426.5408**	**0.7677**		**2,445.7341**

3.3 Site Preparation - 2019

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	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491
Total	**0.0443**	**0.0325**	**0.3540**	**9.2000e-004**	**0.0894**	**7.7000e-004**	**0.0902**	**0.0237**	**7.1000e-004**	**0.0244**		**91.3705**	**91.3705**	**3.1400e-003**		**91.4491**

3.4 Grading - 2019

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					6.6170	0.0000	6.6170	3.3773	0.0000	3.3773			0.0000			0.0000
Off-Road	2.0287	22.7444	10.1518	0.0206		1.0730	1.0730		0.9871	0.9871		2,041.2539	2,041.2539	0.6458		2,057.3997
Total	**2.0287**	**22.7444**	**10.1518**	**0.0206**	**6.6170**	**1.0730**	**7.6900**	**3.3773**	**0.9871**	**4.3644**		**2,041.2539**	**2,041.2539**	**0.6458**		**2,057.3997**

3.4 Grading - 2019

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	0.6887	22.1915	4.9847	0.0562	1.2501	0.0819	1.3320	0.3427	0.0783	0.4210		6,076.4252	6,076.4252	0.4419		6,087.4732
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	0.0554	0.0407	0.4425	1.1500e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		114.2131	114.2131	3.9300e-003		114.3113
Total	**0.7441**	**22.2321**	**5.4271**	**0.0573**	**1.3619**	**0.0828**	**1.4447**	**0.3723**	**0.0792**	**0.4515**		**6,190.6383**	**6,190.6383**	**0.4459**		**6,201.7845**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5310	0.0000	2.5310	1.2918	0.0000	1.2918			0.0000			0.0000
Off-Road	2.0287	22.7444	10.1518	0.0206		1.0730	1.0730		0.9871	0.9871	0.0000	2,041.2539	2,041.2539	0.6458		2,057.3997
Total	**2.0287**	**22.7444**	**10.1518**	**0.0206**	**2.5310**	**1.0730**	**3.6040**	**1.2918**	**0.9871**	**2.2789**	**0.0000**	**2,041.2539**	**2,041.2539**	**0.6458**		**2,057.3997**

3.4 Grading - 2019

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	0.6887	22.1915	4.9847	0.0562	1.2501	0.0819	1.3320	0.3427	0.0783	0.4210		6,076.4252	6,076.4252	0.4419		6,087.4732
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	0.0554	0.0407	0.4425	1.1500e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		114.2131	114.2131	3.9300e-003		114.3113
Total	**0.7441**	**22.2321**	**5.4271**	**0.0573**	**1.3619**	**0.0828**	**1.4447**	**0.3723**	**0.0792**	**0.4515**		**6,190.6383**	**6,190.6383**	**0.4459**		**6,201.7845**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5581	18.9103	15.2545	0.0250		1.0901	1.0901		1.0449	1.0449		2,312.1454	2,312.1454	0.4810		2,324.1705
Total	**2.5581**	**18.9103**	**15.2545**	**0.0250**		**1.0901**	**1.0901**		**1.0449**	**1.0449**		**2,312.1454**	**2,312.1454**	**0.4810**		**2,324.1705**

3.5 Building Construction - 2019

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	0.3077	8.2278	2.4032	0.0181	0.4545	0.0533	0.5078	0.1309	0.0509	0.1818		1,926.0675	1,926.0675	0.1353		1,929.4501
Worker	1.7499	1.2848	13.9822	0.0363	3.5321	0.0305	3.5626	0.9367	0.0281	0.9648		3,609.1334	3,609.1334	0.1242		3,612.2373
Total	**2.0576**	**9.5126**	**16.3854**	**0.0543**	**3.9867**	**0.0837**	**4.0704**	**1.0676**	**0.0790**	**1.1466**		**5,535.2009**	**5,535.2009**	**0.2595**		**5,541.6874**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5581	18.9103	15.2545	0.0250		1.0901	1.0901		1.0449	1.0449	0.0000	2,312.1454	2,312.1454	0.4810		2,324.1705
Total	**2.5581**	**18.9103**	**15.2545**	**0.0250**		**1.0901**	**1.0901**		**1.0449**	**1.0449**	**0.0000**	**2,312.1454**	**2,312.1454**	**0.4810**		**2,324.1705**

3.5 Building Construction - 2019

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	0.3077	8.2278	2.4032	0.0181	0.4545	0.0533	0.5078	0.1309	0.0509	0.1818		1,926.0675	1,926.0675	0.1353		1,929.4501
Worker	1.7499	1.2848	13.9822	0.0363	3.5321	0.0305	3.5626	0.9367	0.0281	0.9648		3,609.1334	3,609.1334	0.1242		3,612.2373
Total	**2.0576**	**9.5126**	**16.3854**	**0.0543**	**3.9867**	**0.0837**	**4.0704**	**1.0676**	**0.0790**	**1.1466**		**5,535.2009**	**5,535.2009**	**0.2595**		**5,541.6874**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2879	17.4336	14.8972	0.0250		0.9482	0.9482		0.9089	0.9089		2,288.8877	2,288.8877	0.4646		2,300.5014
Total	**2.2879**	**17.4336**	**14.8972**	**0.0250**		**0.9482**	**0.9482**		**0.9089**	**0.9089**		**2,288.8877**	**2,288.8877**	**0.4646**		**2,300.5014**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2640	7.5509	2.1824	0.0179	0.4545	0.0361	0.4907	0.1309	0.0345	0.1654		1,913.0884	1,913.0884	0.1279		1,916.2865
Worker	1.6148	1.1454	12.6719	0.0351	3.5321	0.0295	3.5617	0.9367	0.0272	0.9639		3,499.4484	3,499.4484	0.1103		3,502.2059
Total	**1.8788**	**8.6963**	**14.8544**	**0.0531**	**3.9867**	**0.0656**	**4.0523**	**1.0676**	**0.0617**	**1.1294**		**5,412.5368**	**5,412.5368**	**0.2382**		**5,418.4924**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2879	17.4336	14.8972	0.0250		0.9482	0.9482		0.9089	0.9089	0.0000	2,288.8877	2,288.8877	0.4646		2,300.5014
Total	**2.2879**	**17.4336**	**14.8972**	**0.0250**		**0.9482**	**0.9482**		**0.9089**	**0.9089**	**0.0000**	**2,288.8877**	**2,288.8877**	**0.4646**		**2,300.5014**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2640	7.5509	2.1824	0.0179	0.4545	0.0361	0.4907	0.1309	0.0345	0.1654		1,913.0884	1,913.0884	0.1279		1,916.2865
Worker	1.6148	1.1454	12.6719	0.0351	3.5321	0.0295	3.5617	0.9367	0.0272	0.9639		3,499.4484	3,499.4484	0.1103		3,502.2059
Total	**1.8788**	**8.6963**	**14.8544**	**0.0531**	**3.9867**	**0.0656**	**4.0523**	**1.0676**	**0.0617**	**1.1294**		**5,412.5368**	**5,412.5368**	**0.2382**		**5,418.4924**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1547	11.5873	11.8076	0.0178		0.6565	0.6565		0.6051	0.6051		1,709.2180	1,709.2180	0.5417		1,722.7605
Paving	0.1389					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2935**	**11.5873**	**11.8076**	**0.0178**		**0.6565**	**0.6565**		**0.6051**	**0.6051**		**1,709.2180**	**1,709.2180**	**0.5417**		**1,722.7605**

3.6 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0767	0.0544	0.6015	1.6700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		166.1131	166.1131	5.2400e-003		166.2440
Total	**0.0767**	**0.0544**	**0.6015**	**1.6700e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**166.1131**	**166.1131**	**5.2400e-003**		**166.2440**

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	1.1547	11.5873	11.8076	0.0178		0.6565	0.6565		0.6051	0.6051	0.0000	1,709.2180	1,709.2180	0.5417		1,722.7605
Paving	0.1389					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2935**	**11.5873**	**11.8076**	**0.0178**		**0.6565**	**0.6565**		**0.6051**	**0.6051**	**0.0000**	**1,709.2180**	**1,709.2180**	**0.5417**		**1,722.7605**

3.6 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0767	0.0544	0.6015	1.6700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		166.1131	166.1131	5.2400e-003		166.2440
Total	**0.0767**	**0.0544**	**0.6015**	**1.6700e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**166.1131**	**166.1131**	**5.2400e-003**		**166.2440**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	42.5837					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**42.8258**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3219	0.2284	2.5264	7.0000e-003	0.7042	5.8900e-003	0.7101	0.1868	5.4200e-003	0.1922		697.6748	697.6748	0.0220		698.2246
Total	**0.3219**	**0.2284**	**2.5264**	**7.0000e-003**	**0.7042**	**5.8900e-003**	**0.7101**	**0.1868**	**5.4200e-003**	**0.1922**		**697.6748**	**697.6748**	**0.0220**		**698.2246**

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	42.5837					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**42.8258**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3219	0.2284	2.5264	7.0000e-003	0.7042	5.8900e-003	0.7101	0.1868	5.4200e-003	0.1922		697.6748	697.6748	0.0220		698.2246
Total	**0.3219**	**0.2284**	**2.5264**	**7.0000e-003**	**0.7042**	**5.8900e-003**	**0.7101**	**0.1868**	**5.4200e-003**	**0.1922**		**697.6748**	**697.6748**	**0.0220**		**698.2246**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.2337	4.3766	30.4959	0.1013	9.9230	0.0777	10.0007	2.6431	0.0719	2.7149		10,136.4169	10,136.4169	0.3116		10,144.2067
Unmitigated	2.2337	4.3766	30.4959	0.1013	9.9230	0.0777	10.0007	2.6431	0.0719	2.7149		10,136.4169	10,136.4169	0.3116		10,144.2067

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,232.16	1,183.84	1084.18	4,135,501	4,135,501
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Regional Shopping Center	169.99	198.88	100.47	399,638	399,638
Total	1,402.15	1,382.72	1,184.65	4,535,139	4,535,139

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	41.00	19.00	40.00	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	61	39	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Enclosed Parking with Elevator	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Other Asphalt Surfaces	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Other Non-Asphalt Surfaces	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Regional Shopping Center	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1199	1.0246	0.4373	6.5400e-003		0.0828	0.0828		0.0828	0.0828		1,307.7372	1,307.7372	0.0251	0.0240	1,315.5084
NaturalGas Unmitigated	0.1199	1.0246	0.4373	6.5400e-003		0.0828	0.0828		0.0828	0.0828		1,307.7372	1,307.7372	0.0251	0.0240	1,315.5084

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	11084	0.1195	1.0215	0.4347	6.5200e-003		0.0826	0.0826		0.0826	0.0826		1,303.9946	1,303.9946	0.0250	0.0239	1,311.7436
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	31.8115	3.4000e-004	3.1200e-003	2.6200e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		3.7425	3.7425	7.0000e-005	7.0000e-005	3.7648
Total		**0.1199**	**1.0246**	**0.4373**	**6.5400e-003**		**0.0828**	**0.0828**		**0.0828**	**0.0828**		**1,307.7372**	**1,307.7372**	**0.0251**	**0.0240**	**1,315.5084**

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 Mid Rise	11.084	0.1195	1.0215	0.4347	6.5200e-003		0.0826	0.0826		0.0826	0.0826		1,303.9946	1,303.9946	0.0250	0.0239	1,311.7436
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.0318115	3.4000e-004	3.1200e-003	2.6200e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		3.7425	3.7425	7.0000e-005	7.0000e-005	3.7648
Total		**0.1199**	**1.0246**	**0.4373**	**6.5400e-003**		**0.0828**	**0.0828**		**0.0828**	**0.0828**		**1,307.7372**	**1,307.7372**	**0.0251**	**0.0240**	**1,315.5084**

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	8.6091	4.5461	26.7783	0.0285		0.4822	0.4822		0.4822	0.4822	0.0000	5,480.9143	5,480.9143	0.1476	0.0997	5,514.3032
Unmitigated	8.6091	4.5461	26.7783	0.0285		0.4822	0.4822		0.4822	0.4822	0.0000	5,480.9143	5,480.9143	0.1476	0.0997	5,514.3032

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6010					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7542					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4983	4.2582	1.8120	0.0272		0.3443	0.3443		0.3443	0.3443	0.0000	5,436.0000	5,436.0000	0.1042	0.0997	5,468.3034
Landscaping	0.7556	0.2879	24.9663	1.3200e-003		0.1379	0.1379		0.1379	0.1379		44.9143	44.9143	0.0434		45.9998
Total	**8.6091**	**4.5461**	**26.7783**	**0.0285**		**0.4822**	**0.4822**		**0.4822**	**0.4822**	**0.0000**	**5,480.9143**	**5,480.9143**	**0.1476**	**0.0997**	**5,514.3032**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6010					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7542					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4983	4.2582	1.8120	0.0272		0.3443	0.3443		0.3443	0.3443	0.0000	5,436.0000	5,436.0000	0.1042	0.0997	5,468.3034
Landscaping	0.7556	0.2879	24.9663	1.3200e-003		0.1379	0.1379		0.1379	0.1379		44.9143	44.9143	0.0434		45.9998
Total	**8.6091**	**4.5461**	**26.7783**	**0.0285**		**0.4822**	**0.4822**		**0.4822**	**0.4822**	**0.0000**	**5,480.9143**	**5,480.9143**	**0.1476**	**0.0997**	**5,514.3032**

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
Emergency Generator	1	0	12	50	0.73	Diesel
Fire Pump	1	0	6	50	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (50 - 75 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Fire Pump - Diesel (50 - 75 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

11.0 Vegetation

Arroyo at Monrovia Station

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	192.22	1000sqft	0.54	192,220.00	0
Other Asphalt Surfaces	23.28	1000sqft	0.53	23,280.00	0
Other Non-Asphalt Surfaces	12.86	1000sqft	0.30	12,860.00	0
Apartments Mid Rise	302.00	Dwelling Unit	1.53	329,955.00	630
Regional Shopping Center	7.08	1000sqft	0.00	7,080.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	427.1	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 and CH4 intensity updated for 2022

Land Use - lot acreage and SF from site plan and project description
Retail footrpint added to residenital footprint

Demolition -

Grading -

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Trip rates obtained from the TIS; commercial pass-by trips removed per TIS and added to primary and diverted trip types.

Woodstoves - SCAQMD Rule 445

Consumer Products -

Area Coating - SCAQMD Rule 1113

Energy Use - Reduce commercial lighting by 30% per 2019 Cal Green

Solid Waste - Adjusted solid waste values of 34.73 (residential) and 1.86 (commercial) multiplied by 4 to remove 75% waste diversion assumption in original model run.

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Mobile Land Use Mitigation -

Fleet Mix - No trips associated with HHD; OBUS; UBUS; SBUS; MH. These trips re allocated to LDA

Stationary Sources - Emergency Generators and Fire Pumps -

Trips and VMT -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55
tblEnergyUse	LightingElect	1.75	1.23
tblEnergyUse	LightingElect	6.26	4.38
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	15.10	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00

tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	LDA	0.55	0.58
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblFleetMix	UBUS	2.2010e-003	0.00

tblFleetMix	UBUS	2.2010e-003	0.00
tblGrading	MaterialExported	0.00	3,430.00
tblLandUse	LandUseSquareFeet	302,000.00	329,955.00
tblLandUse	LotAcreage	4.41	0.54
tblLandUse	LotAcreage	7.95	1.53
tblLandUse	LotAcreage	0.16	0.00
tblLandUse	Population	864.00	630.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.033
tblProjectCharacteristics	CO2IntensityFactor	702.44	427.1
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblSolidWaste	SolidWasteGenerationRate	138.92	139.00
tblSolidWaste	SolidWasteGenerationRate	7.43	7.50
tblVehicleTrips	DV_TP	35.00	39.00
tblVehicleTrips	HO_TTP	40.60	40.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	41.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	54.00	61.00
tblVehicleTrips	ST_TR	6.39	3.92
tblVehicleTrips	ST_TR	49.97	28.09
tblVehicleTrips	SU_TR	5.86	3.59
tblVehicleTrips	SU_TR	25.24	14.19
tblVehicleTrips	WD_TR	6.65	4.08
tblVehicleTrips	WD_TR	42.70	24.01
tblWoodstoves	NumberCatalytic	15.10	0.00
tblWoodstoves	NumberNoncatalytic	15.10	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					
2019	0.1179	0.9625	0.8174	2.1100e-003	0.1276	0.0395	0.1671	0.0357	0.0373	0.0730	0.0000	191.1674	191.1674	0.0225	0.0000	191.7305
2020	1.4727	2.4746	2.8281	7.3700e-003	0.3620	0.0966	0.4586	0.0971	0.0924	0.1895	0.0000	659.7108	659.7108	0.0608	0.0000	661.2309
Maximum	**1.4727**	**2.4746**	**2.8281**	**7.3700e-003**	**0.3620**	**0.0966**	**0.4586**	**0.0971**	**0.0924**	**0.1895**	**0.0000**	**659.7108**	**659.7108**	**0.0608**	**0.0000**	**661.2309**

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					
2019	0.1179	0.9625	0.8174	2.1100e-003	0.0982	0.0395	0.1376	0.0269	0.0373	0.0642	0.0000	191.1673	191.1673	0.0225	0.0000	191.7304
2020	1.4727	2.4746	2.8281	7.3700e-003	0.3620	0.0966	0.4586	0.0971	0.0924	0.1895	0.0000	659.7105	659.7105	0.0608	0.0000	661.2306
Maximum	**1.4727**	**2.4746**	**2.8281**	**7.3700e-003**	**0.3620**	**0.0966**	**0.4586**	**0.0971**	**0.0924**	**0.1895**	**0.0000**	**659.7105**	**659.7105**	**0.0608**	**0.0000**	**661.2306**

	ROG	NOx	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**	**6.02**	**0.00**	**4.71**	**6.62**	**0.00**	**3.35**	**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	**10-1-2019**	**12-31-2019**	1.0754	1.0754
2	**1-1-2020**	**3-31-2020**	0.9846	0.9846
3	**4-1-2020**	**6-30-2020**	0.9755	0.9755
4	**7-1-2020**	**9-30-2020**	1.2436	1.2436
		Highest	1.2436	1.2436

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.4430	0.0892	3.1434	5.0000e-004		0.0215	0.0215		0.0215	0.0215	0.0000	66.7364	66.7364	6.1000e-003	1.1300e-003	67.2258
Energy	0.0219	0.1870	0.0798	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	668.1462	668.1462	0.0391	8.2000e-003	671.5657
Mobile	0.3805	0.7789	5.4341	0.0180	1.7029	0.0136	1.7165	0.4543	0.0126	0.4668	0.0000	1,631.2078	1,631.2078	0.0499	0.0000	1,632.4543
Stationary	7.4000e-004	2.4100e-003	2.6800e-003	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.3427	0.3427	5.0000e-005	0.0000	0.3439
Waste						0.0000	0.0000		0.0000	0.0000	29.7382	0.0000	29.7382	1.7575	0.0000	73.6751
Water						0.0000	0.0000		0.0000	0.0000	6.4088	78.3489	84.7577	0.6643	0.0163	106.2156
Total	**1.8461**	**1.0575**	**8.6600**	**0.0197**	**1.7029**	**0.0504**	**1.7533**	**0.4543**	**0.0494**	**0.5036**	**36.1470**	**2,444.7820**	**2,480.9290**	**2.5168**	**0.0256**	**2,551.4804**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.4430	0.0892	3.1434	5.0000e-004		0.0215	0.0215		0.0215	0.0215	0.0000	66.7364	66.7364	6.1000e-003	1.1300e-003	67.2258
Energy	0.0219	0.1870	0.0798	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	668.1462	668.1462	0.0391	8.2000e-003	671.5657
Mobile	0.3805	0.7789	5.4341	0.0180	1.7029	0.0136	1.7165	0.4543	0.0126	0.4668	0.0000	1,631.2078	1,631.2078	0.0499	0.0000	1,632.4543
Stationary	7.4000e-004	2.4100e-003	2.6800e-003	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.3427	0.3427	5.0000e-005	0.0000	0.3439
Waste						0.0000	0.0000		0.0000	0.0000	29.7382	0.0000	29.7382	1.7575	0.0000	73.6751
Water						0.0000	0.0000		0.0000	0.0000	6.4088	78.3489	84.7577	0.6643	0.0163	106.2156
Total	**1.8461**	**1.0575**	**8.6600**	**0.0197**	**1.7029**	**0.0504**	**1.7533**	**0.4543**	**0.0494**	**0.5036**	**36.1470**	**2,444.7820**	**2,480.9290**	**2.5168**	**0.0256**	**2,551.4804**

	ROG	NOx	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	10/1/2019	10/28/2019	5	20	
2	Site Preparation	Site Preparation	10/29/2019	10/31/2019	5	3	
3	Grading	Grading	11/1/2019	11/8/2019	5	6	
4	Building Construction	Building Construction	11/9/2019	9/11/2020	5	220	
5	Paving	Paving	9/12/2020	9/25/2020	5	10	
6	Architectural Coating	Architectural Coating	9/26/2020	10/9/2020	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 1.37

Residential Indoor: 668,159; Residential Outdoor: 222,720; Non-Residential Indoor: 10,620; Non-Residential Outdoor: 3,540; Striped Parking Area: 13,702 (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	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
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	5	13.00	0.00	235.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	429.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	316.00	71.00	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	63.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

3.2 Demolition - 2019

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					0.0255	0.0000	0.0255	3.8600e-003	0.0000	3.8600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0230	0.2268	0.1489	2.4000e-004		0.0129	0.0129		0.0120	0.0120	0.0000	21.4161	21.4161	5.4500e-003	0.0000	21.5524
Total	**0.0230**	**0.2268**	**0.1489**	**2.4000e-004**	**0.0255**	**0.0129**	**0.0383**	**3.8600e-003**	**0.0120**	**0.0159**	**0.0000**	**21.4161**	**21.4161**	**5.4500e-003**	**0.0000**	**21.5524**

3.2 Demolition - 2019

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	1.1200e-003	0.0372	7.9000e-003	9.0000e-005	2.0200e-003	1.3000e-004	2.1500e-003	5.5000e-004	1.3000e-004	6.8000e-004	0.0000	9.1496	9.1496	6.5000e-004	0.0000	9.1657
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	5.4000e-004	5.9000e-003	2.0000e-005	1.4200e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.3694	1.3694	5.0000e-005	0.0000	1.3705
Total	**1.7700e-003**	**0.0377**	**0.0138**	**1.1000e-004**	**3.4400e-003**	**1.4000e-004**	**3.5900e-003**	**9.3000e-004**	**1.4000e-004**	**1.0700e-003**	**0.0000**	**10.5189**	**10.5189**	**7.0000e-004**	**0.0000**	**10.5362**

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					9.7400e-003	0.0000	9.7400e-003	1.4700e-003	0.0000	1.4700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0230	0.2268	0.1489	2.4000e-004		0.0129	0.0129		0.0120	0.0120	0.0000	21.4161	21.4161	5.4500e-003	0.0000	21.5524
Total	**0.0230**	**0.2268**	**0.1489**	**2.4000e-004**	**9.7400e-003**	**0.0129**	**0.0226**	**1.4700e-003**	**0.0120**	**0.0135**	**0.0000**	**21.4161**	**21.4161**	**5.4500e-003**	**0.0000**	**21.5524**

3.2 Demolition - 2019

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	1.1200e-003	0.0372	7.9000e-003	9.0000e-005	2.0200e-003	1.3000e-004	2.1500e-003	5.5000e-004	1.3000e-004	6.8000e-004	0.0000	9.1496	9.1496	6.5000e-004	0.0000	9.1657
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	5.4000e-004	5.9000e-003	2.0000e-005	1.4200e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.3694	1.3694	5.0000e-005	0.0000	1.3705
Total	**1.7700e-003**	**0.0377**	**0.0138**	**1.1000e-004**	**3.4400e-003**	**1.4000e-004**	**3.5900e-003**	**9.3000e-004**	**1.4000e-004**	**1.0700e-003**	**0.0000**	**10.5189**	**10.5189**	**7.0000e-004**	**0.0000**	**10.5362**

3.3 Site Preparation - 2019

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6300e-003	0.0323	0.0179	4.0000e-005		1.2800e-003	1.2800e-003		1.1800e-003	1.1800e-003	0.0000	3.3020	3.3020	1.0400e-003	0.0000	3.3281
Total	**2.6300e-003**	**0.0323**	**0.0179**	**4.0000e-005**	**2.3900e-003**	**1.2800e-003**	**3.6700e-003**	**2.6000e-004**	**1.1800e-003**	**1.4400e-003**	**0.0000**	**3.3020**	**3.3020**	**1.0400e-003**	**0.0000**	**3.3281**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	5.0000e-005	5.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1264	0.1264	0.0000	0.0000	0.1265
Total	**6.0000e-005**	**5.0000e-005**	**5.4000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1264**	**0.1264**	**0.0000**	**0.0000**	**0.1265**

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					9.1000e-004	0.0000	9.1000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6300e-003	0.0323	0.0179	4.0000e-005		1.2800e-003	1.2800e-003		1.1800e-003	1.1800e-003	0.0000	3.3020	3.3020	1.0400e-003	0.0000	3.3281
Total	**2.6300e-003**	**0.0323**	**0.0179**	**4.0000e-005**	**9.1000e-004**	**1.2800e-003**	**2.1900e-003**	**1.0000e-004**	**1.1800e-003**	**1.2800e-003**	**0.0000**	**3.3020**	**3.3020**	**1.0400e-003**	**0.0000**	**3.3281**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	5.0000e-005	5.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1264	0.1264	0.0000	0.0000	0.1265
Total	**6.0000e-005**	**5.0000e-005**	**5.4000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1264**	**0.1264**	**0.0000**	**0.0000**	**0.1265**

3.4 Grading - 2019

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					0.0199	0.0000	0.0199	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0900e-003	0.0682	0.0305	6.0000e-005		3.2200e-003	3.2200e-003		2.9600e-003	2.9600e-003	0.0000	5.5554	5.5554	1.7600e-003	0.0000	5.5993
Total	**6.0900e-003**	**0.0682**	**0.0305**	**6.0000e-005**	**0.0199**	**3.2200e-003**	**0.0231**	**0.0101**	**2.9600e-003**	**0.0131**	**0.0000**	**5.5554**	**5.5554**	**1.7600e-003**	**0.0000**	**5.5993**

3.4 Grading - 2019

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	2.0400e-003	0.0679	0.0144	1.7000e-004	3.6900e-003	2.4000e-004	3.9300e-003	1.0100e-003	2.3000e-004	1.2400e-003	0.0000	16.7028	16.7028	1.1800e-003	0.0000	16.7323
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	1.5000e-004	1.3000e-004	1.3600e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3160	0.3160	1.0000e-005	0.0000	0.3163
Total	**2.1900e-003**	**0.0680**	**0.0158**	**1.7000e-004**	**4.0200e-003**	**2.4000e-004**	**4.2600e-003**	**1.1000e-003**	**2.3000e-004**	**1.3300e-003**	**0.0000**	**17.0188**	**17.0188**	**1.1900e-003**	**0.0000**	**17.0485**

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					7.5900e-003	0.0000	7.5900e-003	3.8800e-003	0.0000	3.8800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0900e-003	0.0682	0.0305	6.0000e-005		3.2200e-003	3.2200e-003		2.9600e-003	2.9600e-003	0.0000	5.5554	5.5554	1.7600e-003	0.0000	5.5993
Total	**6.0900e-003**	**0.0682**	**0.0305**	**6.0000e-005**	**7.5900e-003**	**3.2200e-003**	**0.0108**	**3.8800e-003**	**2.9600e-003**	**6.8400e-003**	**0.0000**	**5.5554**	**5.5554**	**1.7600e-003**	**0.0000**	**5.5993**

3.4 Grading - 2019

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	2.0400e-003	0.0679	0.0144	1.7000e-004	3.6900e-003	2.4000e-004	3.9300e-003	1.0100e-003	2.3000e-004	1.2400e-003	0.0000	16.7028	16.7028	1.1800e-003	0.0000	16.7323
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	1.5000e-004	1.3000e-004	1.3600e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3160	0.3160	1.0000e-005	0.0000	0.3163
Total	**2.1900e-003**	**0.0680**	**0.0158**	**1.7000e-004**	**4.0200e-003**	**2.4000e-004**	**4.2600e-003**	**1.1000e-003**	**2.3000e-004**	**1.3300e-003**	**0.0000**	**17.0188**	**17.0188**	**1.1900e-003**	**0.0000**	**17.0485**

3.5 Building Construction - 2019

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	0.0473	0.3498	0.2822	4.6000e-004		0.0202	0.0202		0.0193	0.0193	0.0000	38.8046	38.8046	8.0700e-003	0.0000	39.0064
Total	**0.0473**	**0.3498**	**0.2822**	**4.6000e-004**		**0.0202**	**0.0202**		**0.0193**	**0.0193**	**0.0000**	**38.8046**	**38.8046**	**8.0700e-003**	**0.0000**	**39.0064**

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5600e-003	0.1552	0.0424	3.4000e-004	8.2700e-003	9.8000e-004	9.2500e-003	2.3900e-003	9.3000e-004	3.3200e-003	0.0000	32.8460	32.8460	2.1900e-003	0.0000	32.9008
Worker	0.0293	0.0244	0.2654	6.8000e-004	0.0641	5.6000e-004	0.0646	0.0170	5.2000e-004	0.0175	0.0000	61.5793	61.5793	2.1200e-003	0.0000	61.6322
Total	**0.0348**	**0.1796**	**0.3078**	**1.0200e-003**	**0.0723**	**1.5400e-003**	**0.0739**	**0.0194**	**1.4500e-003**	**0.0209**	**0.0000**	**94.4252**	**94.4252**	**4.3100e-003**	**0.0000**	**94.5330**

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	0.0473	0.3498	0.2822	4.6000e-004		0.0202	0.0202		0.0193	0.0193	0.0000	38.8045	38.8045	8.0700e-003	0.0000	39.0063
Total	**0.0473**	**0.3498**	**0.2822**	**4.6000e-004**		**0.0202**	**0.0202**		**0.0193**	**0.0193**	**0.0000**	**38.8045**	**38.8045**	**8.0700e-003**	**0.0000**	**39.0063**

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5600e-003	0.1552	0.0424	3.4000e-004	8.2700e-003	9.8000e-004	9.2500e-003	2.3900e-003	9.3000e-004	3.3200e-003	0.0000	32.8460	32.8460	2.1900e-003	0.0000	32.9008
Worker	0.0293	0.0244	0.2654	6.8000e-004	0.0641	5.6000e-004	0.0646	0.0170	5.2000e-004	0.0175	0.0000	61.5793	61.5793	2.1200e-003	0.0000	61.6322
Total	**0.0348**	**0.1796**	**0.3078**	**1.0200e-003**	**0.0723**	**1.5400e-003**	**0.0739**	**0.0194**	**1.4500e-003**	**0.0209**	**0.0000**	**94.4252**	**94.4252**	**4.3100e-003**	**0.0000**	**94.5330**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2093	1.5952	1.3631	2.2900e-003		0.0868	0.0868		0.0832	0.0832	0.0000	189.9946	189.9946	0.0386	0.0000	190.9587
Total	**0.2093**	**1.5952**	**1.3631**	**2.2900e-003**		**0.0868**	**0.0868**		**0.0832**	**0.0832**	**0.0000**	**189.9946**	**189.9946**	**0.0386**	**0.0000**	**190.9587**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0236	0.7040	0.1906	1.6700e-003	0.0409	3.2700e-003	0.0442	0.0118	3.1300e-003	0.0149	0.0000	161.3901	161.3901	0.0103	0.0000	161.6465
Worker	0.1335	0.1076	1.1902	3.2700e-003	0.3168	2.7000e-003	0.3195	0.0842	2.4900e-003	0.0866	0.0000	295.3133	295.3133	9.3100e-003	0.0000	295.5460
Total	**0.1570**	**0.8116**	**1.3808**	**4.9400e-003**	**0.3578**	**5.9700e-003**	**0.3637**	**0.0960**	**5.6200e-003**	**0.1016**	**0.0000**	**456.7034**	**456.7034**	**0.0196**	**0.0000**	**457.1924**

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	0.2093	1.5952	1.3631	2.2900e-003		0.0868	0.0868		0.0832	0.0832	0.0000	189.9944	189.9944	0.0386	0.0000	190.9584
Total	**0.2093**	**1.5952**	**1.3631**	**2.2900e-003**		**0.0868**	**0.0868**		**0.0832**	**0.0832**	**0.0000**	**189.9944**	**189.9944**	**0.0386**	**0.0000**	**190.9584**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0236	0.7040	0.1906	1.6700e-003	0.0409	3.2700e-003	0.0442	0.0118	3.1300e-003	0.0149	0.0000	161.3901	161.3901	0.0103	0.0000	161.6465
Worker	0.1335	0.1076	1.1902	3.2700e-003	0.3168	2.7000e-003	0.3195	0.0842	2.4900e-003	0.0866	0.0000	295.3133	295.3133	9.3100e-003	0.0000	295.5460
Total	**0.1570**	**0.8116**	**1.3808**	**4.9400e-003**	**0.3578**	**5.9700e-003**	**0.3637**	**0.0960**	**5.6200e-003**	**0.1016**	**0.0000**	**456.7034**	**456.7034**	**0.0196**	**0.0000**	**457.1924**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.7700e-003	0.0579	0.0590	9.0000e-005		3.2800e-003	3.2800e-003		3.0300e-003	3.0300e-003	0.0000	7.7529	7.7529	2.4600e-003	0.0000	7.8143
Paving	6.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4600e-003**	**0.0579**	**0.0590**	**9.0000e-005**		**3.2800e-003**	**3.2800e-003**		**3.0300e-003**	**3.0300e-003**	**0.0000**	**7.7529**	**7.7529**	**2.4600e-003**	**0.0000**	**7.8143**

3.6 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.8000e-004	3.0900e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7660	0.7660	2.0000e-005	0.0000	0.7666
Total	**3.5000e-004**	**2.8000e-004**	**3.0900e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.7660**	**0.7660**	**2.0000e-005**	**0.0000**	**0.7666**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.7700e-003	0.0579	0.0590	9.0000e-005		3.2800e-003	3.2800e-003		3.0300e-003	3.0300e-003	0.0000	7.7529	7.7529	2.4600e-003	0.0000	7.8143
Paving	6.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4600e-003**	**0.0579**	**0.0590**	**9.0000e-005**		**3.2800e-003**	**3.2800e-003**		**3.0300e-003**	**3.0300e-003**	**0.0000**	**7.7529**	**7.7529**	**2.4600e-003**	**0.0000**	**7.8143**

3.6 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.8000e-004	3.0900e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7660	0.7660	2.0000e-005	0.0000	0.7666
Total	**3.5000e-004**	**2.8000e-004**	**3.0900e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.7660**	**0.7660**	**2.0000e-005**	**0.0000**	**0.7666**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0969					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
Total	**1.0981**	**8.4200e-003**	**9.1600e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2791**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4500e-003	1.1700e-003	0.0130	4.0000e-005	3.4500e-003	3.0000e-005	3.4800e-003	9.2000e-004	3.0000e-005	9.4000e-004	0.0000	3.2173	3.2173	1.0000e-004	0.0000	3.2198
Total	**1.4500e-003**	**1.1700e-003**	**0.0130**	**4.0000e-005**	**3.4500e-003**	**3.0000e-005**	**3.4800e-003**	**9.2000e-004**	**3.0000e-005**	**9.4000e-004**	**0.0000**	**3.2173**	**3.2173**	**1.0000e-004**	**0.0000**	**3.2198**

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	1.0969					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
Total	**1.0981**	**8.4200e-003**	**9.1600e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2791**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4500e-003	1.1700e-003	0.0130	4.0000e-005	3.4500e-003	3.0000e-005	3.4800e-003	9.2000e-004	3.0000e-005	9.4000e-004	0.0000	3.2173	3.2173	1.0000e-004	0.0000	3.2198
Total	**1.4500e-003**	**1.1700e-003**	**0.0130**	**4.0000e-005**	**3.4500e-003**	**3.0000e-005**	**3.4800e-003**	**9.2000e-004**	**3.0000e-005**	**9.4000e-004**	**0.0000**	**3.2173**	**3.2173**	**1.0000e-004**	**0.0000**	**3.2198**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3805	0.7789	5.4341	0.0180	1.7029	0.0136	1.7165	0.4543	0.0126	0.4668	0.0000	1,631.2078	1,631.2078	0.0499	0.0000	1,632.4543
Unmitigated	0.3805	0.7789	5.4341	0.0180	1.7029	0.0136	1.7165	0.4543	0.0126	0.4668	0.0000	1,631.2078	1,631.2078	0.0499	0.0000	1,632.4543

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,232.16	1,183.84	1084.18	4,135,501	4,135,501
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Regional Shopping Center	169.99	198.88	100.47	399,638	399,638
Total	1,402.15	1,382.72	1,184.65	4,535,139	4,535,139

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	41.00	19.00	40.00	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	61	39	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Enclosed Parking with Elevator	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Other Asphalt Surfaces	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Other Non-Asphalt Surfaces	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000
Regional Shopping Center	0.583458	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.000000	0.000000	0.000000	0.005142	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	451.6357	451.6357	0.0349	4.2300e-003	453.7685
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	451.6357	451.6357	0.0349	4.2300e-003	453.7685
NaturalGas Mitigated	0.0219	0.1870	0.0798	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	216.5106	216.5106	4.1500e-003	3.9700e-003	217.7972
NaturalGas Unmitigated	0.0219	0.1870	0.0798	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	216.5106	216.5106	4.1500e-003	3.9700e-003	217.7972

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	4.04564e+006	0.0218	0.1864	0.0793	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	215.8909	215.8909	4.1400e-003	3.9600e-003	217.1739
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	11611.2	6.0000e-005	5.7000e-004	4.8000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.6196	0.6196	1.0000e-005	1.0000e-005	0.6233
Total		**0.0219**	**0.1870**	**0.0798**	**1.1900e-003**		**0.0151**	**0.0151**		**0.0151**	**0.0151**	**0.0000**	**216.5106**	**216.5106**	**4.1500e-003**	**3.9700e-003**	**217.7972**

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 Mid Rise	4.04564e+006	0.0218	0.1864	0.0793	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	215.8909	215.8909	4.1400e-003	3.9600e-003	217.1739
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	11611.2	6.0000e-005	5.7000e-004	4.8000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.6196	0.6196	1.0000e-005	1.0000e-005	0.6233
Total		**0.0219**	**0.1870**	**0.0798**	**1.1900e-003**		**0.0151**	**0.0151**		**0.0151**	**0.0151**	**0.0000**	**216.5106**	**216.5106**	**4.1500e-003**	**3.9700e-003**	**217.7972**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.22255e+006	236.8432	0.0183	2.2200e-003	237.9618
Enclosed Parking with Elevator	1.02645e+006	198.8544	0.0154	1.8600e-003	199.7935
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	82269.6	15.9380	1.2300e-003	1.5000e-004	16.0133
Total		**451.6356**	**0.0349**	**4.2300e-003**	**453.7685**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.22255e+006	236.8432	0.0183	2.2200e-003	237.9618
Enclosed Parking with Elevator	1.02645e+006	198.8544	0.0154	1.8600e-003	199.7935
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	82269.6	15.9380	1.2300e-003	1.5000e-004	16.0133
Total		**451.6356**	**0.0349**	**4.2300e-003**	**453.7685**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.4430	0.0892	3.1434	5.0000e-004		0.0215	0.0215		0.0215	0.0215	0.0000	66.7364	66.7364	6.1000e-003	1.1300e-003	67.2258
Unmitigated	1.4430	0.0892	3.1434	5.0000e-004		0.0215	0.0215		0.0215	0.0215	0.0000	66.7364	66.7364	6.1000e-003	1.1300e-003	67.2258

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	0.1097					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2326					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.2300e-003	0.0532	0.0227	3.4000e-004		4.3000e-003	4.3000e-003		4.3000e-003	4.3000e-003	0.0000	61.6432	61.6432	1.1800e-003	1.1300e-003	62.0095
Landscaping	0.0945	0.0360	3.1208	1.6000e-004		0.0172	0.0172		0.0172	0.0172	0.0000	5.0932	5.0932	4.9200e-003	0.0000	5.2163
Total	**1.4430**	**0.0892**	**3.1434**	**5.0000e-004**		**0.0215**	**0.0215**		**0.0215**	**0.0215**	**0.0000**	**66.7364**	**66.7364**	**6.1000e-003**	**1.1300e-003**	**67.2258**

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	0.1097					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2326					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.2300e-003	0.0532	0.0227	3.4000e-004		4.3000e-003	4.3000e-003		4.3000e-003	4.3000e-003	0.0000	61.6432	61.6432	1.1800e-003	1.1300e-003	62.0095
Landscaping	0.0945	0.0360	3.1208	1.6000e-004		0.0172	0.0172		0.0172	0.0172	0.0000	5.0932	5.0932	4.9200e-003	0.0000	5.2163
Total	**1.4430**	**0.0892**	**3.1434**	**5.0000e-004**		**0.0215**	**0.0215**		**0.0215**	**0.0215**	**0.0000**	**66.7364**	**66.7364**	**6.1000e-003**	**1.1300e-003**	**67.2258**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	84.7577	0.6643	0.0163	106.2156
Unmitigated	84.7577	0.6643	0.0163	106.2156

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	19.6765 / 12.4048	82.5766	0.6471	0.0159	103.4776
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.524433 / 0.321427	2.1811	0.0172	4.2000e-004	2.7381
Total		**84.7577**	**0.6643**	**0.0163**	**106.2156**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	19.6765 / 12.4048	82.5766	0.6471	0.0159	103.4776
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.524433 / 0.321427	2.1811	0.0172	4.2000e-004	2.7381
Total		**84.7577**	**0.6643**	**0.0163**	**106.2156**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	29.7382	1.7575	0.0000	73.6751
Unmitigated	29.7382	1.7575	0.0000	73.6751

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	139	28.2157	1.6675	0.0000	69.9033
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	7.5	1.5224	0.0900	0.0000	3.7718
Total		**29.7382**	**1.7575**	**0.0000**	**73.6751**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	139	28.2157	1.6675	0.0000	69.9033
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	7.5	1.5224	0.0900	0.0000	3.7718
Total		**29.7382**	**1.7575**	**0.0000**	**73.6751**

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
Emergency Generator	1	0	12	50	0.73	Diesel
Fire Pump	1	0	6	50	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (50 - 75 HP)	4.9000e-004	1.6100e-003	1.7900e-003	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2285	0.2285	3.0000e-005	0.0000	0.2293
Fire Pump - Diesel (50 - 75 HP)	2.5000e-004	8.0000e-004	8.9000e-004	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.1142	0.1142	2.0000e-005	0.0000	0.1146
Total	**7.4000e-004**	**2.4100e-003**	**2.6800e-003**	**0.0000**		**1.4000e-004**	**1.4000e-004**		**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.3427**	**0.3427**	**5.0000e-005**	**0.0000**	**0.3439**

11.0 Vegetation

C2
HEALTH RISK ASSESSMENT REPORT

Arroyo at Monrovia Station Specific Plan

Operational Health Risk Assessment

February 27, 2019

Prepared for:

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This document is formatted for double-sided printing to conserve natural resources.

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List of Acronyms, Abbreviations, and Symbols	
Acronym / Abbreviation	Full Phrase or Description
AERMOD	American Meteorological Society/U.S. EPA Regulatory Model
AMSL	Above Mean Sea Level
ASF	Age Sensitivity Factor
CA	California
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CPF	Cancer Potency Factor
DPM	Diesel Particulate Matter
EA	Environmental Assessment
ED	Exposure Duration
EF	Exposure Frequency
EMFAC	Emission Factors Model
FAH	Fraction of Time at Home
HAP	Hazardous Air Pollutants
HARP	Hot Spots Analysis and Reporting Program
HHDT	Heavy Heavy-Duty Truck
HR	Hour
HRA	Health Risk Assessment
kg	Kilogram
KSF	Thousand Square Feet
L	Liter
LHDT	Light Heavy-Duty Truck
m^3	Cubic Meter
MEIR	Maximally Exposed Individual Resident
MEIW	Maximally Exposed Individual Worker
mg	Milligram
MHDT	Medium Heavy-Duty Truck
MPH	Miles Per Hour
OEHHA	Office of Environmental Health Hazard Assessment
PM	Particulate Matter
PMI	Point of Maximum Impact
PM_{10}	Coarse Particulate Matter
RAST	Risk Assessment Stand Alone Tool

List of Acronyms, Abbreviations, and Symbols	
Acronym / Abbreviation	Full Phrase or Description
REL	Reference Exposure Level
SCAQMD	South Coast Air Quality Management District
SRA	Source Receptor Area
TAC	Toxic Air Contaminants
U.S. EPA	United States Environmental Protection Agency
UTM	Universal Transverse Mercator
V.	Version
WAF	Worker Adjustment Factor
µg	Micrograms
§	Section
° F	Degrees Fahrenheit

EXECUTIVE SUMMARY

This Operational Health Risk Assessment Report (Report) evaluates and documents the potential health risks posed by Interstate 210 emissions on the proposed Arroyo at Monrovia Station Specific Plan (proposed Project) in the City of Monrovia, Los Angeles County, California 90025. The proposed Project is located within approximately 500 feet of the I-210.

This Report is consistent with the guidance and recommendations contained in the South Coast Air Quality Management District's (SCAQMD) California Environmental Quality Act (CEQA) *Air Quality Handbook*, as amended and supplemented (SCAQMD, 2017), SCAQMD's *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions* (SCAQMD, 2003), and the California Office of Environmental Health Hazard Assessment's (OEHHA) *Air Toxics Hot Spots Program Guidance Manual* (OEHHA, 2015). This Report is intended to assist the CEQA Lead Agency (City of Monrovia) with its review of potential Project-related air quality impacts in compliance with the State CEQA Statutes and Guidelines, particularly in respect to the air quality issues identified in Appendix G of the State CEQA Guidelines.

S.1 PROPOSED PROJECT DESCRIPTION

Evergreen Investment Partner, LLA is proposing to develop an approximately 302-unit, six-story apartment complex and an seven level (six-story) partially underground parking structure. The apartment complex would also contain 7,080 sf of retail space. The proposed retail/flex space is planned as retail space but is proposed to be allowed to be re-purposed for eight (8) of the 302 units if leasing of the retail space does not occur. The proposed mixed-use development would be located on approximately 2.90 acres, located at the northwest corner of the City-designated Station Square Transit Village bounded by West Evergreen Avenue to the north, South Primrose Avenue to the east, West Pomona Avenue to the south, and South Magnolia Avenue to the west.

The proposed Project would be located in close proximity to the I-210. The I-210 is located approximately 150 feet to the north of the site at its closest point. The freeway carries vehicle traffic that generate emissions of diesel particulate matter, or DPM, a pollutant identified by the California Air Resources Board as a toxic air contaminant (TAC). The proposed Project will include sensitive receptors (inhabitants of the residential units) that will be exposed to DPM from the I-210.

S.2 RISK ASSESSMENT

The proposed Project's potential exposure to DPM emissions (e.g., pounds per year, grams per second, etc.) from the I-210 Freeway was estimated using EMFAC2017 emission factors and California Department of Transportation (CalTrans) traffic data. The U.S. Environmental Protection Agency (U.S. EPA)- and SCAQMD-approved American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD, V. 18081) was used to predict pollutant concentrations at the boundary of the Project site. The AERMOD dispersion model simulates the dispersion of pollutant emissions and estimates ground level concentrations of pollutants at specified receptor locations. Predicted ground level concentrations of DPM were then assessed for potential health risks in accordance with SCAQMD and OEHHA methodologies.

The results of the operational health risk assessment (HRA) indicate the maximally exposed individual resident, or MEIR, is located at the northeastern corner of the Project site, where residential units will be located on the ground floors. The incremental increase in cancer risk at this location is 28.2 in one

million, which is above the SCAQMD's recommended significance threshold of 10 in one million. In addition, based on the results of the dispersion modeling, the annual average concentration of DPM at MEIR is 0.041 micrograms per cubic meter, resulting in a non-carcinogenic health hazard index of 0.01, which is below the SCAQMD's recommended significance threshold of 1.

The modeled point of maximum impact, or PMI, is located northwest of the proposed site, in the freeway right-of-way. This point is not an occupied receptor location. Cancer risks, therefore, were not estimated at the PMI.

Finally, the HRA indicates the population-wide cancer burden is 0.05, which is below the SCAQMD threshold of 0.5.

1 INTRODUCTION

Evergreen Investment Partners, LLA has submitted an application to the City of Monrovia for its proposed Arroyo at Monrovia Station Specific Plan (proposed Project). The proposed Project would be located on approximately 2.90 acres in the City of Monrovia, Los Angeles County, at the northwest corner of the City-designated Station Square Transit Village. The Project site is bounded by West Evergreen Avenue to the north, South Primrose Avenue to the east, West Pomona Avenue to the south, and South Magnolia Avenue to the west. The proposed transit-oriented, infill, mixed-use development would be comprised of an approximately 302-unit, six story apartment complex, an seven-level (six-story) partially underground parking structure, and 7,080 sf of retail space. Project development and operation would expose sensitive receptors (future residents of the development) to emissions from diesel-powered vehicles (trucks, motorcycles, recreational vehicles, and buses) travelling along the I-210 Freeway, which is located approximately 130 feet to the north of the site.

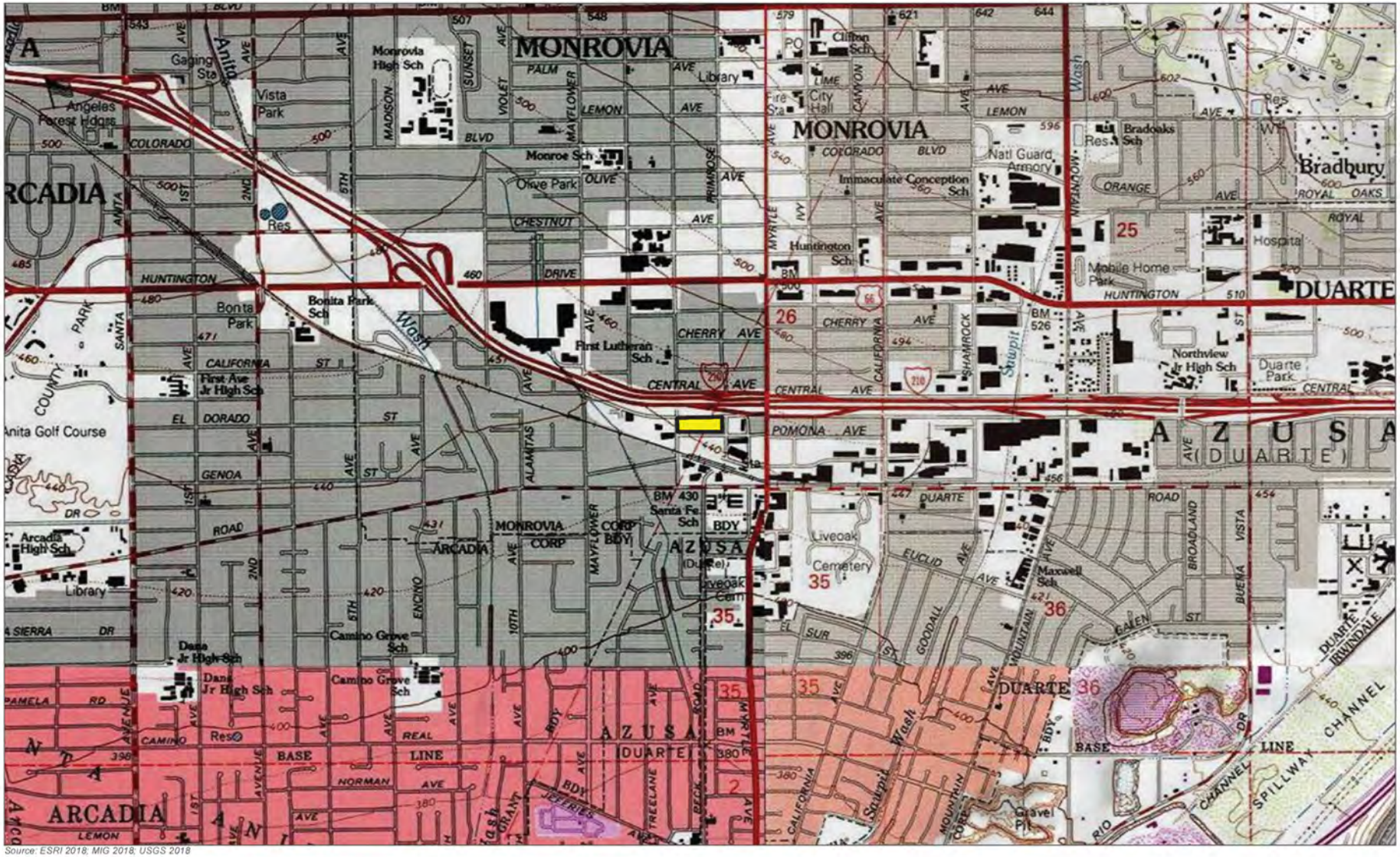
MIG, Inc. (MIG) has prepared this Operational Health Risk Assessment Report (Report) at the request of Evergreen Investment Partners. This Report evaluates the potential health risks of the proposed Project using Project-specific information contained in the Evergreen Investment Partner's permit application. Where necessary, MIG has supplemented available information with standardized sources of information, such as model assumptions pertaining to emission factors and SCAQMD-recommendations for idling time. In general, this Report evaluates the potential "worst-case" conditions associated with the I-210 Freeway's emissions levels to ensure a conservative (i.e., likely to overestimate) assessment of cancer risk, annual average concentration of DPM, non-carcinogenic health hazard index, and population-wide cancer burden.

This Report is intended for use by the Lead Agency to assess the potential operational health risk impacts of the proposed Project in compliance with the California Environmental Quality Act (CEQA; PRC §21000 et seq.) and the State CEQA Guidelines (14 CCR §15000 et seq.), particularly in respect to the air quality issues identified in Appendix G of the State CEQA Guidelines. This report does not make determinations of significance pursuant to CEQA because such determinations are solely the purview of the Lead Agency.

1.1 REPORT ORGANIZATION

This Report is organized as follows:

- Chapter 1, Introduction, explains the contents of this Report and its intended use.
- Chapter 2, Project Description and Emissions Sources, provides pertinent information on the proposed Project and its surroundings, as well as its emission sources and the dispersion model parameters used to assess potential health risks.
- Chapter 3, Risk Assessment, provides the methodology and results of the proposed Project's operational health risk assessment.
- Chapter 4, Report Preparers and References, list the individuals involved, and the references used, in the preparation of this Report.



Source: ESRI 2018; MIG 2018; USGS 2018

Figure 1-1: Regional Location Map

The Arroyo at Monrovia Station Project

2 PROJECT DESCRIPTION AND EMISSIONS SOURCES

This chapter provides information on the proposed Project and its surroundings, as well as its emissions sources and the dispersion modeling parameters used to assess potential health risks.

2.1 ENVIRONMENTAL SETTING

Air quality is a function of pollutant emissions and topographic and meteorological influences. The amount of pollutants emitted into the air and the physical features and atmospheric conditions of a geographic region interact to affect the movement and dispersion of pollutants and determine the quality of its air.

The proposed Project is located on West Evergreen Avenue in the City of Monrovia, in southeastern Los Angeles County, within the South Coast Air Basin (see Figure 1-1). The South Coast Air Basin includes Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties.

Southeast Los Angeles County and the broader Los Angeles Basin are defined by a semi-arid, Mediterranean climate with mild winters and warm summers. The San Gabriel, San Bernardino, and San Jacinto Mountains bound the Basin to the north and east trap ambient air and pollutants within the Los Angeles and Inland Empire valleys below.

Near the City of Monrovia, the predominant wind direction is from the south and southwest, although Santa Ana winds come from the north or north east, usually during the fall and winter.

2.2 FACILITY DESCRIPTION

Evergreen Investment Partners is proposing to develop the Arroyo at Monrovia Station Specific Plan. The proposed Project would consist of development of a transit-oriented, infill, mixed-use development with residential and commercial uses. The residential component consists of 302 apartment units. The development will be six stories in height. The apartment complex would also contain 7,080 sf of retail space. The proposed retail/flex space is planned as retail space but is proposed to be allowed to be re-purposed for eight (8) of the 302 units if leasing of the retail space does not occur. Three (3) of the proposed units would comprise live/work units. A range of studios, and one-bedroom and two-bedroom apartments are proposed. Other tenant amenities include a pool, a pet spa, bike “kitchen” (i.e., bicycle repair area), tenant lounge, centralized mail/package delivery room, and a golf simulation room. The project will also include the development of a seven level (six-story), 500 space parking structure that is partially underground. In total, the Project site comprises approximately 2.90 acres of land centered on 407435 Easting and 3777531 Northing (Universal Transverse Mercator Zone 11 S).

2.2.1 Local Land Use and Topography

The proposed Project site consists of lands designated and zoned as "Planned Development" (PD-12) by the City of Monrovia General Plan and Zoning Code. The Project site is bound by West Evergreen Avenue to the north, South Primrose Avenue to the east, West Pomona Avenue to the south, and South Magnolia Avenue to the west. West Evergreen Avenue is a frontage road for the I-210 Freeway. Surrounding lands generally consist of a mix of industrial, commercial, and residential uses (see Figure 2-1).

Elevations in the City of Monrovia range from approximately 600 feet above mean sea level (AMSL) in the southern part of the City to approximately 900 feet AMSL in the northern part of the City, with hills and ridges that reach above 1,100 feet AMSL. Elevations at the proposed Project site range from approximately 430 to 440 feet AMSL.

Some populations are more susceptible to the effects of air pollution than the population at large; these populations are defined as sensitive air quality receptors. Sensitive receptors include children, the elderly, the sick, and the athletic. Land uses associated with sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The proposed Project includes residential dwelling units and therefore would result in the placement of sensitive residential receptors in close proximity to the I-210.

2.2.2 Project Site Plan

The site plan for the proposed Project is shown in Figure 2-1.

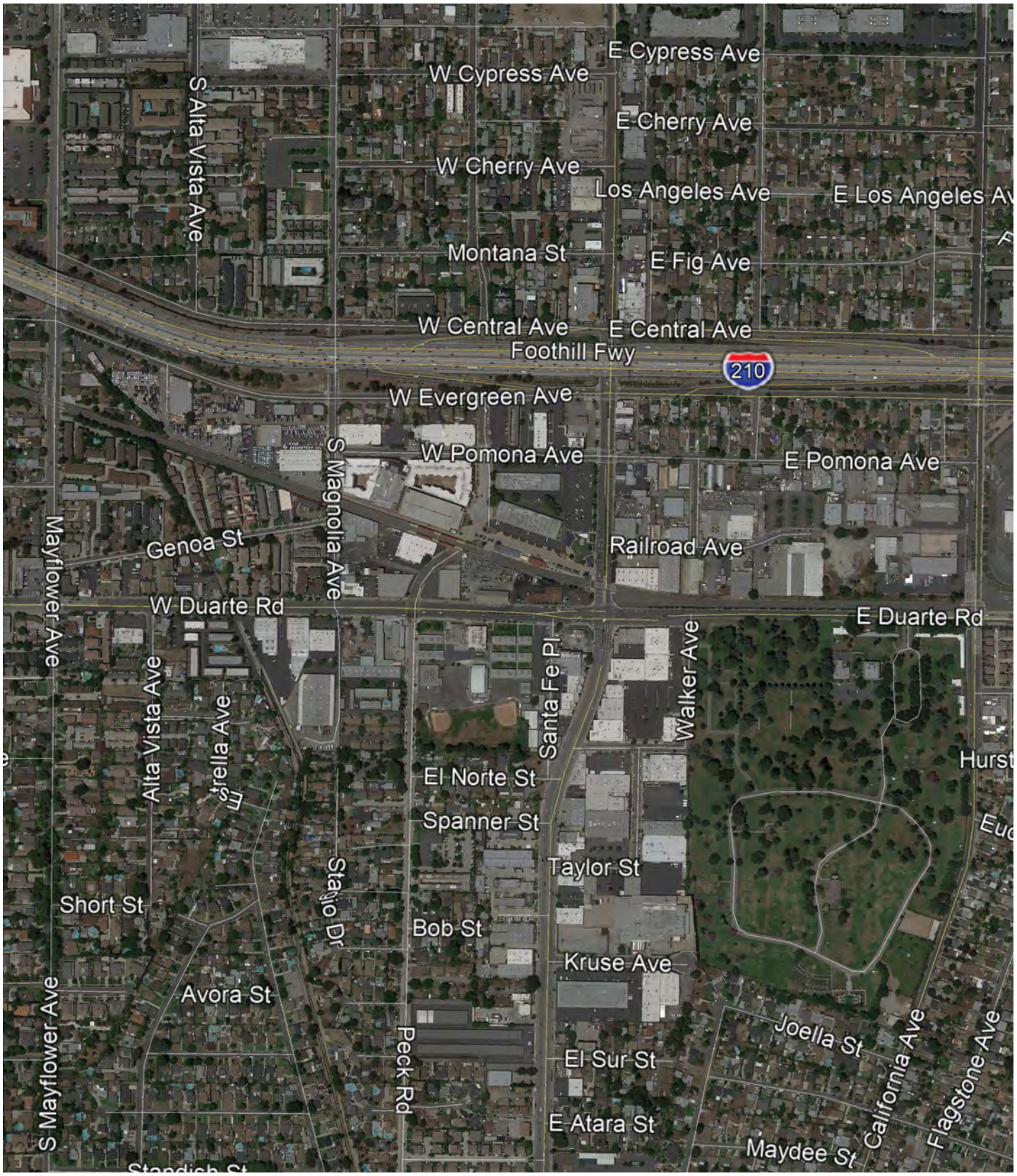
2.3 EMISSION SOURCES

The proposed Project would be exposed to emissions of DPM from vehicles travelling along the I-210 freeway in both directions. Diesel vehicles include trucks, motorcycles, recreational vehicles, and buses[1].

2.3.1 Hazard Identification

DPM is the exhaust from diesel engines. It includes hundreds of different gaseous and particulate components, many of which are toxic. Many of the toxic compounds adhere to the particles, and because diesel particles are very small (less than 2.5 microns in diameter), they can penetrate deeply into the lungs. The California Air Resources Board designated DPM a toxic air contaminant in 1998 because of its potential to cause cancer, premature deaths, and other health problems. The potential health hazards associated with DPM are especially concerning for children because their lungs are still developing, and the elderly, who may have other serious health problems that can be exacerbated by DPM. Health risks from DPM occur exclusively through the inhalation pathway.

[1] Gasoline and diesel-fueled vehicles travelling on the I-210 would emit other TACs besides DPM; however, these other TACs would be emitted in much lower quantities than DPM. Accordingly, this analysis focuses on the risk from DPM emitted by vehicles travelling on the I-210 as an overall indicator of potential adverse health risks from mobile sources operating near the site.



Source: ©2019 Google

Figure 2-1: Aerial View of Project Area

The Arroyo at Monrovia Station Project

2.3.2 Modeled I-210 Sources and Emissions Rates

Emissions from the I-210 were modeled as a polygon-area source, as shown in Table 2-1. The area source representing the freeway was extended approximately 1,000 feet to the west and east of the Project area boundary to capture emissions emanating from the I-210 both adjacent and in close proximity to the Project area. The total length of the I-210 modeled was approximately 3,800 feet, or 0.64 miles.

Table 2-1: Modeled I-210 Emissions Source Location

Source ID	Description	UTM Coordinates (Zone 11N)(A)		Size (m^2)
		Easting	Northing	
PAREA1	I-210 Freeway Travel Lanes	406923.15	3777692.99	46,564.8

Source: MIG 2019 (see Appendix C)
Coordinates are for the southwest corner of the source.

Consistent with SCAQMD recommendations, PM_{10} exhaust from diesel vehicles travelling along the I-210 was evaluated in the HRA. The emission rate for the segment of I-210 modeled in the operational HRA was derived from diesel vehicle emission factors and vehicle population data contained in CARB's EMFAC model and annual average daily traffic volume data available from Caltrans. Using EMFAC data (for the Los Angeles South Coast Sub-Area), an average diesel emission factor, in terms of grams per mile, was developed for each vehicle class, based on a speed of 55 miles per hour (MPH) for school buses and 65 MPH for all other vehicle types. Then the population percentage for each vehicle class was multiplied by the annual average daily trips (AADT) for the segment of I-210 adjacent to the Project area, between Huntington Drive and South Myrtle Avenue (252,000 vehicles), to determine the total amount of diesel vehicles traveling adjacent to the Project area[2]. This diesel vehicle estimate was then multiplied by the total segment length (0.64 miles) to determine the total miles travelled by each vehicle class. The total miles travelled were then multiplied by the average emission factor to determine total diesel vehicle emissions emitted from the modeled portion of I-210. Table 2-2 summarizes the average emission factors, vehicle class population percentage, vehicle miles traveled, and total diesel emissions occurring within the modeled source.

[2] According to Caltrans' traffic data (Caltrans 2017), the annual average daily traffic (AADT) volume east of Myrtle Avenue is 252,000 vehicles while the AADT west of Myrtle Avenue is 246,000 vehicles. This Report uses the higher AADT value (252,000 vehicles) for the segment of the I-210 modeled (both east and west of Myrtle Avenue).

Table 2-2: PM_{10} Emission Factors

Vehicle Class	2022 - 2050 Average PM10 Emission Factor (Grams/Mile)(A)	2022 Diesel Vehicle Population(B)	Vehicle Population Percentage(B)	I-210 ADT	Class Vehicles on I-210(C)	Trip Length (miles)	Total Daily Class Miles(D)	Total Daily PM_{10} (Grams)(E)	Total Daily PM_{10} (Grams/Sec)(F)
LDA	0.001852246	34,751	0.46%	252,000	1,157	0.64	741	1.371969646	1.58793E-05
LDT1	0.03185804	271	0.00%	252,000	9	0.64	6	0.183784701	2.12714E-06
LDT2	0.003402849	8,920	0.12%	252,000	297	0.64	190	0.647004967	7.48848E-06
LHDT1	0.00623252	64,097	0.85%	252,000	2,135	0.64	1,366	8.51500031	9.85532E-05
LHDT2	0.010840485	25,927	0.34%	252,000	863	0.64	553	5.99084265	6.93385E-05
HHDT	0.034086662	56,923	0.75%	252,000	1,896	0.64	1,213	41.3576665	0.000478677
MDV	0.001443049	19,517	0.26%	252,000	650	0.64	416	0.600300399	6.94792E-06
MH	0.040468538	5,865	0.08%	252,000	195	0.64	125	5.059293149	5.85566E-05
MHDT	0.016485717	64,993	0.86%	252,000	2,165	0.64	1,385	22.83800335	0.000264329
OBUS	0.024065833	3,064	0.04%	252,000	102	0.64	65	1.57165885	1.81905E-05
SBUS	0.018773815	3,460	0.05%	252,000	115	0.64	74	1.384618376	1.60257E-05
UBUS	0.004388309	10	0.00%	252,000	0	0.64	0	0.000948352	1.09763E-08
ALL DSL	0.014593326	287,799	3.80%	252,000	9,585	0.64	6,134	89.52109125	0.001036124

Source: EMFAC2017 and Caltrans 2017. See Appendix A.

(A) Emission factors represent the average emission factor for the vehicle class over the 2022 to 2050 time period. Emission factors are reported for a speed of 55 miles per hour for school buses (SBUS) and 65 miles per hour for all other vehicle classes.

(B) Population and population percentage reflects the proportion of each vehicle class out of the total amount of vehicles in the Los Angeles (South Coast) sub-area.

(C) Class vehicle amounts are estimated by multiplying the vehicle population percentage times 252,000 (the AADT on I-210).

(D) Total daily vehicle miles travelled is estimated by multiplying class vehicles times trip length (i.e., distance traveled in the modeled source).

(E) Total daily emissions are estimated by multiplying the vehicle miles travelled by the average emission factor.

(F) Grams per second is derived based on 86,400 seconds per day.

The release height for the modeled source was set to 3.28 meters to approximate an average of height of all vehicle exhaust sources.

2.4 DISPERSION MODEL

The US EPA's AERMOD dispersion model (Version 18081) was used to predict DPM concentrations at the Project boundary. The AERMOD dispersion model is the US EPA- and SCAQMD-approved model for simulating the dispersion of pollutant emissions and estimating ground level concentrations of pollutants at specified receptor locations. AERMOD requires the user to input information on the source(s) of pollutants being modeled, the receptors where pollutant concentrations are modeled, and the meteorology, terrain, and other factors that affect the potential dispersion of pollutants. These variables are described below and shown in detail in Appendix C.

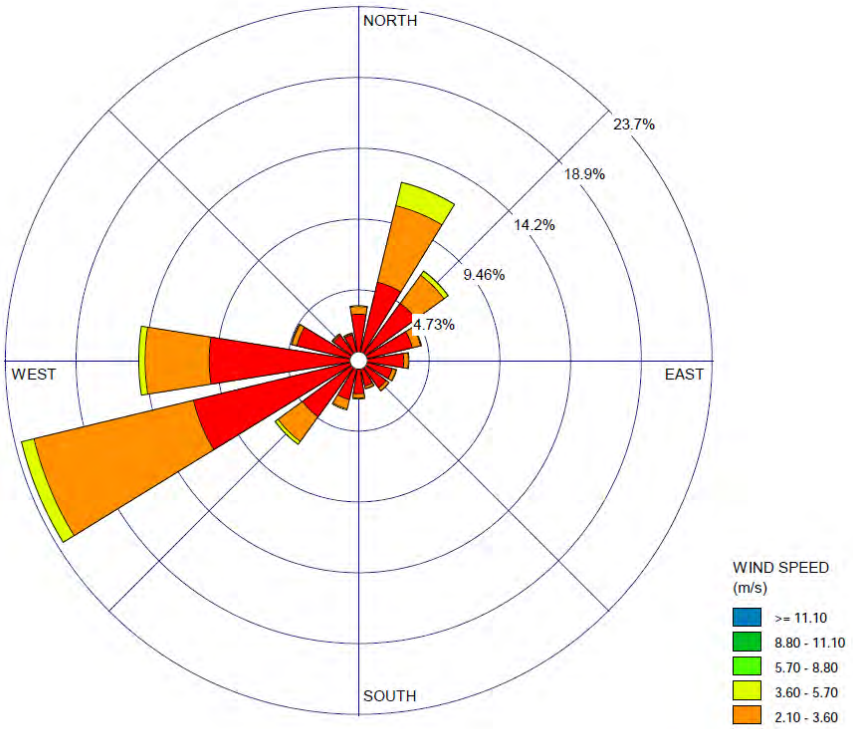
2.4.1 Modeled Sources/Emissions Rates

The proposed Project's emissions sources and source emission rates, location, and type are described in Section 2.3.2.

2.4.2 Meteorological Data Inputs

AERMOD requires meteorological data as an input into the model. The meteorological data is processed using AERMET, a pre-processor to AERMOD. AERMET requires surface meteorological data, upper air meteorological data, and surface parameter data such as albedo (reflectivity) and surface roughness. For the proposed project, pre-processed surface data from the SCAQMD was obtained for the Azusa meteorological station, the closest meteorological station to the proposed Project site. Five complete years of meteorological data from January 2012 to December 2016 were utilized; the SCAQMD data set incorporates the U.S. EPA's option for adjusted surface friction velocity factors (μ*) under low and stable wind conditions. Emissions were presumed to be generated 24-hours per day. The wind rose for the Azusa meteorological station data set is shown in Figure 2-2.

Figure 2-2 Wind Rose for Azusa Meteorological Station



2.4.3 Terrain Inputs

Terrain was incorporated by using AERMAP (an AERMOD pre-processer) to import the elevation of the project site using data from the National Elevation Dataset with a resolution of 1/3 arcsecond.

2.4.4 Modeled Receptors

Emissions were modeled in a multiple-tier fenceline grid. The first tier consisted of 5-meter spacing from the fenceline for a distance of 25 meters; the second tier consisted of 100-meter spacing for an additional distance of 400 meters. Primary and intermediate receptors were also spaced every 5 meters along the fenceline. The receptor grids were then converted to discrete Cartesian receptors (2,490 in total). Receptors were modeled at a height of 0.0 meters (i.e., ground level) and 10.0 meters (i.e., upper floors) above the ground.

3 Risk Assessment

Cancer risk and non-cancer health risks to sensitive receptors on the proposed Project site were estimated using the U.S. EPA's AERMOD dispersion model and recommendations contained in the SCAQMD's *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions* white paper and *Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics Hot Spots Information and Assessment Act,* as well as the OEHHA *Air Toxics Hot Spots Program Guidance Manual*.

The SCAQMD has developed significance thresholds applicable to TAC emissions emanating from stationary and mobile sources. Under SCAQMD methodology, health risks from TAC emissions are estimated based on "Individual Cancer Risk," which is the likelihood that a person exposed to TACs over 70-year lifetime will get cancer. The SCAQMD recommends preparation of a Health Risk Assessment (HRA) for large commercial or industrial projects to determine the specific health risks posed by long-term project emissions. Numerous weighting factors (e.g., age sensitivity factors, breathing rates, etc.) are applied during health risk calculations to account for those members of the public who may be more sensitive to pollution than others. A project is considered to have a significant impact if it results in any of the following:

- A maximum incremental cancer risk greater than equal to 10 in one million;
- A population wide cancer burden greater than 0.5 (in areas were cancer risk is greater than or equal to 1 in one million); or
- A chronic or acute hazard index greater than or equal to 1.0.

3.1 Cancer Risk

Cancer risk is the calculated, pollutant-specific estimated probability of developing cancer based upon the dose and exposure to the TAC. Cancer risk is determined by calculating the combinatory effects of the cancer potency factor (CPF) when inhaling the toxic, the daily inhalation dose, the age group the receptor is cohort to, the duration of exposure over a lifetime (30 years), and other factors such as age sensitivity and the amount of time spent at the location of exposure. For the proposed Project, risks were assessed for the inhalation pathway (i.e., breathing) for residential receptors. Cancer risk equations for residential receptors are summarized in Table 3-1 and Table 3-2.

Table 3-1: Cancer Risk Equations	
Equation 1 - Residential Risk:	$RISK_{INH.RES} = DOSE_{AIR.RES} \times CPF \times ASF \times \frac{ED}{AT} \times FAH$
Where:	
$DOSE_{AIR}$ =	Daily Inhalation Dose (mg/kg-day). See Table 3-2.
CPF =	Cancer Potency Factor for Inhalants (mg/kg-day). CPF is expressed as the 95th percent upper confidence limit of the slope of the dose response curve under continuous lifetime exposure conditions. The CPF for diesel exhaust is 1.1 mg/kg-day.
ASF =	Age Sensitivity Factor. ASF is a protective coefficient intended to take into account increased susceptibility to long-term health effects from early-life exposure to TACs. The recommended ASFs are 10 for the third-trimester to birth and two-year age bins, three for the two-year to nine-year and 16-year age bins, and one for receptors over 16 years of age.
ED =	Exposure Duration (years). Exposure duration characterizes the length of residency (30 Years) or employment (25 Years) of the receptor.
AT =	Averaging Time (years). A 70-year (lifetime) averaging time is used to characterize to total risk as a factor of average risk over a typical lifespan.
FAH =	Fraction at Home. FAH is the percentage of time the receptor is physically at the receptor location. The recommended percentages are 85 percent for the third-trimester to birth and two-year age bins, 72 percent for the two-year to nine-year and 16-year age bins, and 73 for receptors over 16 years of age.

Table 3-2: Inhalation Dose Equations	
Residential Dose	$DOSE_{AIR.RES} = C_{AIr} \times \frac{BR}{BW} \times A \times EF \times 10^{-6}$
Where:	
C_{AIR} =	Concentration of TAC in air (µg/m^3). Concentration of toxic in micrograms per one cubic meter of air. The AERMOD program is used in the study to determine concentrations of diesel particulate matter at surrounding discrete and grid receptor points.
BR/BW =	Breathing Rate ÷ Body Weight (L/kg/day). Daily breathing rate normalized to body weight. The 95th percentile breathing rate to body weight ratios are used in this study with a recommended 361 L/kg/day for the third-trimester to birth age bin, 1,090 L/kg/day for the birth to two-years age bin, 861 L/kg/day for the two-years to nine-years age bin, 745 for the two-years to 16-years age bin, 335 L/kg/day for the 16-years to 30-years age bin, and 290 L/kg/day for the 16-years to 70-years age bin.
A =	Inhalation Absorption Factor. Is a coefficient that reflects the fraction of chemical absorbed in studies used in the development of CPF and Reference Exposure Levels (RELs). An absorption factor of one is recommended for all chemicals.
EF =	Exposure Frequency. EF is the ratio of days in a year that a receptor is receiving the dose. The recommended EF is 0.96 characterizing an assumed 350 days a year that a residential receptor is home for some portion of the day.

Cancer risk was assessed for the maximally exposed individual resident (MEIR) over a 30-year exposure duration (that characterizes the maximum residency tendency in California). Residential risk calculations account for presumed sensitivity to carcinogens and differences in intake rates for the third-

trimester to birth, birth to two-years, two-years to nine-years, two-years to 16-years, and 16-year to 30-years age bins.

Concentrations were modeled using AERMOD and then input into CARB's Hot Spots and Reporting Program (HARP2) Health Risk Assessment Standalone Tool (RAST) to calculate cancer risk based on the methods and recommendations found in the OEHHA HRA Guidelines. The RAST intake rate percentile was set to the 95th percentile and the FAH factor was applied to age bins less than 16 years. The resulting annual average DPM concentration and corresponding excess cancer risk at the PMI and MEIR are summarized in Table 3-3. The PMI is located off-site, in the I-210 Freeway right-of-way, and would not be occupied by residential receptors; cancer risks at this location, therefore, were not estimated. The ground-level MEIR is located on the northeast corner of the proposed Project site, and the upper-floor MEIR is located on the northwest corner of the proposed Project site. The incremental increase in cancer risk MEIR is 28.2 in one million. Modeled sources, receptor locations, DPM concentrations, and the locations of the PMI and MEIR are depicted on Error! Reference source not found..

Table 3-3: Estimated Cancer Risk at PMI and MEIR

Receptor	UTM Location		Annual Average DPM Concentration (µg/m^3)	Excess Cancer Risk (per million population)
	Easting	Northing		
PMI(A)	407141.35	3777658.90	0.109	--
Ground-level MEIR	407526.47	3777566.99	0.041	28.2

Source: MIG 2019 (see Appendix B and C)

(A) The PMI is located in the I-210 Freeway right-of-way and is not an occupied receptor location.

3.2 CANCER BURDEN

Cancer burden is the product of public cancer risk and the population exposed to the carcinogen. The population of the Arroyo at Monrovia Station Specific Plan is conservatively estimated to be 611 people. Using the highest modeled residential exposure (i.e., the MEIR), the average cancer risk based on the lifetime exposure scenario (70 years) is 28.2E-05 (approximately 28 cases per million people). The product of cancer risk and the estimated population is 0.05 and is below the SCAQMD threshold of 0.5 excess cancer cases in the Project population.

3.3 NON-CANCER RISK

The chronic non-cancer hazard quotient is the calculated pollutant-specific indicator for risk of developing an adverse health effect on specific organ system(s) targeted by the identified TAC, in this case DPM. The potential for exposure to result in chronic non-cancer effects is evaluated by comparing the estimated annual average air concentration to the chemical-specific, non-cancer chronic RELs. The REL is a concentration below which there is assumed to be no observable adverse health impact to a target organ system. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient. To evaluate the potential for adverse chronic non-cancer health effects from simultaneous exposure to multiple chemicals, the hazard quotients for all chemicals are summed, yielding a hazard index. The chronic REL for DPM was established by OEHHA as 5 µg/m^3. For an acute hazard quotient, the one-hour maximum concentration is divided by the acute REL for the substance; however, there is no acute REL for DPM. Non-cancer risk equations are summarized in Table 3-4.

Figure 3-1: Ground-level Modeled Source, Receptor, and DPM Contours

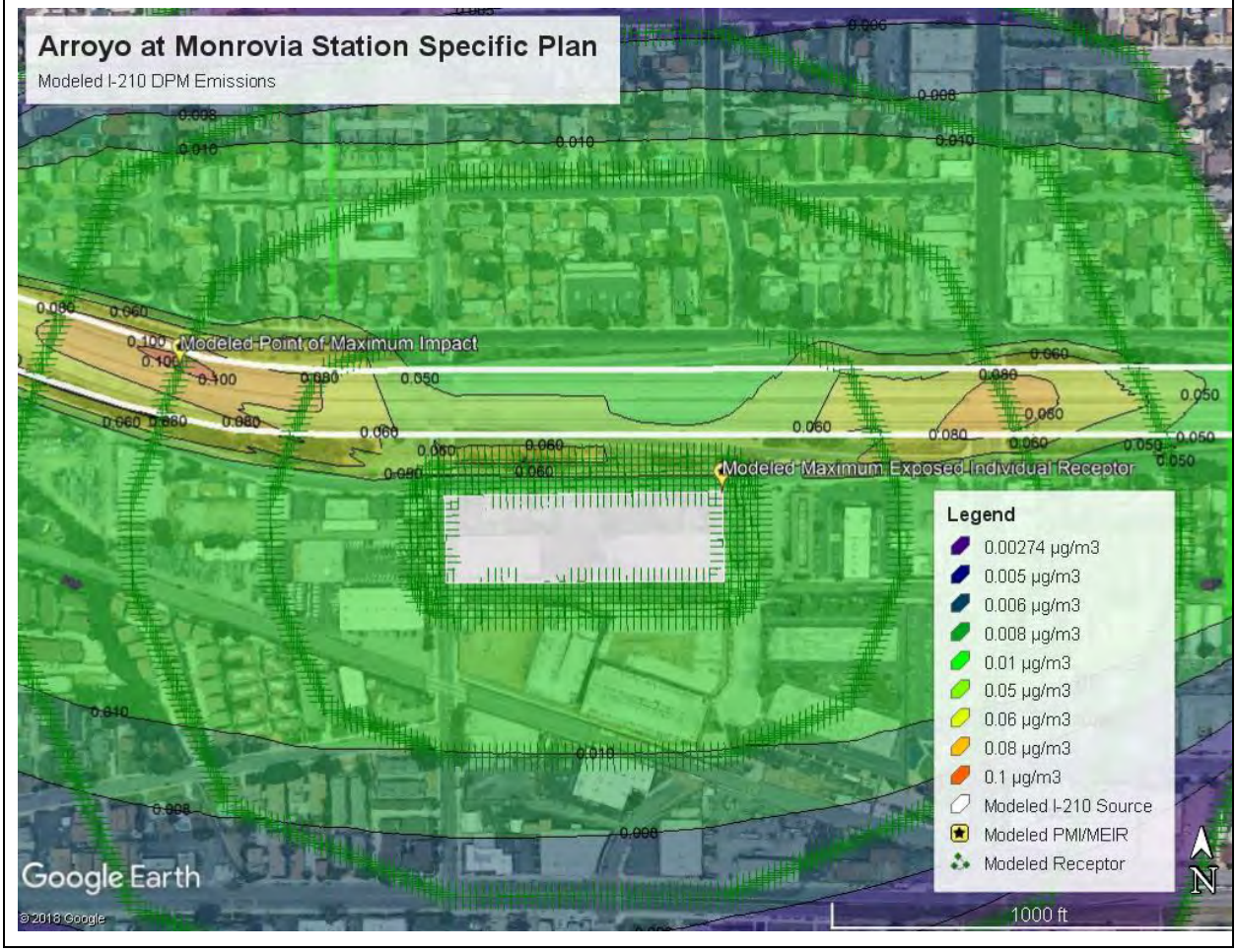


Table 3-4: Non-Cancer Risk Equation	
Chronic Hazard Quotient:	$HI_{DPM} = \frac{C_{DPM}}{REL_{AAC}}$
Where:	
HI_{DPM} =	Hazard Index; an expression of the potential for non-cancer health effects.
C_{DPM} =	Annual average DPM concentration (µg/m^3).
REL_{DPM} =	Reference exposure level (REL) for DPM; the DPM concentration at which no adverse health effects are anticipated.

As shown in Table 3-3, the annual average DPM concentration at the ground-level MEIR is 0.041 µg/m^3, which yields a chronic hazard quotient of 0.01.

4 REPORT PREPARERS AND REFERENCES

This report was prepared by MIG under contract to Evergreen Investment Partners, LLA. This report reflects the independent, objective, professional opinion of MIG. The following individuals were involved in the preparation and review of this report:

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4.1 REFERENCES

California Department of Transporation. 2018a. *Traffic Census Program*. Accessed February 21, 2019. Available online at:<http://www.dot.ca.gov/trafficops/census/>

_____2018b. "2017 Traffic Volumes (for All Vehicles on CA State Highways)". Caltrans, Online Services-Traffic Operations, Data-Traffic Counts and Monthly Vehicle Miles of Travel (MVMT), Traffic Volumes: Annual Average Daily Traffic (AADT) by Webpage (2016). n.d. Web. Accessed February 21, 2019. <http://www.dot.ca.gov/trafficops/census/volumes2017/Route198-220.html>

Office of Environmental Health Hazard Assessment (OEHHA) 2015. *Air Toxics Hot Spots Program Guidance Manual*. Sacramento, CA. February 2015.

South Coast Air Quality Management District (SCAQMD) 2003. *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis.* Diamond Bar, CA. August 2003.

_____2015a. *SCAQMD Air Quality Significance Thresholds*. Diamond Bar, CA. March 2015. Available online at: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>

_____2015b. *Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act.* Diamond Bar, CA. June 5, 2015.

_____2017. "Air Quality Analysis Handbook." *Air Quality Analysis Handbook.* SCAQMD, Regulations, CEQA. , n.d. Web. Accessed August 21, 2017. <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook

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APPENDIX A: EMFAC OUTPUT

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Arroyo Specific Plan
DPM Emission Estimates for I-210
Derived by MIG from EMFAC2017 data file

Vehicle Class	2022 - 2050 Average PM10 Emission Factor (Grams/Mile)	2022 Vehicle Population	Vehicle Class Percentage of Population	I-210 ADT	Class Vehicles on I-210	Trip Length (miles)	Total Daily Class Miles	Total Daily PM10 (Grams)	Total Daily PM10 (Grams/Sec)
LDA	0.001852246	34,751	0.46%	252,000	1,157	0.64	741	1.3719696	1.58793E-05
LDT1	0.03185804	271	0.00%	252,000	9	0.64	6	0.1837847	2.12714E-06
LDT2	0.003402849	8,920	0.12%	252,000	297	0.64	190	0.647005	7.48848E-06
LHDT1	0.00623252	64,097	0.85%	252,000	2,135	0.64	1,366	8.5150003	9.85532E-05
LHDT2	0.010840485	25,927	0.34%	252,000	863	0.64	553	5.9908427	6.93385E-05
HHDT	0.034086662	56,923	0.75%	252,000	1,896	0.64	1,213	41.357667	0.000478677
MDV	0.001443049	19,517	0.26%	252,000	650	0.64	416	0.6003004	6.94792E-06
MH	0.040468538	5,865	0.08%	252,000	195	0.64	125	5.0592931	5.85566E-05
MHDT	0.016485717	64,993	0.86%	252,000	2,165	0.64	1,385	22.838003	0.000264329
OBUS	0.024065833	3,064	0.04%	252,000	102	0.64	65	1.5716589	1.81905E-05
SBUS	0.018773815	3,460	0.05%	252,000	115	0.64	74	1.3846184	1.60257E-05
UBUS	0.004388309	10	0.00%	252,000	0	0.64	0	0.0009484	1.09763E-08
ALL DSL	0.014593326	287,799	3.80%	252,000	9,585	0.64	6,134	89.521091	0.001036124

Notes:
2022 - 2050 average emission factor derived from EMFAC 2017
2022 vehicle population dereived from EMFAC2017
I-210 ADT from 2017 Caltrans AADT data

Aermod Source Area Size:	501219.2	square feet
Rate:	2.07E-09	grams/second/sq foot
Aermod Source Area Size:	46564.8	square meters
Rate:	2.23E-08	grams/second/sq meter

Arroyo Specific Plan
Los Angeles South Coast, 2022 to 2050 Average Diesel Vehicle Emission Factors (65 MPH)
Derived by MIG from EMFAC2017 data file

Vehicle Class	Speed	PM10 Average Running Exhaust Emission Factor (Grams/Mile)
HHDT	65 MPH	0.034086662
LDA	65 MPH	0.001852246
LDT1	65 MPH	0.03185804
LDT2	65 MPH	0.003402849
LHDT1	65 MPH	0.00623252
LHDT2	65 MPH	0.010840485
MDV	65 MPH	0.001443049
MH	65 MPH	0.040468538
MHDT	65 MPH	0.016485717
OBUS	65 MPH	0.024065833
SBUS	55 MPH	0.018773815
UBUS	65 MPH	0.004388309

SOURCE: EMFAC 2017
Note: SBUS factors are for 55 mph travel speed; UBUS emissions rate based on data for 2022-2027

Arroyo Specific Plan
EMFAC2017 WebDataBase Output file
Los Angeles South Coast, 2022 to 2050 Diesel Vehicle Emission Factors (55 and 65 MPH)

EMFAC2017 (v1.0.2) Emission Rates
Region Type: Sub-Area
Region: Los Angeles (SC)
Calendar Year: 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 204
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, g/mile for RUNEX, PMBW and PMTW

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	VMT	ROG_RUNE	TOG_RUNE	CO_RUNEX	NOx_RUNE	SOx_RUNE	CO2_RUNE
Los Angeles	2022	HHDT	Aggregated	55	DSL	785331.8	0.041366	0.047092	0.159603	2.524333	0.01158	1225.716
Los Angeles	2022	LDA	Aggregated	55	DSL	75655.41	0.010944	0.012459	0.131625	0.075636	0.001682	177.9037
Los Angeles	2022	LDT1	Aggregated	55	DSL	367.1622	0.143053	0.162856	1.057979	1.208702	0.003632	384.1708
Los Angeles	2022	LDT2	Aggregated	55	DSL	20967.59	0.009113	0.010374	0.073121	0.036425	0.002276	240.7048
Los Angeles	2022	LHDT1	Aggregated	55	DSL	267682.3	0.043903	0.04998	0.255826	1.274101	0.004336	458.6794
Los Angeles	2022	LHDT2	Aggregated	55	DSL	104092.1	0.043032	0.048989	0.248362	1.218993	0.004723	499.5826
Los Angeles	2022	MDV	Aggregated	55	DSL	42751.32	0.006424	0.007314	0.104526	0.039062	0.002991	316.3844
Los Angeles	2022	MH	Aggregated	55	DSL	6377.26	0.039167	0.044589	0.182487	2.84264	0.008208	868.2078
Los Angeles	2022	MHDT	Aggregated	55	DSL	427398.3	0.03827	0.043567	0.182069	1.273683	0.007731	818.299
Los Angeles	2022	OBUS	Aggregated	55	DSL	24165.53	0.038676	0.04403	0.148787	1.611227	0.009576	1013.607
Los Angeles	2022	SBUS	Aggregated	55	DSL	4843.171	0.045394	0.051677	0.146342	5.674488	0.008935	945.7554
Los Angeles	2022	UBUS	Aggregated	55	DSL	16.64149	0.000555	0.039672	0.050258	0.146993	0.011437	1209.753
Los Angeles	2023	HHDT	Aggregated	55	DSL	805607.6	0.014338	0.016323	0.098438	1.382271	0.010723	1134.961
Los Angeles	2023	LDA	Aggregated	55	DSL	79017.25	0.00935	0.010645	0.120907	0.061947	0.001637	173.2086
Los Angeles	2023	LDT1	Aggregated	55	DSL	339.778	0.135774	0.15457	1.005371	1.143195	0.003582	378.9494
Los Angeles	2023	LDT2	Aggregated	55	DSL	22397.61	0.008573	0.009759	0.071885	0.032897	0.002213	234.127
Los Angeles	2023	LHDT1	Aggregated	55	DSL	282155	0.040304	0.045883	0.230456	1.08186	0.004269	451.5671
Los Angeles	2023	LHDT2	Aggregated	55	DSL	109857.6	0.0397	0.045196	0.225218	1.041755	0.00465	491.8939
Los Angeles	2023	MDV	Aggregated	55	DSL	45623.02	0.005838	0.006646	0.10062	0.033689	0.002907	307.4936
Los Angeles	2023	MH	Aggregated	55	DSL	6638.828	0.037117	0.042255	0.169888	2.679499	0.008109	857.7179
Los Angeles	2023	MHDT	Aggregated	55	DSL	438346.5	0.005945	0.006768	0.035622	0.632949	0.007362	779.2267

Los Angeles	2023	OBUS	Aggregated	55	DSL	24755.48	0.008476	0.009649	0.056898	0.867846	0.009254	979.5325
Los Angeles	2023	SBUS	Aggregated	55	DSL	4891.926	0.043356	0.049357	0.142367	5.364602	0.008827	934.3223
Los Angeles	2023	UBUS	Aggregated	55	DSL	16.64149	0.000555	0.039672	0.050258	0.146993	0.011437	1209.753
Los Angeles	2024	HHDT	Aggregated	55	DSL	825759.5	0.014443	0.016442	0.099427	1.382873	0.010596	1121.611
Los Angeles	2024	LDA	Aggregated	55	DSL	78866.62	0.007735	0.008805	0.111545	0.050061	0.001593	168.4848
Los Angeles	2024	LDT1	Aggregated	55	DSL	302.9878	0.126406	0.143905	0.947015	1.072644	0.003526	372.9636
Los Angeles	2024	LDT2	Aggregated	55	DSL	22765.18	0.007864	0.008953	0.070254	0.029109	0.002152	227.5859
Los Angeles	2024	LHDT1	Aggregated	55	DSL	296382.4	0.037293	0.042456	0.209384	0.922937	0.004201	444.4109
Los Angeles	2024	LHDT2	Aggregated	55	DSL	115480.4	0.036927	0.042039	0.205954	0.895137	0.004577	484.1677
Los Angeles	2024	MDV	Aggregated	55	DSL	46393.31	0.005419	0.006169	0.097899	0.029652	0.002826	298.9077
Los Angeles	2024	MH	Aggregated	55	DSL	6639.549	0.035355	0.04025	0.159079	2.543057	0.007979	843.9657
Los Angeles	2024	MHDT	Aggregated	55	DSL	433892.2	0.00593	0.00675	0.035767	0.627194	0.007245	766.8603
Los Angeles	2024	OBUS	Aggregated	55	DSL	24822.49	0.008637	0.009832	0.05803	0.877985	0.009179	971.5657
Los Angeles	2024	SBUS	Aggregated	55	DSL	4932.23	0.041365	0.047091	0.138395	5.033606	0.008705	921.3757
Los Angeles	2024	UBUS	Aggregated	55	DSL	15.56331	0.000555	0.039672	0.050258	0.146993	0.011437	1209.753
Los Angeles	2025	HHDT	Aggregated	55	DSL	844043.9	0.014449	0.016449	0.0997	1.365142	0.010433	1104.271
Los Angeles	2025	LDA	Aggregated	55	DSL	81341.53	0.006732	0.007664	0.104612	0.040918	0.001548	163.7792
Los Angeles	2025	LDT1	Aggregated	55	DSL	282.4597	0.118513	0.134919	0.8906	1.002939	0.003462	366.2556
Los Angeles	2025	LDT2	Aggregated	55	DSL	23852.88	0.007593	0.008644	0.069728	0.026455	0.00209	221.1237
Los Angeles	2025	LHDT1	Aggregated	55	DSL	308373.1	0.034747	0.039557	0.191632	0.788794	0.004133	437.1942
Los Angeles	2025	LHDT2	Aggregated	55	DSL	120237.6	0.034615	0.039407	0.18993	0.772333	0.004504	476.4072
Los Angeles	2025	MDV	Aggregated	55	DSL	48607.66	0.005004	0.005696	0.095435	0.025895	0.002745	290.3659
Los Angeles	2025	MH	Aggregated	55	DSL	6845.457	0.033854	0.03854	0.149729	2.424986	0.007855	830.8673
Los Angeles	2025	MHDT	Aggregated	55	DSL	442324.8	0.00591	0.006728	0.03586	0.620875	0.007123	753.9967
Los Angeles	2025	OBUS	Aggregated	55	DSL	25359.83	0.008577	0.009764	0.057612	0.855273	0.008969	949.3467
Los Angeles	2025	SBUS	Aggregated	55	DSL	4964.396	0.03932	0.044763	0.134094	4.682033	0.008577	907.8607
Los Angeles	2025	UBUS	Aggregated	55	DSL	9.911139	0.000555	0.039672	0.050258	0.146993	0.011437	1209.753
Los Angeles	2026	HHDT	Aggregated	55	DSL	864515.3	0.014394	0.016386	0.099552	1.339073	0.010255	1085.425
Los Angeles	2026	LDA	Aggregated	55	DSL	83319.43	0.005775	0.006574	0.098398	0.032723	0.00151	159.7458
Los Angeles	2026	LDT1	Aggregated	55	DSL	254.2138	0.103745	0.118107	0.811303	0.892278	0.003387	358.2988
Los Angeles	2026	LDT2	Aggregated	55	DSL	24785.82	0.007501	0.008539	0.070088	0.025205	0.00204	215.7384
Los Angeles	2026	LHDT1	Aggregated	55	DSL	319498	0.03256	0.037067	0.176488	0.674249	0.004064	429.9378
Los Angeles	2026	LHDT2	Aggregated	55	DSL	124629.6	0.032649	0.037168	0.176295	0.668299	0.00443	468.5966
Los Angeles	2026	MDV	Aggregated	55	DSL	50495.73	0.00462	0.00526	0.093318	0.022563	0.002676	283.0777

Los Angeles	2026	MH	Aggregated	55	DSL	7036.696	0.03251	0.03701	0.141274	2.321212	0.007745	819.2847
Los Angeles	2026	MHDT	Aggregated	55	DSL	450766.9	0.005883	0.006698	0.035893	0.612954	0.007007	741.6271
Los Angeles	2026	OBUS	Aggregated	55	DSL	25904.24	0.008526	0.009706	0.057256	0.835716	0.008779	929.1875
Los Angeles	2026	SBUS	Aggregated	55	DSL	4989.376	0.037085	0.042218	0.129166	4.302234	0.008444	893.7611
Los Angeles	2026	UBUS	Aggregated	55	DSL	9.911139	0.000555	0.039672	0.050258	0.146993	0.011437	1209.753
Los Angeles	2027	HHDT	Aggregated	55	DSL	886291.2	0.014327	0.01631	0.0993	1.311598	0.01007	1065.93
Los Angeles	2027	LDA	Aggregated	55	DSL	85179.1	0.004888	0.005564	0.092832	0.02547	0.001477	156.2487
Los Angeles	2027	LDT1	Aggregated	55	DSL	216.7554	0.075911	0.08642	0.684156	0.701435	0.003283	347.3002
Los Angeles	2027	LDT2	Aggregated	55	DSL	25650.53	0.007284	0.008292	0.06981	0.023222	0.001994	210.9586
Los Angeles	2027	LHDT1	Aggregated	55	DSL	329719.3	0.030706	0.034957	0.163678	0.57738	0.003996	422.6952
Los Angeles	2027	LHDT2	Aggregated	55	DSL	128655.1	0.030993	0.035284	0.1648	0.580767	0.004356	460.7994
Los Angeles	2027	MDV	Aggregated	55	DSL	52264.26	0.004157	0.004732	0.090898	0.018821	0.002616	276.6952
Los Angeles	2027	MH	Aggregated	55	DSL	7210.35	0.031277	0.035607	0.133566	2.22826	0.007631	807.23
Los Angeles	2027	MHDT	Aggregated	55	DSL	460006.3	0.005855	0.006665	0.03588	0.603546	0.006883	728.5671
Los Angeles	2027	OBUS	Aggregated	55	DSL	26507.84	0.00847	0.009643	0.056865	0.816936	0.008588	909.063
Los Angeles	2027	SBUS	Aggregated	55	DSL	5019.282	0.03463	0.039423	0.123404	3.898908	0.008299	878.4039
Los Angeles	2027	UBUS	Aggregated	55	DSL	9.911139	0.000555	0.039672	0.050258	0.146993	0.011437	1209.753
Los Angeles	2028	HHDT	Aggregated	55	DSL	905260.5	0.014246	0.016218	0.098926	1.283781	0.009882	1045.972
Los Angeles	2028	LDA	Aggregated	55	DSL	86813.55	0.00431	0.004907	0.088229	0.019965	0.001449	153.2282
Los Angeles	2028	LDT1	Aggregated	55	DSL	198.1684	0.065277	0.074314	0.59447	0.589399	0.003193	337.7448
Los Angeles	2028	LDT2	Aggregated	55	DSL	26429.64	0.007252	0.008256	0.070304	0.022554	0.001956	206.8889
Los Angeles	2028	LHDT1	Aggregated	55	DSL	339156.1	0.029126	0.033158	0.152788	0.494839	0.003936	416.3249
Los Angeles	2028	LHDT2	Aggregated	55	DSL	132389.4	0.029603	0.033701	0.155173	0.507215	0.004291	453.9189
Los Angeles	2028	MDV	Aggregated	55	DSL	53865.17	0.003882	0.004419	0.089124	0.016208	0.002564	271.2274
Los Angeles	2028	MH	Aggregated	55	DSL	7366.188	0.030188	0.034367	0.126692	2.145617	0.007526	796.0644
Los Angeles	2028	MHDT	Aggregated	55	DSL	466820	0.005837	0.006645	0.035905	0.598272	0.00677	716.5739
Los Angeles	2028	OBUS	Aggregated	55	DSL	26958.46	0.008458	0.009629	0.056767	0.809451	0.008434	892.7377
Los Angeles	2028	SBUS	Aggregated	55	DSL	5060.31	0.032029	0.036462	0.117017	3.490552	0.008148	862.4489
Los Angeles	2028	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2029	HHDT	Aggregated	55	DSL	924257.3	0.014142	0.0161	0.098393	1.253971	0.009685	1025.159
Los Angeles	2029	LDA	Aggregated	55	DSL	88248.86	0.003739	0.004257	0.08382	0.016175	0.001424	150.6463
Los Angeles	2029	LDT1	Aggregated	55	DSL	182.9755	0.049061	0.055853	0.465891	0.491551	0.003116	329.587
Los Angeles	2029	LDT2	Aggregated	55	DSL	27105.35	0.007213	0.008211	0.070676	0.022079	0.001921	203.2535
Los Angeles	2029	LHDT1	Aggregated	55	DSL	347956.1	0.027791	0.031639	0.143576	0.424928	0.003884	410.8373

Los Angeles	2029	LHDT2	Aggregated	55	DSL	135873.6	0.028436	0.032372	0.147111	0.445415	0.004235	447.944
Los Angeles	2029	MDV	Aggregated	55	DSL	55295.98	0.003597	0.004095	0.08728	0.014206	0.002519	266.458
Los Angeles	2029	MH	Aggregated	55	DSL	7510.027	0.029209	0.033253	0.120465	2.071159	0.007431	786.0442
Los Angeles	2029	MHDT	Aggregated	55	DSL	473432.6	0.005821	0.006626	0.035924	0.594172	0.006667	705.6633
Los Angeles	2029	OBUS	Aggregated	55	DSL	27410.98	0.008465	0.009636	0.056789	0.80797	0.008306	879.1743
Los Angeles	2029	SBUS	Aggregated	55	DSL	5115.259	0.029442	0.033518	0.110451	3.095462	0.007997	846.4487
Los Angeles	2029	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2030	HHDT	Aggregated	55	DSL	943299.7	0.014036	0.015979	0.097828	1.223887	0.009484	1003.821
Los Angeles	2030	LDA	Aggregated	55	DSL	89511.76	0.003281	0.003735	0.080274	0.013213	0.001403	148.3817
Los Angeles	2030	LDT1	Aggregated	55	DSL	172.5541	0.036359	0.041392	0.363301	0.407775	0.003039	321.4799
Los Angeles	2030	LDT2	Aggregated	55	DSL	27695.88	0.007177	0.00817	0.071002	0.021673	0.001891	199.9962
Los Angeles	2030	LHDT1	Aggregated	55	DSL	356171.1	0.026647	0.030336	0.135778	0.364792	0.003839	406.0485
Los Angeles	2030	LHDT2	Aggregated	55	DSL	139109.5	0.027444	0.031243	0.140385	0.392731	0.004185	442.6936
Los Angeles	2030	MDV	Aggregated	55	DSL	56598.42	0.003413	0.003885	0.086164	0.012843	0.00248	262.3106
Los Angeles	2030	MH	Aggregated	55	DSL	7645.387	0.028353	0.032277	0.114941	2.004704	0.007347	777.1416
Los Angeles	2030	MHDT	Aggregated	55	DSL	479826.2	0.005804	0.006607	0.035926	0.590069	0.006571	695.5589
Los Angeles	2030	OBUS	Aggregated	55	DSL	27833.78	0.008486	0.00966	0.056912	0.808789	0.008202	868.1189
Los Angeles	2030	SBUS	Aggregated	55	DSL	5183.384	0.026906	0.030631	0.103748	2.721738	0.007846	830.4869
Los Angeles	2030	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2031	HHDT	Aggregated	55	DSL	999250.8	0.013926	0.015854	0.097188	1.193073	0.00927	981.1696
Los Angeles	2031	LDA	Aggregated	55	DSL	93116.77	0.003075	0.003501	0.078646	0.01173	0.001385	146.4756
Los Angeles	2031	LDT1	Aggregated	55	DSL	170.3455	0.027375	0.031164	0.288758	0.341012	0.002967	313.8759
Los Angeles	2031	LDT2	Aggregated	55	DSL	28969.04	0.007157	0.008148	0.071379	0.021397	0.001863	197.0579
Los Angeles	2031	LHDT1	Aggregated	55	DSL	415777.6	0.025683	0.029238	0.129278	0.313772	0.003799	401.839
Los Angeles	2031	LHDT2	Aggregated	55	DSL	162405.6	0.026597	0.030279	0.134776	0.347773	0.004141	438.0557
Los Angeles	2031	MDV	Aggregated	55	DSL	59333.73	0.003249	0.003699	0.085172	0.01168	0.002445	258.6423
Los Angeles	2031	MH	Aggregated	55	DSL	8253.377	0.027517	0.031326	0.109619	1.942849	0.007271	769.1726
Los Angeles	2031	MHDT	Aggregated	55	DSL	515505.7	0.005787	0.006588	0.035915	0.585726	0.006484	686.3306
Los Angeles	2031	OBUS	Aggregated	55	DSL	30003.79	0.008514	0.009693	0.057092	0.809092	0.008119	859.3883
Los Angeles	2031	SBUS	Aggregated	55	DSL	5259.706	0.024435	0.027818	0.096889	2.373923	0.007698	814.768
Los Angeles	2031	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2032	HHDT	Aggregated	55	DSL	1015468	0.013837	0.015752	0.096715	1.1671	0.009086	961.714
Los Angeles	2032	LDA	Aggregated	55	DSL	94102.13	0.002829	0.003221	0.076712	0.010182	0.001368	144.749
Los Angeles	2032	LDT1	Aggregated	55	DSL	166.6572	0.022383	0.025481	0.244361	0.292574	0.002903	307.0534

Los Angeles	2032	LDT2	Aggregated	55	DSL	29418.5	0.007159	0.00815	0.071853	0.021263	0.001838	194.4218
Los Angeles	2032	LHDT1	Aggregated	55	DSL	424102.4	0.024886	0.028331	0.124051	0.271188	0.003764	398.1262
Los Angeles	2032	LHDT2	Aggregated	55	DSL	165639	0.025842	0.029419	0.129899	0.308475	0.004102	433.93
Los Angeles	2032	MDV	Aggregated	55	DSL	60407.67	0.003131	0.003564	0.084488	0.010835	0.002414	255.4
Los Angeles	2032	MH	Aggregated	55	DSL	8379.592	0.026826	0.03054	0.105007	1.88822	0.007204	762.065
Los Angeles	2032	MHDT	Aggregated	55	DSL	521007.9	0.005774	0.006573	0.035907	0.581258	0.006408	678.2828
Los Angeles	2032	OBUS	Aggregated	55	DSL	30426.45	0.008519	0.009698	0.057109	0.804207	0.008039	850.9308
Los Angeles	2032	SBUS	Aggregated	55	DSL	5334.652	0.022069	0.025124	0.08994	2.059632	0.007554	799.6049
Los Angeles	2032	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2033	HHDT	Aggregated	55	DSL	1031727	0.013759	0.015664	0.096291	1.143697	0.008913	943.4589
Los Angeles	2033	LDA	Aggregated	55	DSL	94980.11	0.002712	0.003087	0.075745	0.009381	0.001355	143.28
Los Angeles	2033	LDT1	Aggregated	55	DSL	164.92	0.019916	0.022673	0.21976	0.258455	0.002847	301.1592
Los Angeles	2033	LDT2	Aggregated	55	DSL	29799.15	0.007159	0.00815	0.072243	0.021145	0.001815	192.0414
Los Angeles	2033	LHDT1	Aggregated	55	DSL	431900.1	0.024209	0.02756	0.119688	0.234702	0.003733	394.8241
Los Angeles	2033	LHDT2	Aggregated	55	DSL	168668.8	0.025198	0.028687	0.125848	0.275023	0.004067	430.2541
Los Angeles	2033	MDV	Aggregated	55	DSL	61366.73	0.003031	0.00345	0.083912	0.010155	0.002387	252.5193
Los Angeles	2033	MH	Aggregated	55	DSL	8498.773	0.026158	0.029779	0.100572	1.837274	0.007144	755.6429
Los Angeles	2033	MHDT	Aggregated	55	DSL	526429.2	0.005764	0.006561	0.035906	0.577025	0.006341	671.1451
Los Angeles	2033	OBUS	Aggregated	55	DSL	30855.3	0.008512	0.00969	0.057048	0.797163	0.007964	842.9345
Los Angeles	2033	SBUS	Aggregated	55	DSL	5406.537	0.019802	0.022543	0.082859	1.777683	0.007416	784.9736
Los Angeles	2033	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2034	HHDT	Aggregated	55	DSL	1047990	0.013678	0.015571	0.095835	1.121402	0.008749	926.0651
Los Angeles	2034	LDA	Aggregated	55	DSL	95735.17	0.002608	0.002969	0.074881	0.008717	0.001342	141.9916
Los Angeles	2034	LDT1	Aggregated	55	DSL	163.5656	0.017818	0.020284	0.198583	0.228375	0.002797	295.8164
Los Angeles	2034	LDT2	Aggregated	55	DSL	30121.88	0.007161	0.008153	0.072592	0.021061	0.001795	189.9152
Los Angeles	2034	LHDT1	Aggregated	55	DSL	439222.4	0.023659	0.026934	0.116236	0.204658	0.003705	391.8879
Los Angeles	2034	LHDT2	Aggregated	55	DSL	171517.9	0.024641	0.028052	0.122468	0.246672	0.004036	426.9774
Los Angeles	2034	MDV	Aggregated	55	DSL	62225.77	0.002945	0.003352	0.083409	0.009591	0.002363	249.9699
Los Angeles	2034	MH	Aggregated	55	DSL	8610.591	0.025522	0.029055	0.096349	1.790436	0.007089	749.8422
Los Angeles	2034	MHDT	Aggregated	55	DSL	531712.9	0.005751	0.006548	0.035882	0.572225	0.006278	664.4903
Los Angeles	2034	OBUS	Aggregated	55	DSL	31253.07	0.008487	0.009661	0.056867	0.787571	0.007889	835.0122
Los Angeles	2034	SBUS	Aggregated	55	DSL	5475.304	0.017654	0.020097	0.07553	1.530484	0.007283	770.9025
Los Angeles	2034	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2035	HHDT	Aggregated	55	DSL	1064290	0.013609	0.015493	0.095435	1.102184	0.008598	910.0722

Los Angeles	2035	LDA	Aggregated	55	DSL	96376.28	0.002519	0.002868	0.074135	0.008178	0.001332	140.8709
Los Angeles	2035	LDT1	Aggregated	55	DSL	161.565	0.014453	0.016454	0.168563	0.195092	0.002748	290.7164
Los Angeles	2035	LDT2	Aggregated	55	DSL	30398.33	0.007169	0.008162	0.072933	0.021018	0.001778	188.0515
Los Angeles	2035	LHDT1	Aggregated	55	DSL	445935.5	0.023168	0.026376	0.113115	0.177656	0.00368	389.2382
Los Angeles	2035	LHDT2	Aggregated	55	DSL	174114.3	0.024131	0.027472	0.119312	0.220988	0.004008	424.0011
Los Angeles	2035	MDV	Aggregated	55	DSL	62978.56	0.002861	0.003257	0.082891	0.009082	0.002342	247.6991
Los Angeles	2035	MH	Aggregated	55	DSL	8716.631	0.02495	0.028403	0.092468	1.747945	0.007039	744.6253
Los Angeles	2035	MHDT	Aggregated	55	DSL	536937.6	0.005736	0.00653	0.035838	0.567161	0.006221	658.4911
Los Angeles	2035	OBUS	Aggregated	55	DSL	31677.84	0.008453	0.009623	0.056633	0.777697	0.007816	827.3478
Los Angeles	2035	SBUS	Aggregated	55	DSL	5541.796	0.015665	0.017833	0.068161	1.320633	0.007157	757.553
Los Angeles	2035	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2036	HHDT	Aggregated	55	DSL	1083539	0.013559	0.015436	0.095149	1.086699	0.008468	896.3067
Los Angeles	2036	LDA	Aggregated	55	DSL	96925.86	0.002437	0.002774	0.073435	0.007701	0.001323	139.899
Los Angeles	2036	LDT1	Aggregated	55	DSL	160.6304	0.012734	0.014497	0.151365	0.170901	0.002707	286.3112
Los Angeles	2036	LDT2	Aggregated	55	DSL	30641.57	0.007174	0.008168	0.073216	0.020974	0.001763	186.4406
Los Angeles	2036	LHDT1	Aggregated	55	DSL	452152.8	0.022756	0.025906	0.110495	0.154587	0.003657	386.856
Los Angeles	2036	LHDT2	Aggregated	55	DSL	176600.3	0.023757	0.027045	0.117069	0.199794	0.003984	421.3939
Los Angeles	2036	MDV	Aggregated	55	DSL	63652.26	0.002791	0.003177	0.082451	0.008671	0.002323	245.6958
Los Angeles	2036	MH	Aggregated	55	DSL	8819.283	0.024454	0.027839	0.08897	1.708601	0.006995	739.9148
Los Angeles	2036	MHDT	Aggregated	55	DSL	543004.6	0.005725	0.006517	0.035797	0.562231	0.006174	653.5537
Los Angeles	2036	OBUS	Aggregated	55	DSL	32088.36	0.008418	0.009584	0.05639	0.767954	0.00775	820.3136
Los Angeles	2036	SBUS	Aggregated	55	DSL	5607.567	0.013907	0.015832	0.061244	1.149565	0.00704	745.1497
Los Angeles	2036	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2037	HHDT	Aggregated	55	DSL	1102841	0.013521	0.015392	0.09493	1.074685	0.008348	883.6421
Los Angeles	2037	LDA	Aggregated	55	DSL	97390.12	0.002371	0.002699	0.072862	0.007327	0.001315	139.0704
Los Angeles	2037	LDT1	Aggregated	55	DSL	160.357	0.011946	0.0136	0.14177	0.15312	0.002671	282.587
Los Angeles	2037	LDT2	Aggregated	55	DSL	30849.67	0.00718	0.008174	0.073467	0.020947	0.001749	185.0574
Los Angeles	2037	LHDT1	Aggregated	55	DSL	457732.3	0.022383	0.025481	0.108103	0.133708	0.003637	384.6826
Los Angeles	2037	LHDT2	Aggregated	55	DSL	178829.5	0.02341	0.026651	0.11495	0.180226	0.003961	419.0153
Los Angeles	2037	MDV	Aggregated	55	DSL	64245.86	0.002726	0.003103	0.082033	0.008312	0.002306	243.9287
Los Angeles	2037	MH	Aggregated	55	DSL	8916.371	0.023973	0.027292	0.085594	1.671216	0.006954	735.6074
Los Angeles	2037	MHDT	Aggregated	55	DSL	548972.2	0.005714	0.006505	0.035757	0.558058	0.006127	648.5044
Los Angeles	2037	OBUS	Aggregated	55	DSL	32505.91	0.008386	0.009547	0.056166	0.759092	0.007689	813.9103
Los Angeles	2037	SBUS	Aggregated	55	DSL	5675.847	0.012367	0.014079	0.054974	1.011043	0.006931	733.5971

Los Angeles	2037	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2038	HHDT	Aggregated	55	DSL	1122180	0.013493	0.015361	0.094775	1.06551	0.008244	872.6588
Los Angeles	2038	LDA	Aggregated	55	DSL	97777.28	0.002318	0.002639	0.072391	0.007018	0.001308	138.37
Los Angeles	2038	LDT1	Aggregated	55	DSL	159.9556	0.011309	0.012875	0.133026	0.135022	0.002637	278.9493
Los Angeles	2038	LDT2	Aggregated	55	DSL	31028.02	0.007185	0.00818	0.073679	0.020917	0.001738	183.8827
Los Angeles	2038	LHDT1	Aggregated	55	DSL	462781.5	0.022079	0.025136	0.106156	0.116458	0.003618	382.7199
Los Angeles	2038	LHDT2	Aggregated	55	DSL	180807.5	0.023103	0.026302	0.113088	0.162891	0.003941	416.8367
Los Angeles	2038	MDV	Aggregated	55	DSL	64767.6	0.002673	0.003043	0.081682	0.008001	0.002291	242.3803
Los Angeles	2038	MH	Aggregated	55	DSL	9006.455	0.023521	0.026777	0.082418	1.63662	0.006917	731.6732
Los Angeles	2038	MHDT	Aggregated	55	DSL	554817.7	0.005704	0.006494	0.035719	0.55433	0.006084	643.9578
Los Angeles	2038	OBUS	Aggregated	55	DSL	32935.28	0.008362	0.009519	0.055988	0.752879	0.007637	808.3157
Los Angeles	2038	SBUS	Aggregated	55	DSL	5743.75	0.011032	0.012559	0.049607	0.899933	0.006829	722.8556
Los Angeles	2038	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2039	HHDT	Aggregated	55	DSL	1141558	0.013474	0.015339	0.094675	1.058649	0.008156	863.3406
Los Angeles	2039	LDA	Aggregated	55	DSL	98104.02	0.002274	0.002589	0.072001	0.006767	0.001303	137.7847
Los Angeles	2039	LDT1	Aggregated	55	DSL	159.7922	0.010795	0.012289	0.125986	0.120366	0.002608	275.8895
Los Angeles	2039	LDT2	Aggregated	55	DSL	31183.95	0.007189	0.008184	0.073857	0.020885	0.001729	182.8998
Los Angeles	2039	LHDT1	Aggregated	55	DSL	467341.7	0.021816	0.024836	0.104494	0.101417	0.003601	380.9435
Los Angeles	2039	LHDT2	Aggregated	55	DSL	182550.8	0.022791	0.025946	0.111221	0.145586	0.003922	414.8352
Los Angeles	2039	MDV	Aggregated	55	DSL	65225.46	0.002626	0.00299	0.081368	0.007715	0.002279	241.0258
Los Angeles	2039	MH	Aggregated	55	DSL	9091.989	0.023115	0.026315	0.079495	1.605956	0.006883	728.1007
Los Angeles	2039	MHDT	Aggregated	55	DSL	560547.6	0.005695	0.006483	0.035679	0.550981	0.006045	639.8585
Los Angeles	2039	OBUS	Aggregated	55	DSL	33339.7	0.00834	0.009494	0.055828	0.74789	0.00759	803.3484
Los Angeles	2039	SBUS	Aggregated	55	DSL	5804.373	0.009876	0.011243	0.045277	0.810919	0.006734	712.758
Los Angeles	2039	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2040	HHDT	Aggregated	55	DSL	1160957	0.013462	0.015326	0.094619	1.053395	0.008083	855.5476
Los Angeles	2040	LDA	Aggregated	55	DSL	98381.2	0.002236	0.002546	0.071656	0.006507	0.001298	137.2981
Los Angeles	2040	LDT1	Aggregated	55	DSL	159.7161	0.010339	0.01177	0.11976	0.107362	0.002583	273.2062
Los Angeles	2040	LDT2	Aggregated	55	DSL	31323.48	0.007193	0.008189	0.074019	0.020869	0.001721	182.091
Los Angeles	2040	LHDT1	Aggregated	55	DSL	471463.9	0.021593	0.024582	0.10309	0.08856	0.003586	379.3384
Los Angeles	2040	LHDT2	Aggregated	55	DSL	184210.6	0.022583	0.02571	0.110051	0.133553	0.003905	413.0938
Los Angeles	2040	MDV	Aggregated	55	DSL	65627.32	0.002584	0.002942	0.081076	0.007452	0.002267	239.8427
Los Angeles	2040	MH	Aggregated	55	DSL	9173.119	0.022753	0.025903	0.076824	1.579081	0.006852	724.785
Los Angeles	2040	MHDT	Aggregated	55	DSL	566190.5	0.005686	0.006473	0.035644	0.548124	0.006011	636.2026

Los Angeles	2040	OBUS	Aggregated	55	DSL	33743.83	0.008328	0.00948	0.055734	0.744894	0.00755	799.1566
Los Angeles	2040	SBUS	Aggregated	55	DSL	5853.822	0.008876	0.010104	0.04201	0.738835	0.006642	703.0906
Los Angeles	2040	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2041	HHDT	Aggregated	55	DSL	1176943	0.013454	0.015316	0.094588	1.049274	0.008021	849.055
Los Angeles	2041	LDA	Aggregated	55	DSL	98606.7	0.002207	0.002513	0.071397	0.006322	0.001294	136.9039
Los Angeles	2041	LDT1	Aggregated	55	DSL	159.0374	0.009695	0.011037	0.110896	0.089086	0.002553	270.064
Los Angeles	2041	LDT2	Aggregated	55	DSL	31445.04	0.007196	0.008193	0.074164	0.020855	0.001715	181.4349
Los Angeles	2041	LHDT1	Aggregated	55	DSL	475106.5	0.021414	0.024378	0.102008	0.078091	0.003572	377.8943
Los Angeles	2041	LHDT2	Aggregated	55	DSL	185680.3	0.022406	0.025508	0.109185	0.123313	0.00389	411.5264
Los Angeles	2041	MDV	Aggregated	55	DSL	65972.5	0.002548	0.002901	0.080825	0.00724	0.002258	238.8232
Los Angeles	2041	MH	Aggregated	55	DSL	9248.645	0.02242	0.025524	0.074307	1.554832	0.006823	721.735
Los Angeles	2041	MHDT	Aggregated	55	DSL	571964.4	0.005679	0.006465	0.035612	0.54554	0.005979	632.8152
Los Angeles	2041	OBUS	Aggregated	55	DSL	34144.84	0.008328	0.009481	0.055724	0.744238	0.007518	795.7411
Los Angeles	2041	SBUS	Aggregated	55	DSL	5892.913	0.008036	0.009148	0.039674	0.681325	0.006556	693.9458
Los Angeles	2041	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2042	HHDT	Aggregated	55	DSL	1195866	0.01345	0.015312	0.094585	1.046102	0.007972	843.8036
Los Angeles	2042	LDA	Aggregated	55	DSL	98813.35	0.002185	0.002487	0.071199	0.006178	0.001291	136.5878
Los Angeles	2042	LDT1	Aggregated	55	DSL	158.7781	0.009244	0.010524	0.104721	0.076259	0.00253	267.6478
Los Angeles	2042	LDT2	Aggregated	55	DSL	31557.89	0.007199	0.008196	0.07429	0.020838	0.00171	180.9029
Los Angeles	2042	LHDT1	Aggregated	55	DSL	478366.3	0.021257	0.024199	0.101034	0.068901	0.00356	376.5828
Los Angeles	2042	LHDT2	Aggregated	55	DSL	187055.8	0.022267	0.02535	0.108555	0.11509	0.003877	410.1411
Los Angeles	2042	MDV	Aggregated	55	DSL	66284.41	0.002517	0.002865	0.080608	0.00706	0.002249	237.9498
Los Angeles	2042	MH	Aggregated	55	DSL	9320.754	0.022118	0.02518	0.071972	1.533214	0.006797	718.9329
Los Angeles	2042	MHDT	Aggregated	55	DSL	577669.5	0.005673	0.006458	0.03559	0.543257	0.00595	629.8159
Los Angeles	2042	OBUS	Aggregated	55	DSL	34550.95	0.008336	0.00949	0.05577	0.745237	0.007492	793.0117
Los Angeles	2042	SBUS	Aggregated	55	DSL	5917.562	0.007314	0.008327	0.038029	0.634795	0.006473	685.133
Los Angeles	2042	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2043	HHDT	Aggregated	55	DSL	1214803	0.013447	0.015308	0.09459	1.043288	0.00793	839.4277
Los Angeles	2043	LDA	Aggregated	55	DSL	98983.18	0.002167	0.002467	0.071048	0.006054	0.001289	136.3372
Los Angeles	2043	LDT1	Aggregated	55	DSL	158.4726	0.008816	0.010036	0.098842	0.064063	0.002509	265.4161
Los Angeles	2043	LDT2	Aggregated	55	DSL	31657.87	0.007202	0.008199	0.074408	0.020828	0.001706	180.4791
Los Angeles	2043	LHDT1	Aggregated	55	DSL	481292.4	0.021147	0.024074	0.100372	0.06216	0.003549	375.4301
Los Angeles	2043	LHDT2	Aggregated	55	DSL	188348.6	0.022176	0.025246	0.108215	0.109315	0.003866	408.9523
Los Angeles	2043	MDV	Aggregated	55	DSL	66551.93	0.002491	0.002836	0.080435	0.006932	0.002242	237.2058

Los Angeles	2043	MH	Aggregated	55	DSL	9386.909	0.021836	0.024859	0.069765	1.51354	0.006772	716.2994
Los Angeles	2043	MHDT	Aggregated	55	DSL	583307.3	0.005669	0.006453	0.035572	0.541264	0.005924	627.0686
Los Angeles	2043	OBUS	Aggregated	55	DSL	34939.56	0.008352	0.009508	0.055867	0.747149	0.007471	790.8375
Los Angeles	2043	SBUS	Aggregated	55	DSL	5932.943	0.006724	0.007654	0.036906	0.597797	0.006394	676.7935
Los Angeles	2043	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2044	HHDT	Aggregated	55	DSL	1233739	0.013443	0.015304	0.094598	1.040399	0.007896	835.7735
Los Angeles	2044	LDA	Aggregated	55	DSL	99126.84	0.002153	0.002451	0.070937	0.005952	0.001287	136.1413
Los Angeles	2044	LDT1	Aggregated	55	DSL	158.4156	0.008532	0.009713	0.094977	0.05597	0.002493	263.7146
Los Angeles	2044	LDT2	Aggregated	55	DSL	31746.58	0.007205	0.008202	0.074516	0.020822	0.001703	180.1388
Los Angeles	2044	LHDT1	Aggregated	55	DSL	483832.5	0.021035	0.023947	0.099689	0.055488	0.003539	374.3887
Los Angeles	2044	LHDT2	Aggregated	55	DSL	189396.6	0.021977	0.025019	0.107287	0.098667	0.003855	407.806
Los Angeles	2044	MDV	Aggregated	55	DSL	66786.58	0.00247	0.002811	0.080297	0.006823	0.002236	236.5766
Los Angeles	2044	MH	Aggregated	55	DSL	9448.08	0.021583	0.024571	0.067722	1.49625	0.006749	713.8587
Los Angeles	2044	MHDT	Aggregated	55	DSL	588896.7	0.005665	0.00645	0.035562	0.539651	0.005901	624.6148
Los Angeles	2044	OBUS	Aggregated	55	DSL	35335.5	0.008366	0.009524	0.055951	0.748873	0.007454	788.998
Los Angeles	2044	SBUS	Aggregated	55	DSL	5947.986	0.006271	0.007139	0.036152	0.569607	0.006322	669.2001
Los Angeles	2044	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2045	HHDT	Aggregated	55	DSL	1252685	0.01344	0.015301	0.094606	1.037655	0.007867	832.6564
Los Angeles	2045	LDA	Aggregated	55	DSL	99259.04	0.002143	0.00244	0.070861	0.005874	0.001286	135.9899
Los Angeles	2045	LDT1	Aggregated	55	DSL	158.5265	0.00834	0.009494	0.092376	0.050451	0.002481	262.4055
Los Angeles	2045	LDT2	Aggregated	55	DSL	31829	0.007207	0.008205	0.074617	0.020818	0.0017	179.8656
Los Angeles	2045	LHDT1	Aggregated	55	DSL	486227.6	0.020947	0.023847	0.099194	0.050148	0.003531	373.4877
Los Angeles	2045	LHDT2	Aggregated	55	DSL	190411.9	0.021818	0.024839	0.106569	0.090066	0.003846	406.8272
Los Angeles	2045	MDV	Aggregated	55	DSL	66998.17	0.002452	0.002792	0.080195	0.006745	0.002231	236.0469
Los Angeles	2045	MH	Aggregated	55	DSL	9504.386	0.021335	0.024289	0.065771	1.479475	0.006727	711.5625
Los Angeles	2045	MHDT	Aggregated	55	DSL	594444.3	0.005663	0.006447	0.035559	0.53855	0.005881	622.4582
Los Angeles	2045	OBUS	Aggregated	55	DSL	35708.64	0.008377	0.009537	0.056024	0.749942	0.007439	787.4461
Los Angeles	2045	SBUS	Aggregated	55	DSL	5967.311	0.005964	0.006789	0.035689	0.550073	0.006259	662.5449
Los Angeles	2045	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2046	HHDT	Aggregated	55	DSL	1272891	0.013437	0.015297	0.094606	1.034975	0.007842	830.0134
Los Angeles	2046	LDA	Aggregated	55	DSL	99359.47	0.002136	0.002431	0.070813	0.005814	0.001284	135.874
Los Angeles	2046	LDT1	Aggregated	55	DSL	158.613	0.008177	0.009309	0.090187	0.045795	0.00247	261.2656
Los Angeles	2046	LDT2	Aggregated	55	DSL	31899.56	0.00721	0.008208	0.074711	0.020813	0.001698	179.6455
Los Angeles	2046	LHDT1	Aggregated	55	DSL	488291.5	0.020867	0.023756	0.098749	0.045303	0.003523	372.6819

Los Angeles	2046	LHDT2	Aggregated	55	DSL	191305.6	0.021638	0.024634	0.105728	0.080562	0.003838	405.9478
Los Angeles	2046	MDV	Aggregated	55	DSL	67175.91	0.002438	0.002775	0.080116	0.006667	0.002227	235.6048
Los Angeles	2046	MH	Aggregated	55	DSL	9557.775	0.021146	0.024073	0.064171	1.466647	0.006707	709.4808
Los Angeles	2046	MHDT	Aggregated	55	DSL	601028.6	0.005662	0.006446	0.035556	0.537635	0.005862	620.5038
Los Angeles	2046	OBUS	Aggregated	55	DSL	36102.15	0.008383	0.009544	0.056062	0.750304	0.007426	785.9883
Los Angeles	2046	SBUS	Aggregated	55	DSL	5990.379	0.005778	0.006578	0.03544	0.538105	0.006206	656.8638
Los Angeles	2046	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2047	HHDT	Aggregated	55	DSL	1293119	0.013433	0.015292	0.094602	1.032321	0.00782	827.6911
Los Angeles	2047	LDA	Aggregated	55	DSL	99454.53	0.00213	0.002425	0.070776	0.00575	0.001284	135.7841
Los Angeles	2047	LDT1	Aggregated	55	DSL	157.9976	0.007741	0.008813	0.084167	0.033437	0.002452	259.3288
Los Angeles	2047	LDT2	Aggregated	55	DSL	31965.79	0.007212	0.00821	0.074797	0.020808	0.001697	179.4626
Los Angeles	2047	LHDT1	Aggregated	55	DSL	490190.2	0.020815	0.023696	0.098455	0.04187	0.003517	371.977
Los Angeles	2047	LHDT2	Aggregated	55	DSL	192189.1	0.021539	0.02452	0.105148	0.074802	0.003831	405.2103
Los Angeles	2047	MDV	Aggregated	55	DSL	67340.91	0.002427	0.002763	0.080067	0.006608	0.002224	235.2402
Los Angeles	2047	MH	Aggregated	55	DSL	9610.082	0.020991	0.023897	0.062831	1.455936	0.006689	707.5912
Los Angeles	2047	MHDT	Aggregated	55	DSL	607573.7	0.005661	0.006444	0.035555	0.536833	0.005845	618.7323
Los Angeles	2047	OBUS	Aggregated	55	DSL	36504.94	0.008388	0.009549	0.056089	0.750398	0.007413	784.6837
Los Angeles	2047	SBUS	Aggregated	55	DSL	6018.731	0.005683	0.006469	0.035338	0.531955	0.006161	652.1133
Los Angeles	2047	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2048	HHDT	Aggregated	55	DSL	1313378	0.013431	0.01529	0.094598	1.030324	0.0078	825.6478
Los Angeles	2048	LDA	Aggregated	55	DSL	99528.85	0.002125	0.002419	0.070752	0.005696	0.001283	135.7148
Los Angeles	2048	LDT1	Aggregated	55	DSL	157.9699	0.007569	0.008616	0.081821	0.028499	0.002442	258.305
Los Angeles	2048	LDT2	Aggregated	55	DSL	32022.77	0.007214	0.008212	0.074877	0.0208	0.001695	179.3085
Los Angeles	2048	LHDT1	Aggregated	55	DSL	491769.6	0.020762	0.023636	0.098154	0.038536	0.003511	371.3453
Los Angeles	2048	LHDT2	Aggregated	55	DSL	192914.7	0.02141	0.024374	0.104347	0.06778	0.003824	404.5221
Los Angeles	2048	MDV	Aggregated	55	DSL	67482.27	0.002417	0.002751	0.080026	0.006539	0.002221	234.9374
Los Angeles	2048	MH	Aggregated	55	DSL	9657.305	0.020893	0.023785	0.061675	1.450033	0.006673	705.831
Los Angeles	2048	MHDT	Aggregated	55	DSL	614095	0.00566	0.006444	0.035555	0.536273	0.005831	617.1773
Los Angeles	2048	OBUS	Aggregated	55	DSL	36887.27	0.008386	0.009547	0.056078	0.748666	0.007399	783.2216
Los Angeles	2048	SBUS	Aggregated	55	DSL	6047.753	0.005646	0.006427	0.035334	0.529937	0.006123	648.1411
Los Angeles	2048	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2049	HHDT	Aggregated	55	DSL	1333667	0.01343	0.015289	0.094602	1.029137	0.007785	824.0153
Los Angeles	2049	LDA	Aggregated	55	DSL	99583.98	0.002122	0.002416	0.070748	0.005665	0.001282	135.6623
Los Angeles	2049	LDT1	Aggregated	55	DSL	158.1876	0.007527	0.008569	0.081299	0.027261	0.002437	257.7465

Los Angeles	2049	LDT2	Aggregated	55	DSL	32071.04	0.007216	0.008215	0.074953	0.020797	0.001694	179.1784
Los Angeles	2049	LHDT1	Aggregated	55	DSL	493091.9	0.020722	0.023591	0.097894	0.035875	0.003505	370.7909
Los Angeles	2049	LHDT2	Aggregated	55	DSL	193542.4	0.021303	0.024252	0.103518	0.061697	0.003818	403.9119
Los Angeles	2049	MDV	Aggregated	55	DSL	67603.46	0.002408	0.002742	0.079992	0.006455	0.002219	234.687
Los Angeles	2049	MH	Aggregated	55	DSL	9699.784	0.020805	0.023685	0.060601	1.444902	0.006657	704.1972
Los Angeles	2049	MHDT	Aggregated	55	DSL	620589.8	0.005661	0.006444	0.03556	0.535887	0.005818	615.8266
Los Angeles	2049	OBUS	Aggregated	55	DSL	37265.61	0.008381	0.009541	0.056043	0.745825	0.007385	781.6759
Los Angeles	2049	SBUS	Aggregated	55	DSL	6072.877	0.00564	0.00642	0.035389	0.530459	0.006092	644.7901
Los Angeles	2049	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2050	HHDT	Aggregated	55	DSL	1353961	0.013431	0.01529	0.094615	1.028596	0.007798	825.4236
Los Angeles	2050	LDA	Aggregated	55	DSL	99627.19	0.002119	0.002413	0.070747	0.00563	0.001282	135.6209
Los Angeles	2050	LDT1	Aggregated	55	DSL	158.4343	0.007504	0.008542	0.081029	0.026534	0.002433	257.3193
Los Angeles	2050	LDT2	Aggregated	55	DSL	32113.32	0.007216	0.008215	0.075006	0.020757	0.001693	179.0651
Los Angeles	2050	LHDT1	Aggregated	55	DSL	494226.9	0.02069	0.023554	0.097686	0.033637	0.003501	370.3049
Los Angeles	2050	LHDT2	Aggregated	55	DSL	193988.6	0.02112	0.024043	0.102012	0.051989	0.003812	403.2801
Los Angeles	2050	MDV	Aggregated	55	DSL	67709.96	0.002399	0.002732	0.079949	0.00633	0.002217	234.4778
Los Angeles	2050	MH	Aggregated	55	DSL	9739.624	0.02073	0.0236	0.059663	1.440489	0.006643	702.7116
Los Angeles	2050	MHDT	Aggregated	55	DSL	627078.5	0.005661	0.006445	0.035567	0.535637	0.005817	615.6928
Los Angeles	2050	OBUS	Aggregated	55	DSL	37648.41	0.00837	0.009529	0.055974	0.74173	0.007376	780.7138
Los Angeles	2050	SBUS	Aggregated	55	DSL	6091.594	0.005648	0.00643	0.035473	0.532307	0.00607	642.5455
Los Angeles	2050	UBUS	Aggregated	55	DSL	0	0	0	0	0	0	0
Los Angeles	2022	HHDT	Aggregated	65	DSL	787757.7	0.037736	0.04296	0.176039	2.694371	0.012723	1346.727
Los Angeles	2022	LDA	Aggregated	65	DSL	48532.32	0.012443	0.014165	0.151289	0.080082	0.00205	216.8238
Los Angeles	2022	LDT1	Aggregated	65	DSL	235.5315	0.179177	0.203981	1.570212	1.304678	0.004419	467.4139
Los Angeles	2022	LDT2	Aggregated	65	DSL	13450.53	0.009326	0.010617	0.076195	0.037175	0.002769	292.8614
Los Angeles	2022	LHDT1	Aggregated	65	DSL	454528.1	0.050222	0.057174	0.351708	1.371107	0.004436	469.2237
Los Angeles	2022	LHDT2	Aggregated	65	DSL	176749.7	0.049056	0.055847	0.339422	1.311312	0.004752	502.6475
Los Angeles	2022	MDV	Aggregated	65	DSL	27424.62	0.006677	0.007601	0.107734	0.040495	0.003637	384.67
Los Angeles	2022	MH	Aggregated	65	DSL	6677.849	0.045014	0.051246	0.195075	2.897566	0.008343	882.503
Los Angeles	2022	MHDT	Aggregated	65	DSL	447543.5	0.03985	0.045366	0.197083	1.610496	0.008877	939.6027
Los Angeles	2022	OBUS	Aggregated	65	DSL	28391.72	0.044522	0.050684	0.173376	2.174987	0.011387	1205.258
Los Angeles	2022	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2022	UBUS	Aggregated	65	DSL	18.70082	0.000495	0.035384	0.043065	0.264685	0.0125	1322.252
Los Angeles	2023	HHDT	Aggregated	65	DSL	799268.1	0.01991	0.022666	0.134069	2.060046	0.012308	1302.772

Los Angeles	2023	LDA	Aggregated	65	DSL	50688.91	0.010517	0.011973	0.135918	0.065436	0.001996	211.1015
Los Angeles	2023	LDT1	Aggregated	65	DSL	217.9648	0.16994	0.193466	1.490023	1.233847	0.004359	461.0612
Los Angeles	2023	LDT2	Aggregated	65	DSL	14367.88	0.00863	0.009825	0.073429	0.03335	0.002693	284.8583
Los Angeles	2023	LHDT1	Aggregated	65	DSL	479103	0.045511	0.051811	0.31168	1.163628	0.004367	461.9479
Los Angeles	2023	LHDT2	Aggregated	65	DSL	186539.6	0.044694	0.050881	0.302834	1.120057	0.004679	494.9117
Los Angeles	2023	MDV	Aggregated	65	DSL	29266.79	0.006022	0.006856	0.10253	0.034839	0.003534	373.8603
Los Angeles	2023	MH	Aggregated	65	DSL	6951.746	0.042254	0.048103	0.181118	2.723407	0.008242	871.8403
Los Angeles	2023	MHDT	Aggregated	65	DSL	459007.7	0.008278	0.009424	0.049334	0.997298	0.008655	916.0903
Los Angeles	2023	OBUS	Aggregated	65	DSL	29063.74	0.012715	0.014475	0.084541	1.464299	0.011213	1186.824
Los Angeles	2023	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2023	UBUS	Aggregated	65	DSL	18.70082	0.000495	0.035384	0.043065	0.264685	0.0125	1322.252
Los Angeles	2024	HHDT	Aggregated	65	DSL	728804.8	0.019918	0.022676	0.134462	2.034841	0.012088	1279.441
Los Angeles	2024	LDA	Aggregated	65	DSL	47924.1	0.008547	0.00973	0.122333	0.052693	0.001941	205.3442
Los Angeles	2024	LDT1	Aggregated	65	DSL	184.1136	0.158071	0.179953	1.401116	1.15731	0.00429	453.7784
Los Angeles	2024	LDT2	Aggregated	65	DSL	13833.49	0.007723	0.008792	0.070115	0.029239	0.002618	276.8998
Los Angeles	2024	LHDT1	Aggregated	65	DSL	457373.1	0.041563	0.047317	0.278197	0.991915	0.004298	454.6272
Los Angeles	2024	LHDT2	Aggregated	65	DSL	178207.7	0.041056	0.046739	0.272152	0.961663	0.004605	487.138
Los Angeles	2024	MDV	Aggregated	65	DSL	28191.36	0.00556	0.00633	0.09887	0.030586	0.003436	363.4213
Los Angeles	2024	MH	Aggregated	65	DSL	6087.028	0.039881	0.045402	0.169165	2.578795	0.00811	857.8617
Los Angeles	2024	MHDT	Aggregated	65	DSL	397785.1	0.008283	0.00943	0.049617	0.994959	0.008519	901.7114
Los Angeles	2024	OBUS	Aggregated	65	DSL	25867.38	0.013025	0.014828	0.086736	1.488452	0.011156	1180.789
Los Angeles	2024	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2024	UBUS	Aggregated	65	DSL	16.16466	0.000495	0.035384	0.043065	0.264685	0.0125	1322.252
Los Angeles	2025	HHDT	Aggregated	65	DSL	736699.9	0.019847	0.022594	0.13428	2.00124	0.011841	1253.364
Los Angeles	2025	LDA	Aggregated	65	DSL	49428	0.00734	0.008356	0.112333	0.04291	0.001887	199.6093
Los Angeles	2025	LDT1	Aggregated	65	DSL	171.6395	0.148055	0.16855	1.315082	1.081956	0.004213	445.6169
Los Angeles	2025	LDT2	Aggregated	65	DSL	14494.45	0.007366	0.008386	0.068525	0.026361	0.002543	269.0374
Los Angeles	2025	LHDT1	Aggregated	65	DSL	475877	0.038219	0.043509	0.249801	0.847164	0.004228	447.2447
Los Angeles	2025	LHDT2	Aggregated	65	DSL	185549	0.038015	0.043278	0.246436	0.829181	0.004531	479.3299
Los Angeles	2025	MDV	Aggregated	65	DSL	29536.94	0.005093	0.005798	0.09548	0.026624	0.003337	353.036
Los Angeles	2025	MH	Aggregated	65	DSL	6275.801	0.037841	0.04308	0.158785	2.452606	0.007984	844.5477
Los Angeles	2025	MHDT	Aggregated	65	DSL	405516	0.00828	0.009426	0.049824	0.99061	0.008377	886.7301
Los Angeles	2025	OBUS	Aggregated	65	DSL	26409.56	0.012935	0.014725	0.08611	1.451736	0.0109	1153.704
Los Angeles	2025	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0

Los Angeles	2025	UBUS	Aggregated	65	DSL	10.2941	0.000495	0.035384	0.043065	0.264685	0.0125	1322.252
Los Angeles	2026	HHDT	Aggregated	65	DSL	744937.2	0.019723	0.022453	0.133745	1.962183	0.011588	1226.569
Los Angeles	2026	LDA	Aggregated	65	DSL	50629.89	0.006184	0.00704	0.103356	0.03414	0.001841	194.6935
Los Angeles	2026	LDT1	Aggregated	65	DSL	154.4756	0.129352	0.147259	1.194043	0.962336	0.004121	435.936
Los Angeles	2026	LDT2	Aggregated	65	DSL	15061.36	0.007238	0.00824	0.068332	0.025003	0.002481	262.4852
Los Angeles	2026	LHDT1	Aggregated	65	DSL	493044.7	0.035341	0.040234	0.225426	0.723565	0.004158	439.8214
Los Angeles	2026	LHDT2	Aggregated	65	DSL	192326.6	0.035425	0.040329	0.224409	0.716955	0.004457	471.4714
Los Angeles	2026	MDV	Aggregated	65	DSL	30684.24	0.004658	0.005303	0.092522	0.023107	0.003254	344.1748
Los Angeles	2026	MH	Aggregated	65	DSL	6451.126	0.03602	0.041006	0.149387	2.341647	0.007873	832.7743
Los Angeles	2026	MHDT	Aggregated	65	DSL	413255.6	0.008265	0.009409	0.04994	0.98312	0.008241	872.3158
Los Angeles	2026	OBUS	Aggregated	65	DSL	26957.96	0.012858	0.014638	0.085579	1.420138	0.010668	1129.142
Los Angeles	2026	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2026	UBUS	Aggregated	65	DSL	10.2941	0.000495	0.035384	0.043065	0.264685	0.0125	1322.252
Los Angeles	2027	HHDT	Aggregated	65	DSL	754804.7	0.01958	0.02229	0.133059	1.919762	0.011315	1197.71
Los Angeles	2027	LDA	Aggregated	65	DSL	51759.94	0.005111	0.005818	0.095339	0.026378	0.0018	190.4313
Los Angeles	2027	LDT1	Aggregated	65	DSL	131.7136	0.094135	0.107167	0.999902	0.756055	0.003995	422.5541
Los Angeles	2027	LDT2	Aggregated	65	DSL	15586.81	0.006953	0.007915	0.067234	0.022852	0.002426	256.6696
Los Angeles	2027	LHDT1	Aggregated	65	DSL	508818.2	0.032898	0.037452	0.204663	0.619046	0.004088	432.4124
Los Angeles	2027	LHDT2	Aggregated	65	DSL	198538.7	0.033239	0.03784	0.205697	0.622539	0.004383	463.6264
Los Angeles	2027	MDV	Aggregated	65	DSL	31758.91	0.004116	0.004686	0.08906	0.019135	0.00318	336.4147
Los Angeles	2027	MH	Aggregated	65	DSL	6610.329	0.034345	0.039099	0.140837	2.242231	0.007757	820.5212
Los Angeles	2027	MHDT	Aggregated	65	DSL	421726.1	0.008244	0.009386	0.049982	0.972592	0.008097	857.0713
Los Angeles	2027	OBUS	Aggregated	65	DSL	27568.65	0.012773	0.014541	0.084989	1.389429	0.010436	1104.599
Los Angeles	2027	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2027	UBUS	Aggregated	65	DSL	10.2941	0.000495	0.035384	0.043065	0.264685	0.0125	1322.252
Los Angeles	2028	HHDT	Aggregated	65	DSL	761201.7	0.019445	0.022136	0.132398	1.883669	0.011048	1169.393
Los Angeles	2028	LDA	Aggregated	65	DSL	52753.13	0.004426	0.005039	0.088789	0.020498	0.001765	186.75
Los Angeles	2028	LDT1	Aggregated	65	DSL	120.419	0.08061	0.091769	0.862901	0.634929	0.003885	410.9282
Los Angeles	2028	LDT2	Aggregated	65	DSL	16060.24	0.006903	0.007859	0.067377	0.022123	0.00238	251.7181
Los Angeles	2028	LHDT1	Aggregated	65	DSL	523380.9	0.030811	0.035076	0.186893	0.529992	0.004026	425.8955
Los Angeles	2028	LHDT2	Aggregated	65	DSL	204301.5	0.031397	0.035744	0.189897	0.543212	0.004317	456.7036
Los Angeles	2028	MDV	Aggregated	65	DSL	32731.72	0.003808	0.004335	0.086565	0.016373	0.003117	329.7668
Los Angeles	2028	MH	Aggregated	65	DSL	6753.199	0.032849	0.037396	0.133187	2.153834	0.00765	809.1717
Los Angeles	2028	MHDT	Aggregated	65	DSL	427972.8	0.008235	0.009375	0.050069	0.967921	0.007965	843.063

Los Angeles	2028	OBUS	Aggregated	65	DSL	28021.32	0.012751	0.014517	0.08482	1.376719	0.010246	1084.547
Los Angeles	2028	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2028	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2029	HHDT	Aggregated	65	DSL	767642.7	0.019305	0.021977	0.131706	1.85243	0.010801	1143.231
Los Angeles	2029	LDA	Aggregated	65	DSL	53625.31	0.003747	0.004265	0.082551	0.016463	0.001736	183.6033
Los Angeles	2029	LDT1	Aggregated	65	DSL	111.1869	0.060066	0.068381	0.667749	0.529126	0.003791	401.0028
Los Angeles	2029	LDT2	Aggregated	65	DSL	16470.84	0.006845	0.007793	0.06741	0.021604	0.002338	247.2951
Los Angeles	2029	LHDT1	Aggregated	65	DSL	536961	0.029044	0.033064	0.171755	0.454574	0.003973	420.2819
Los Angeles	2029	LHDT2	Aggregated	65	DSL	209678.3	0.029848	0.03398	0.176551	0.476568	0.004261	450.6921
Los Angeles	2029	MDV	Aggregated	65	DSL	33601.16	0.003484	0.003966	0.083969	0.014266	0.003063	323.9679
Los Angeles	2029	MH	Aggregated	65	DSL	6885.068	0.03149	0.03585	0.126236	2.074182	0.007553	798.9865
Los Angeles	2029	MHDT	Aggregated	65	DSL	434035.1	0.008227	0.009366	0.050142	0.964619	0.007844	830.3164
Los Angeles	2029	OBUS	Aggregated	65	DSL	28475.67	0.012756	0.014522	0.084823	1.373656	0.010088	1067.809
Los Angeles	2029	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2029	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2030	HHDT	Aggregated	65	DSL	774146.4	0.019183	0.021838	0.131121	1.826061	0.010572	1119.021
Los Angeles	2030	LDA	Aggregated	65	DSL	54392.73	0.003206	0.00365	0.077619	0.013319	0.00171	180.8433
Los Angeles	2030	LDT1	Aggregated	65	DSL	104.8542	0.043966	0.050052	0.511877	0.43854	0.003698	391.139
Los Angeles	2030	LDT2	Aggregated	65	DSL	16829.68	0.006792	0.007732	0.067432	0.02116	0.0023	243.3319
Los Angeles	2030	LHDT1	Aggregated	65	DSL	549638.1	0.027526	0.031336	0.158843	0.389707	0.003927	415.3829
Los Angeles	2030	LHDT2	Aggregated	65	DSL	214671.8	0.028528	0.032478	0.165319	0.419764	0.004211	445.4095
Los Angeles	2030	MDV	Aggregated	65	DSL	34392.6	0.003284	0.003739	0.082486	0.012843	0.003015	318.9254
Los Angeles	2030	MH	Aggregated	65	DSL	7009.164	0.03028	0.034472	0.120039	2.003089	0.007468	789.9373
Los Angeles	2030	MHDT	Aggregated	65	DSL	439896.7	0.008216	0.009354	0.050184	0.960885	0.007733	818.5071
Los Angeles	2030	OBUS	Aggregated	65	DSL	28902.74	0.012783	0.014552	0.084976	1.374373	0.009959	1054.146
Los Angeles	2030	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2030	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2031	HHDT	Aggregated	65	DSL	698779.2	0.019077	0.021718	0.130625	1.80335	0.010363	1096.929
Los Angeles	2031	LDA	Aggregated	65	DSL	51753.87	0.002982	0.003395	0.075581	0.011766	0.001688	178.5202
Los Angeles	2031	LDT1	Aggregated	65	DSL	94.67722	0.032569	0.037077	0.398447	0.366363	0.00361	381.8873
Los Angeles	2031	LDT2	Aggregated	65	DSL	16100.86	0.00676	0.007696	0.067594	0.020857	0.002267	239.7569
Los Angeles	2031	LHDT1	Aggregated	65	DSL	518485.7	0.026244	0.029877	0.147983	0.334809	0.003886	411.0767
Los Angeles	2031	LHDT2	Aggregated	65	DSL	202524.1	0.027399	0.031192	0.155855	0.371441	0.004167	440.7432
Los Angeles	2031	MDV	Aggregated	65	DSL	32977.42	0.003107	0.003537	0.081177	0.011631	0.002973	314.4654

Los Angeles	2031	MH	Aggregated	65	DSL	5857.722	0.029111	0.033141	0.114097	1.939383	0.007391	781.8371
Los Angeles	2031	MHDT	Aggregated	65	DSL	365873.2	0.008204	0.00934	0.050205	0.957673	0.007631	807.7198
Los Angeles	2031	OBUS	Aggregated	65	DSL	25067.37	0.013013	0.014814	0.086679	1.386572	0.009942	1052.353
Los Angeles	2031	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2031	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2032	HHDT	Aggregated	65	DSL	703891.6	0.018975	0.021602	0.130144	1.778894	0.010176	1077.114
Los Angeles	2032	LDA	Aggregated	65	DSL	52301.53	0.002705	0.003079	0.07307	0.010138	0.001668	176.4158
Los Angeles	2032	LDT1	Aggregated	65	DSL	92.6273	0.026221	0.029851	0.330642	0.313991	0.003532	373.5866
Los Angeles	2032	LDT2	Aggregated	65	DSL	16350.67	0.006758	0.007693	0.06796	0.020709	0.002236	236.5496
Los Angeles	2032	LHDT1	Aggregated	65	DSL	528867	0.025181	0.028667	0.139139	0.288871	0.00385	407.2786
Los Angeles	2032	LHDT2	Aggregated	65	DSL	206556.2	0.026392	0.030046	0.147573	0.329062	0.004127	436.5922
Los Angeles	2032	MDV	Aggregated	65	DSL	33574.3	0.002985	0.003399	0.080338	0.010757	0.002936	310.5233
Los Angeles	2032	MH	Aggregated	65	DSL	5947.301	0.028114	0.032006	0.108869	1.880852	0.007323	774.6125
Los Angeles	2032	MHDT	Aggregated	65	DSL	369778.3	0.008194	0.009328	0.050224	0.952691	0.007542	798.3107
Los Angeles	2032	OBUS	Aggregated	65	DSL	25410.73	0.013015	0.014817	0.086676	1.377845	0.009842	1041.787
Los Angeles	2032	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2032	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2033	HHDT	Aggregated	65	DSL	709041.5	0.018888	0.021503	0.129729	1.756544	0.010012	1059.737
Los Angeles	2033	LDA	Aggregated	65	DSL	52789.5	0.002586	0.002943	0.071998	0.009312	0.001651	174.6254
Los Angeles	2033	LDT1	Aggregated	65	DSL	91.6618	0.023071	0.026265	0.292852	0.277103	0.003464	366.4151
Los Angeles	2033	LDT2	Aggregated	65	DSL	16562.23	0.006753	0.007687	0.068251	0.020578	0.002209	233.6535
Los Angeles	2033	LHDT1	Aggregated	65	DSL	538590.9	0.024277	0.027637	0.131685	0.249518	0.003818	403.9005
Los Angeles	2033	LHDT2	Aggregated	65	DSL	210334.5	0.025532	0.029066	0.140621	0.292996	0.004092	432.8937
Los Angeles	2033	MDV	Aggregated	65	DSL	34107.34	0.002884	0.003283	0.07966	0.010057	0.002902	307.0209
Los Angeles	2033	MH	Aggregated	65	DSL	6031.889	0.027156	0.030916	0.103854	1.826252	0.007261	768.0846
Los Angeles	2033	MHDT	Aggregated	65	DSL	373626	0.008187	0.009321	0.050247	0.947768	0.007463	789.9628
Los Angeles	2033	OBUS	Aggregated	65	DSL	25758.49	0.012999	0.014798	0.086548	1.365343	0.009747	1031.725
Los Angeles	2033	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2033	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2034	HHDT	Aggregated	65	DSL	714187.8	0.018799	0.021401	0.129286	1.734362	0.009864	1044.043
Los Angeles	2034	LDA	Aggregated	65	DSL	53209.17	0.002481	0.002824	0.071056	0.008631	0.001636	173.0552
Los Angeles	2034	LDT1	Aggregated	65	DSL	90.90898	0.020391	0.023214	0.260283	0.244582	0.003402	359.9147
Los Angeles	2034	LDT2	Aggregated	65	DSL	16741.6	0.006752	0.007686	0.068527	0.020484	0.002184	231.0666
Los Angeles	2034	LHDT1	Aggregated	65	DSL	547722	0.023539	0.026798	0.125689	0.217122	0.00379	400.8968

Los Angeles	2034	LHDT2	Aggregated	65	DSL	213887.3	0.024786	0.028217	0.134749	0.262437	0.004061	429.5969
Los Angeles	2034	MDV	Aggregated	65	DSL	34584.8	0.002798	0.003186	0.07909	0.00948	0.002873	303.9212
Los Angeles	2034	MH	Aggregated	65	DSL	6111.25	0.026254	0.029888	0.099085	1.776035	0.007205	762.1884
Los Angeles	2034	MHDT	Aggregated	65	DSL	377376	0.008176	0.009308	0.050235	0.941679	0.00739	782.1761
Los Angeles	2034	OBUS	Aggregated	65	DSL	26084.2	0.012955	0.014749	0.086243	1.348657	0.009653	1021.747
Los Angeles	2034	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2034	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2035	HHDT	Aggregated	65	DSL	719365	0.018725	0.021317	0.128903	1.714787	0.009732	1030.152
Los Angeles	2035	LDA	Aggregated	65	DSL	53565.49	0.002393	0.002724	0.070262	0.00808	0.001623	171.6893
Los Angeles	2035	LDT1	Aggregated	65	DSL	89.7971	0.016111	0.018341	0.214371	0.208596	0.003344	353.7096
Los Angeles	2035	LDT2	Aggregated	65	DSL	16895.25	0.006758	0.007694	0.068829	0.020435	0.002163	228.799
Los Angeles	2035	LHDT1	Aggregated	65	DSL	556093.4	0.02288	0.026047	0.120261	0.188008	0.003764	398.1862
Los Angeles	2035	LHDT2	Aggregated	65	DSL	217125.1	0.024102	0.027439	0.129279	0.234754	0.004033	426.6024
Los Angeles	2035	MDV	Aggregated	65	DSL	35003.19	0.002714	0.003089	0.0785	0.008959	0.002847	301.1604
Los Angeles	2035	MH	Aggregated	65	DSL	6186.51	0.025437	0.028958	0.094681	1.730469	0.007155	756.8856
Los Angeles	2035	MHDT	Aggregated	65	DSL	381084.2	0.008161	0.009291	0.050192	0.934993	0.007323	775.1561
Los Angeles	2035	OBUS	Aggregated	65	DSL	26429.07	0.012901	0.014687	0.085864	1.331776	0.009562	1012.139
Los Angeles	2035	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2035	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2036	HHDT	Aggregated	65	DSL	725680.7	0.018669	0.021254	0.12863	1.698617	0.00962	1018.295
Los Angeles	2036	LDA	Aggregated	65	DSL	53870.95	0.00231	0.00263	0.069504	0.007591	0.001612	170.5047
Los Angeles	2036	LDT1	Aggregated	65	DSL	89.27763	0.013915	0.015842	0.187905	0.182441	0.003293	348.3499
Los Angeles	2036	LDT2	Aggregated	65	DSL	17030.44	0.006762	0.007698	0.069072	0.020386	0.002144	226.8391
Los Angeles	2036	LHDT1	Aggregated	65	DSL	563846.6	0.022324	0.025415	0.115663	0.163142	0.003741	395.7492
Los Angeles	2036	LHDT2	Aggregated	65	DSL	220225.3	0.023597	0.026863	0.125271	0.21192	0.004008	423.9792
Los Angeles	2036	MDV	Aggregated	65	DSL	35377.63	0.002644	0.00301	0.07802	0.00854	0.002824	298.7247
Los Angeles	2036	MH	Aggregated	65	DSL	6259.366	0.024701	0.028121	0.090655	1.688294	0.00711	752.0976
Los Angeles	2036	MHDT	Aggregated	65	DSL	385390.1	0.008148	0.009276	0.050148	0.928297	0.007264	768.8635
Los Angeles	2036	OBUS	Aggregated	65	DSL	26763.82	0.012844	0.014622	0.085469	1.314878	0.009478	1003.274
Los Angeles	2036	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2036	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2037	HHDT	Aggregated	65	DSL	732047.1	0.018627	0.021205	0.128415	1.685685	0.00952	1007.705
Los Angeles	2037	LDA	Aggregated	65	DSL	54128.98	0.002245	0.002555	0.068903	0.00721	0.001602	169.4949
Los Angeles	2037	LDT1	Aggregated	65	DSL	89.12567	0.0129	0.014686	0.172989	0.163218	0.00325	343.8187

Los Angeles	2037	LDT2	Aggregated	65	DSL	17146.11	0.006767	0.007704	0.069296	0.020354	0.002129	225.1562
Los Angeles	2037	LHDT1	Aggregated	65	DSL	570804.4	0.021822	0.024843	0.111477	0.140638	0.00372	393.5259
Los Angeles	2037	LHDT2	Aggregated	65	DSL	223005.1	0.023129	0.026331	0.121513	0.190839	0.003986	421.586
Los Angeles	2037	MDV	Aggregated	65	DSL	35707.56	0.00258	0.002937	0.077566	0.008175	0.002804	296.5761
Los Angeles	2037	MH	Aggregated	65	DSL	6328.273	0.023986	0.027306	0.086772	1.648217	0.007069	747.7193
Los Angeles	2037	MHDT	Aggregated	65	DSL	389625.5	0.008137	0.009263	0.050103	0.922556	0.007208	762.9935
Los Angeles	2037	OBUS	Aggregated	65	DSL	27103.54	0.012792	0.014563	0.085112	1.29954	0.009403	995.2413
Los Angeles	2037	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2037	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2038	HHDT	Aggregated	65	DSL	738449.3	0.018595	0.021169	0.128257	1.675225	0.009432	998.3822
Los Angeles	2038	LDA	Aggregated	65	DSL	54344.16	0.002193	0.002497	0.06842	0.006896	0.001594	168.6412
Los Angeles	2038	LDT1	Aggregated	65	DSL	88.90257	0.012075	0.013746	0.159353	0.143652	0.003208	339.3927
Los Angeles	2038	LDT2	Aggregated	65	DSL	17245.23	0.006771	0.007708	0.069482	0.020321	0.002115	223.7269
Los Angeles	2038	LHDT1	Aggregated	65	DSL	577100.9	0.021412	0.024376	0.108033	0.122054	0.003701	391.518
Los Angeles	2038	LHDT2	Aggregated	65	DSL	225471.7	0.022716	0.025861	0.11821	0.172169	0.003965	419.394
Los Angeles	2038	MDV	Aggregated	65	DSL	35997.53	0.002528	0.002878	0.077197	0.007859	0.002786	294.6935
Los Angeles	2038	MH	Aggregated	65	DSL	6392.209	0.023312	0.026539	0.083119	1.611125	0.007031	743.7203
Los Angeles	2038	MHDT	Aggregated	65	DSL	393774.3	0.008126	0.00925	0.05006	0.917406	0.007158	757.7085
Los Angeles	2038	OBUS	Aggregated	65	DSL	27451.63	0.012749	0.014514	0.084807	1.288033	0.009335	988.095
Los Angeles	2038	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2038	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2039	HHDT	Aggregated	65	DSL	744889.3	0.018571	0.021142	0.128148	1.666851	0.009355	990.2387
Los Angeles	2039	LDA	Aggregated	65	DSL	54525.76	0.002151	0.002448	0.068021	0.006641	0.001588	167.9279
Los Angeles	2039	LDT1	Aggregated	65	DSL	88.81174	0.011407	0.012986	0.148348	0.127807	0.003173	335.67
Los Angeles	2039	LDT2	Aggregated	65	DSL	17331.89	0.006774	0.007712	0.069637	0.020285	0.002104	222.5311
Los Angeles	2039	LHDT1	Aggregated	65	DSL	582787.6	0.021056	0.023971	0.105078	0.105853	0.003684	389.7009
Los Angeles	2039	LHDT2	Aggregated	65	DSL	227645.7	0.022297	0.025384	0.114949	0.153527	0.003946	417.3802
Los Angeles	2039	MDV	Aggregated	65	DSL	36252.01	0.002483	0.002826	0.076862	0.007567	0.00277	293.0467
Los Angeles	2039	MH	Aggregated	65	DSL	6452.915	0.022715	0.025859	0.079749	1.578225	0.006997	740.089
Los Angeles	2039	MHDT	Aggregated	65	DSL	397841	0.008115	0.009238	0.050013	0.912749	0.007113	752.9456
Los Angeles	2039	OBUS	Aggregated	65	DSL	27782	0.012709	0.014468	0.084523	1.278333	0.009274	981.669
Los Angeles	2039	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2039	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2040	HHDT	Aggregated	65	DSL	751351	0.018554	0.021123	0.12808	1.659748	0.009288	983.1156

Los Angeles	2040	LDA	Aggregated	65	DSL	54679.81	0.002113	0.002406	0.067653	0.006372	0.001582	167.3349
Los Angeles	2040	LDT1	Aggregated	65	DSL	88.76945	0.010816	0.012313	0.138603	0.113748	0.003142	332.4053
Los Angeles	2040	LDT2	Aggregated	65	DSL	17409.45	0.006778	0.007716	0.069782	0.020267	0.002094	221.547
Los Angeles	2040	LHDT1	Aggregated	65	DSL	587928	0.020753	0.023626	0.102566	0.092007	0.003669	388.0588
Los Angeles	2040	LHDT2	Aggregated	65	DSL	229715.5	0.022016	0.025064	0.112801	0.140574	0.003929	415.6282
Los Angeles	2040	MDV	Aggregated	65	DSL	36475.36	0.002442	0.00278	0.076548	0.007297	0.002757	291.6082
Los Angeles	2040	MH	Aggregated	65	DSL	6510.496	0.022191	0.025263	0.076661	1.549367	0.006965	736.7187
Los Angeles	2040	MHDT	Aggregated	65	DSL	401846	0.008105	0.009226	0.049971	0.908805	0.007073	748.696
Los Angeles	2040	OBUS	Aggregated	65	DSL	28112.14	0.012684	0.01444	0.084339	1.272146	0.009223	976.2176
Los Angeles	2040	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2040	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2041	HHDT	Aggregated	65	DSL	758121	0.018542	0.021108	0.128042	1.653841	0.00923	976.9801
Los Angeles	2041	LDA	Aggregated	65	DSL	54805.15	0.002085	0.002373	0.067382	0.006183	0.001577	166.8544
Los Angeles	2041	LDT1	Aggregated	65	DSL	88.39224	0.009981	0.011363	0.124801	0.09399	0.003106	328.5822
Los Angeles	2041	LDT2	Aggregated	65	DSL	17477.01	0.00678	0.007719	0.069912	0.02025	0.002087	220.7488
Los Angeles	2041	LHDT1	Aggregated	65	DSL	592470.5	0.02051	0.023349	0.100597	0.080739	0.003655	386.5815
Los Angeles	2041	LHDT2	Aggregated	65	DSL	231548.2	0.021777	0.024791	0.111167	0.129556	0.003914	414.0511
Los Angeles	2041	MDV	Aggregated	65	DSL	36667.21	0.002407	0.00274	0.076285	0.007082	0.002745	290.3687
Los Angeles	2041	MH	Aggregated	65	DSL	6564.1	0.021716	0.024723	0.073746	1.523311	0.006935	733.6185
Los Angeles	2041	MHDT	Aggregated	65	DSL	405944	0.008096	0.009217	0.049934	0.905191	0.007036	744.76
Los Angeles	2041	OBUS	Aggregated	65	DSL	28440.04	0.012679	0.014434	0.084287	1.270066	0.00918	971.7266
Los Angeles	2041	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2041	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2042	HHDT	Aggregated	65	DSL	764908.4	0.018533	0.021099	0.128026	1.649028	0.00918	971.7325
Los Angeles	2042	LDA	Aggregated	65	DSL	54920.01	0.002062	0.002348	0.067174	0.006035	0.001574	166.4691
Los Angeles	2042	LDT1	Aggregated	65	DSL	88.24813	0.009397	0.010698	0.115158	0.080123	0.003078	325.6425
Los Angeles	2042	LDT2	Aggregated	65	DSL	17539.73	0.006783	0.007722	0.070023	0.020231	0.002081	220.1014
Los Angeles	2042	LHDT1	Aggregated	65	DSL	596535.6	0.020297	0.023106	0.098833	0.070849	0.003642	385.2398
Los Angeles	2042	LHDT2	Aggregated	65	DSL	233263.5	0.021588	0.024576	0.109928	0.12071	0.003901	412.6573
Los Angeles	2042	MDV	Aggregated	65	DSL	36840.57	0.002376	0.002705	0.076057	0.006898	0.002735	289.3068
Los Angeles	2042	MH	Aggregated	65	DSL	6615.278	0.021291	0.024239	0.071035	1.500064	0.006908	730.7703
Los Angeles	2042	MHDT	Aggregated	65	DSL	409993.1	0.008089	0.009209	0.049908	0.902028	0.007003	741.2739
Los Angeles	2042	OBUS	Aggregated	65	DSL	28771.55	0.012686	0.014443	0.084325	1.270939	0.009146	968.1321
Los Angeles	2042	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0

Los Angeles	2042	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2043	HHDT	Aggregated	65	DSL	771710.3	0.018525	0.021089	0.128015	1.644718	0.009137	967.1268
Los Angeles	2043	LDA	Aggregated	65	DSL	55014.4	0.002045	0.002328	0.06701	0.005906	0.001571	166.1638
Los Angeles	2043	LDT1	Aggregated	65	DSL	88.07833	0.008841	0.010065	0.105982	0.066938	0.003053	322.9272
Los Angeles	2043	LDT2	Aggregated	65	DSL	17595.3	0.006785	0.007725	0.070129	0.020219	0.002076	219.5858
Los Angeles	2043	LHDT1	Aggregated	65	DSL	600184.5	0.020145	0.022934	0.097582	0.0636	0.003631	384.0607
Los Angeles	2043	LHDT2	Aggregated	65	DSL	234875.7	0.021461	0.024432	0.109159	0.114502	0.00389	411.4613
Los Angeles	2043	MDV	Aggregated	65	DSL	36989.25	0.002351	0.002677	0.075881	0.006769	0.002726	288.4022
Los Angeles	2043	MH	Aggregated	65	DSL	6662.231	0.020901	0.023795	0.06847	1.478896	0.006883	728.0934
Los Angeles	2043	MHDT	Aggregated	65	DSL	413994.4	0.008084	0.009204	0.049889	0.899245	0.006973	738.0798
Los Angeles	2043	OBUS	Aggregated	65	DSL	29090.61	0.012706	0.014465	0.084446	1.273633	0.009119	965.2787
Los Angeles	2043	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2043	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2044	HHDT	Aggregated	65	DSL	778512.6	0.018515	0.021078	0.12801	1.640478	0.009099	963.1626
Los Angeles	2044	LDA	Aggregated	65	DSL	55094.24	0.002031	0.002313	0.066888	0.005802	0.001569	165.925
Los Angeles	2044	LDT1	Aggregated	65	DSL	88.04667	0.008473	0.009646	0.099926	0.058188	0.003033	320.857
Los Angeles	2044	LDT2	Aggregated	65	DSL	17644.6	0.006788	0.007727	0.070227	0.020212	0.002072	219.1717
Los Angeles	2044	LHDT1	Aggregated	65	DSL	603352	0.019992	0.02276	0.096325	0.056421	0.003621	382.9953
Los Angeles	2044	LHDT2	Aggregated	65	DSL	236182.6	0.021196	0.024131	0.107512	0.103025	0.003879	410.3079
Los Angeles	2044	MDV	Aggregated	65	DSL	37119.67	0.002331	0.002653	0.075741	0.00666	0.002719	287.6372
Los Angeles	2044	MH	Aggregated	65	DSL	6705.646	0.020559	0.023405	0.066089	1.460275	0.00686	725.6125
Los Angeles	2044	MHDT	Aggregated	65	DSL	417961.4	0.008081	0.0092	0.049879	0.897052	0.006946	735.2263
Los Angeles	2044	OBUS	Aggregated	65	DSL	29414.86	0.012724	0.014486	0.084556	1.276187	0.009097	962.8867
Los Angeles	2044	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2044	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2045	HHDT	Aggregated	65	DSL	785323.5	0.018507	0.021069	0.128007	1.636754	0.009067	959.72
Los Angeles	2045	LDA	Aggregated	65	DSL	55167.71	0.002021	0.002301	0.066802	0.00572	0.001567	165.7404
Los Angeles	2045	LDT1	Aggregated	65	DSL	88.10831	0.008223	0.009362	0.095828	0.052222	0.003018	319.2642
Los Angeles	2045	LDT2	Aggregated	65	DSL	17690.41	0.00679	0.00773	0.070319	0.020207	0.002069	218.8393
Los Angeles	2045	LHDT1	Aggregated	65	DSL	606338.8	0.019872	0.022623	0.095377	0.050677	0.003612	382.0737
Los Angeles	2045	LHDT2	Aggregated	65	DSL	237448.7	0.020985	0.02389	0.106203	0.093754	0.00387	409.3231
Los Angeles	2045	MDV	Aggregated	65	DSL	37237.27	0.002314	0.002634	0.075639	0.006582	0.002713	286.9932
Los Angeles	2045	MH	Aggregated	65	DSL	6745.608	0.020217	0.023016	0.063822	1.442219	0.006838	723.2785
Los Angeles	2045	MHDT	Aggregated	65	DSL	421898.7	0.00808	0.009198	0.049879	0.895624	0.006922	732.7181

Los Angeles	2045	OBUS	Aggregated	65	DSL	29722.92	0.01274	0.014503	0.084654	1.27791	0.009078	960.9101
Los Angeles	2045	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2045	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2046	HHDT	Aggregated	65	DSL	793447.6	0.018499	0.02106	0.128	1.633455	0.00904	956.885
Los Angeles	2046	LDA	Aggregated	65	DSL	55223.54	0.002014	0.002293	0.066746	0.005658	0.001566	165.5992
Los Angeles	2046	LDT1	Aggregated	65	DSL	88.15635	0.008012	0.009122	0.092376	0.047187	0.003005	317.8774
Los Angeles	2046	LDT2	Aggregated	65	DSL	17729.63	0.006792	0.007732	0.070404	0.020201	0.002066	218.5715
Los Angeles	2046	LHDT1	Aggregated	65	DSL	608912.5	0.019762	0.022498	0.094524	0.045464	0.003604	381.2493
Los Angeles	2046	LHDT2	Aggregated	65	DSL	238563.1	0.020746	0.023618	0.104717	0.083502	0.003861	408.4383
Los Angeles	2046	MDV	Aggregated	65	DSL	37336.06	0.0023	0.002619	0.075556	0.006503	0.002708	286.4557
Los Angeles	2046	MH	Aggregated	65	DSL	6783.501	0.019964	0.022728	0.061949	1.428375	0.006818	721.1625
Los Angeles	2046	MHDT	Aggregated	65	DSL	426571.8	0.008079	0.009197	0.049879	0.894433	0.006901	730.448
Los Angeles	2046	OBUS	Aggregated	65	DSL	30045.43	0.012748	0.014513	0.084703	1.278575	0.009061	959.0984
Los Angeles	2046	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2046	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2047	HHDT	Aggregated	65	DSL	801592.8	0.018492	0.021051	0.127988	1.630372	0.009017	954.4307
Los Angeles	2047	LDA	Aggregated	65	DSL	55276.37	0.002007	0.002285	0.066697	0.005591	0.001564	165.4896
Los Angeles	2047	LDT1	Aggregated	65	DSL	87.81435	0.007448	0.008479	0.083019	0.033827	0.002983	315.5208
Los Angeles	2047	LDT2	Aggregated	65	DSL	17766.44	0.006794	0.007735	0.070483	0.020195	0.002064	218.3491
Los Angeles	2047	LHDT1	Aggregated	65	DSL	611280.2	0.019689	0.022414	0.093922	0.041774	0.003597	380.5282
Los Angeles	2047	LHDT2	Aggregated	65	DSL	239664.9	0.020611	0.023464	0.103644	0.077294	0.003854	407.6962
Los Angeles	2047	MDV	Aggregated	65	DSL	37427.77	0.002289	0.002606	0.075504	0.006444	0.002704	286.0124
Los Angeles	2047	MH	Aggregated	65	DSL	6820.625	0.019754	0.022489	0.060378	1.416801	0.006799	719.2418
Los Angeles	2047	MHDT	Aggregated	65	DSL	431217.2	0.008078	0.009196	0.04988	0.893382	0.006881	728.3912
Los Angeles	2047	OBUS	Aggregated	65	DSL	30374.52	0.012755	0.014521	0.084742	1.278959	0.009046	957.5145
Los Angeles	2047	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2047	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2048	HHDT	Aggregated	65	DSL	809768	0.018488	0.021047	0.127975	1.628347	0.008997	952.2986
Los Angeles	2048	LDA	Aggregated	65	DSL	55317.68	0.002002	0.00228	0.066662	0.005533	0.001564	165.4052
Los Angeles	2048	LDT1	Aggregated	65	DSL	87.79894	0.007224	0.008224	0.079336	0.028489	0.002971	314.2752
Los Angeles	2048	LDT2	Aggregated	65	DSL	17798.11	0.006796	0.007736	0.070554	0.020187	0.002062	218.1615
Los Angeles	2048	LHDT1	Aggregated	65	DSL	613249.7	0.019615	0.022331	0.093329	0.03819	0.003591	379.8819
Los Angeles	2048	LHDT2	Aggregated	65	DSL	240569.8	0.020438	0.023268	0.102251	0.06972	0.003848	407.0038
Los Angeles	2048	MDV	Aggregated	65	DSL	37506.33	0.00228	0.002595	0.075454	0.006373	0.0027	285.6442

Los Angeles	2048	MH	Aggregated	65	DSL	6854.141	0.019662	0.022383	0.058994	1.410334	0.006783	717.4526
Los Angeles	2048	MHDT	Aggregated	65	DSL	435845.5	0.008078	0.009196	0.049884	0.892637	0.006864	726.5857
Los Angeles	2048	OBUS	Aggregated	65	DSL	30689.09	0.012754	0.01452	0.084737	1.276803	0.00903	955.8514
Los Angeles	2048	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2048	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2049	HHDT	Aggregated	65	DSL	817973.6	0.018484	0.021043	0.127961	1.626693	0.00898	950.4733
Los Angeles	2049	LDA	Aggregated	65	DSL	55348.31	0.001999	0.002276	0.066652	0.005502	0.001563	165.3411
Los Angeles	2049	LDT1	Aggregated	65	DSL	87.91995	0.007169	0.008161	0.078473	0.02715	0.002965	313.5957
Los Angeles	2049	LDT2	Aggregated	65	DSL	17824.94	0.006797	0.007738	0.070623	0.020183	0.002061	218.0032
Los Angeles	2049	LHDT1	Aggregated	65	DSL	614898.7	0.019559	0.022267	0.092812	0.03533	0.003586	379.3148
Los Angeles	2049	LHDT2	Aggregated	65	DSL	241352.5	0.020293	0.023102	0.100824	0.063159	0.003842	406.3899
Los Angeles	2049	MDV	Aggregated	65	DSL	37573.69	0.002271	0.002585	0.075404	0.006284	0.002697	285.3398
Los Angeles	2049	MH	Aggregated	65	DSL	6884.29	0.019584	0.022295	0.057707	1.404699	0.006767	715.7919
Los Angeles	2049	MHDT	Aggregated	65	DSL	440455.1	0.008079	0.009197	0.049892	0.892137	0.00685	725.0162
Los Angeles	2049	OBUS	Aggregated	65	DSL	31000.82	0.012748	0.014513	0.084699	1.273088	0.009014	954.1499
Los Angeles	2049	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2049	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2050	HHDT	Aggregated	65	DSL	826185.4	0.01848	0.021039	0.127945	1.625145	0.009014	954.1177
Los Angeles	2050	LDA	Aggregated	65	DSL	55372.33	0.001997	0.002273	0.066642	0.005464	0.001563	165.2907
Los Angeles	2050	LDT1	Aggregated	65	DSL	88.05704	0.007138	0.008126	0.078001	0.026364	0.00296	313.076
Los Angeles	2050	LDT2	Aggregated	65	DSL	17848.44	0.006797	0.007738	0.070661	0.020139	0.00206	217.8654
Los Angeles	2050	LHDT1	Aggregated	65	DSL	616314.1	0.019513	0.022214	0.09239	0.032927	0.003581	378.8176
Los Angeles	2050	LHDT2	Aggregated	65	DSL	241909	0.020049	0.022825	0.098368	0.052679	0.003836	405.7542
Los Angeles	2050	MDV	Aggregated	65	DSL	37632.88	0.002261	0.002574	0.075332	0.006151	0.002695	285.0854
Los Angeles	2050	MH	Aggregated	65	DSL	6912.566	0.019518	0.02222	0.05658	1.399842	0.006753	714.2818
Los Angeles	2050	MHDT	Aggregated	65	DSL	445060.4	0.008081	0.009199	0.049905	0.891851	0.006848	724.8767
Los Angeles	2050	OBUS	Aggregated	65	DSL	31315.71	0.012736	0.014499	0.084621	1.267632	0.009007	953.3878
Los Angeles	2050	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0
Los Angeles	2050	UBUS	Aggregated	65	DSL	0	0	0	0	0	0	0

3, 2044, 2045, 2046, 2047, 2048, 2049, 2050

CH4_RUNE	PM10_RUNEX	PM2_5_RU	N2O_RUNEX
0.001921	0.033315915	0.031875	0.192665
0.000508	0.007339439	0.007022	0.027964
0.006645	0.108882252	0.104172	0.060386
0.000423	0.004630898	0.004431	0.037835
0.002039	0.010876678	0.010406	0.072098
0.001999	0.012338176	0.011804	0.078527
0.000298	0.003859957	0.003693	0.049731
0.001819	0.074248617	0.071037	0.13647
0.001778	0.044244226	0.04233	0.128625
0.001796	0.03062983	0.029305	0.159325
0.002108	0.034416899	0.032928	0.14866
0.038872	0.014532653	0.013904	0.190156
0.000666	0.024090972	0.023049	0.1784
0.000434	0.006178203	0.005911	0.027226
0.006306	0.10313607	0.098674	0.059566
0.000398	0.004251617	0.004068	0.036802
0.001872	0.009991273	0.009559	0.07098
0.001844	0.011811921	0.011301	0.077319
0.000271	0.003456711	0.003307	0.048334
0.001724	0.067772089	0.06484	0.134821
0.000276	0.009453604	0.009045	0.122484

0.000394	0.014493919	0.013867	0.153969
0.002014	0.033244778	0.031807	0.146862
0.038872	0.014532653	0.013904	0.190156
0.000671	0.0246447	0.023579	0.176302
0.000359	0.004992554	0.004777	0.026483
0.005871	0.095938148	0.091788	0.058625
0.000365	0.003749172	0.003587	0.035773
0.001732	0.009255948	0.008856	0.069855
0.001715	0.011436501	0.010942	0.076104
0.000252	0.003160334	0.003024	0.046984
0.001642	0.062272351	0.059578	0.13266
0.000275	0.009601214	0.009186	0.12054
0.000401	0.014992899	0.014344	0.152717
0.001921	0.032189634	0.030797	0.144827
0.038872	0.014532653	0.013904	0.190156
0.000671	0.024850883	0.023776	0.173576
0.000313	0.004223973	0.004041	0.025744
0.005505	0.089801327	0.085917	0.05757
0.000353	0.003544318	0.003391	0.034758
0.001614	0.008634064	0.008261	0.068721
0.001608	0.011179058	0.010695	0.074885
0.000232	0.002847741	0.002725	0.045641
0.001572	0.057516871	0.055029	0.130601
0.000274	0.009714763	0.009295	0.118518
0.000398	0.014812262	0.014171	0.149224
0.001826	0.031161157	0.029813	0.142703
0.038872	0.014532653	0.013904	0.190156
0.000669	0.024857345	0.023782	0.170614
0.000268	0.003474943	0.003325	0.02511
0.004819	0.077486654	0.074135	0.05632
0.000348	0.003488535	0.003338	0.033911
0.001512	0.008096159	0.007746	0.06758
0.001516	0.010985059	0.01051	0.073657
0.000215	0.002548758	0.002438	0.044496

0.00151	0.053221887	0.05092	0.12878
0.000273	0.009786672	0.009363	0.116573
0.000396	0.014665155	0.014031	0.146055
0.001722	0.030086199	0.028785	0.140487
0.038872	0.014532653	0.013904	0.190156
0.000665	0.024809518	0.023736	0.167549
0.000227	0.002769984	0.00265	0.02456
0.003526	0.053739693	0.051415	0.054591
0.000338	0.003324329	0.003181	0.03316
0.001426	0.007626365	0.007296	0.066442
0.00144	0.010841123	0.010372	0.072431
0.000193	0.002173479	0.002079	0.043493
0.001453	0.049373657	0.047238	0.126885
0.000272	0.009823969	0.009399	0.114521
0.000393	0.014496507	0.013869	0.142892
0.001608	0.028914913	0.027664	0.138073
0.038872	0.014532653	0.013904	0.190156
0.000662	0.024694237	0.023626	0.164412
0.0002	0.002201963	0.002107	0.024085
0.003032	0.040967989	0.039196	0.053089
0.000337	0.003301478	0.003159	0.03252
0.001353	0.007214908	0.006903	0.06544
0.001375	0.010732749	0.010268	0.07135
0.00018	0.001904964	0.001823	0.042633
0.001402	0.045959595	0.043971	0.12513
0.000271	0.009878585	0.009451	0.112635
0.000393	0.014489452	0.013863	0.140326
0.001488	0.027654253	0.026458	0.135565
0	0	0	0
0.000657	0.024502383	0.023442	0.161141
0.000174	0.00181178	0.001733	0.02368
0.002279	0.030402166	0.029087	0.051806
0.000335	0.003291433	0.003149	0.031949
0.001291	0.00685215	0.006556	0.064578

0.001321	0.010647934	0.010187	0.070411
0.000167	0.001695963	0.001623	0.041883
0.001357	0.042890511	0.041035	0.123555
0.00027	0.009924938	0.009496	0.11092
0.000393	0.014548355	0.013919	0.138194
0.001368	0.02637728	0.025236	0.13305
0	0	0	0
0.000652	0.024290618	0.02324	0.157787
0.000152	0.001493376	0.001429	0.023324
0.001689	0.022135477	0.021178	0.050532
0.000333	0.003281599	0.00314	0.031437
0.001238	0.006534887	0.006252	0.063825
0.001275	0.010597635	0.010139	0.069585
0.000159	0.001552007	0.001485	0.041232
0.001317	0.040181074	0.038443	0.122156
0.00027	0.009955825	0.009525	0.109332
0.000394	0.014655352	0.014021	0.136456
0.00125	0.025068534	0.023984	0.130541
0	0	0	0
0.000647	0.024031113	0.022992	0.154226
0.000143	0.001339457	0.001282	0.023024
0.001272	0.016298458	0.015593	0.049337
0.000332	0.003280753	0.003139	0.030975
0.001193	0.00625891	0.005988	0.063164
0.001235	0.010541289	0.010085	0.068856
0.000151	0.001421601	0.00136	0.040655
0.001278	0.037619875	0.035992	0.120903
0.000269	0.009976256	0.009545	0.107882
0.000395	0.01477947	0.01414	0.135084
0.001135	0.023713087	0.022687	0.12807
0	0	0	0
0.000643	0.023853554	0.022822	0.151168
0.000131	0.001159606	0.001109	0.022753
0.00104	0.013069852	0.012504	0.048265

0.000333	0.003292413	0.00315	0.03056
0.001156	0.006023439	0.005763	0.06258
0.0012	0.010484423	0.010031	0.068208
0.000145	0.001321201	0.001264	0.040145
0.001246	0.035362049	0.033832	0.119786
0.000268	0.009994193	0.009562	0.106617
0.000396	0.014819102	0.014178	0.133754
0.001025	0.022316004	0.021351	0.125687
0	0	0	0
0.000639	0.023690628	0.022666	0.148299
0.000126	0.001063776	0.001018	0.022522
0.000925	0.011488182	0.010991	0.047338
0.000333	0.003301113	0.003158	0.030186
0.001124	0.005815586	0.005564	0.062061
0.00117	0.010432237	0.009981	0.06763
0.000141	0.001233699	0.00118	0.039693
0.001215	0.033218639	0.031782	0.118777
0.000268	0.010012507	0.009579	0.105495
0.000395	0.014817629	0.014177	0.132498
0.00092	0.020863585	0.019961	0.123387
0	0	0	0
0.000635	0.023507343	0.02249	0.145565
0.000121	0.000977889	0.000936	0.022319
0.000828	0.01014491	0.009706	0.046498
0.000333	0.003310054	0.003167	0.029852
0.001099	0.005632127	0.005388	0.061599
0.001145	0.010358795	0.009911	0.067115
0.000137	0.001156042	0.001106	0.039292
0.001185	0.031192491	0.029843	0.117865
0.000267	0.010013933	0.009581	0.104449
0.000394	0.014742317	0.014105	0.131252
0.00082	0.019327507	0.018491	0.121175
0	0	0	0
0.000632	0.023339959	0.02233	0.143051

0.000117	0.000903669	0.000865	0.022143
0.000671	0.00797101	0.007626	0.045697
0.000333	0.003321472	0.003178	0.029559
0.001076	0.005462649	0.005226	0.061183
0.001121	0.010275077	0.009831	0.066647
0.000133	0.001081215	0.001034	0.038935
0.001159	0.029329929	0.028061	0.117045
0.000266	0.010001093	0.009568	0.103506
0.000393	0.014640078	0.014007	0.130048
0.000728	0.017754764	0.016987	0.119077
0	0	0	0
0.00063	0.023217265	0.022213	0.140887
0.000113	0.00083482	0.000799	0.02199
0.000591	0.006870537	0.006573	0.045004
0.000333	0.003330287	0.003186	0.029306
0.001057	0.005314102	0.005084	0.060808
0.001103	0.010309408	0.009863	0.066237
0.00013	0.001016478	0.000973	0.03862
0.001136	0.0276335	0.026438	0.116304
0.000266	0.009986349	0.009554	0.10273
0.000391	0.014530196	0.013902	0.128942
0.000646	0.016262565	0.015559	0.117127
0	0	0	0
0.000628	0.023123776	0.022123	0.138896
0.00011	0.0007783	0.000745	0.02186
0.000555	0.006375879	0.0061	0.044419
0.000334	0.003338757	0.003194	0.029088
0.00104	0.005173449	0.00495	0.060467
0.001087	0.010337727	0.009891	0.065863
0.000127	0.000956883	0.000915	0.038342
0.001114	0.026012302	0.024887	0.115627
0.000265	0.009970764	0.009539	0.101936
0.00039	0.014429601	0.013805	0.127935
0.000574	0.014900508	0.014256	0.115311

0	0	0	0
0.000627	0.02305959	0.022062	0.13717
0.000108	0.000732004	0.0007	0.02175
0.000525	0.005980844	0.005722	0.043847
0.000334	0.003345833	0.003201	0.028904
0.001026	0.005046905	0.004829	0.060158
0.001073	0.01036281	0.009915	0.065521
0.000124	0.000906435	0.000867	0.038099
0.001093	0.02449897	0.023439	0.115009
0.000265	0.009955083	0.009524	0.101221
0.000388	0.014360305	0.013739	0.127056
0.000512	0.013720468	0.013127	0.113623
0	0	0	0
0.000626	0.023021725	0.022026	0.135705
0.000106	0.00069346	0.000663	0.021658
0.000501	0.005662334	0.005417	0.043366
0.000334	0.003351763	0.003207	0.028749
0.001013	0.00493178	0.004718	0.059879
0.001059	0.010380101	0.009931	0.065206
0.000122	0.000862087	0.000825	0.037886
0.001074	0.023121063	0.022121	0.114447
0.000265	0.009937545	0.009508	0.100577
0.000387	0.014296803	0.013678	0.126275
0.000459	0.012743842	0.012193	0.112036
0	0	0	0
0.000625	0.023004505	0.022009	0.13448
0.000104	0.000660592	0.000632	0.021581
0.00048	0.005380435	0.005148	0.042944
0.000334	0.003357234	0.003212	0.028622
0.001003	0.004827916	0.004619	0.059627
0.001049	0.010406549	0.009956	0.064933
0.00012	0.000822293	0.000787	0.0377
0.001057	0.021835187	0.020891	0.113926
0.000264	0.009921987	0.009493	0.100002

0.000387	0.014268074	0.013651	0.125616
0.000412	0.01196443	0.011447	0.110516
0	0	0	0
0.000625	0.022997785	0.022003	0.13346
0.000103	0.000634834	0.000607	0.021519
0.00045	0.004980348	0.004765	0.04245
0.000334	0.003362115	0.003217	0.028519
0.000995	0.004736827	0.004532	0.0594
0.001041	0.010433048	0.009982	0.064686
0.000118	0.000787667	0.000754	0.03754
0.001041	0.020605619	0.019714	0.113447
0.000264	0.009907857	0.009479	0.09947
0.000387	0.014284359	0.013666	0.125079
0.000373	0.011359839	0.010868	0.109079
0	0	0	0
0.000625	0.023003587	0.022008	0.132634
0.000101	0.000614591	0.000588	0.02147
0.000429	0.004701148	0.004498	0.042071
0.000334	0.003366352	0.003221	0.028435
0.000987	0.004653137	0.004452	0.059194
0.001034	0.010459742	0.010007	0.064468
0.000117	0.000757488	0.000725	0.037402
0.001027	0.019448734	0.018607	0.113006
0.000264	0.009899225	0.009471	0.098998
0.000387	0.014329909	0.01371	0.12465
0.00034	0.010866162	0.010396	0.107693
0	0	0	0
0.000625	0.023012807	0.022017	0.131946
0.000101	0.000598628	0.000573	0.02143
0.000409	0.004435418	0.004244	0.04172
0.000335	0.003370333	0.003225	0.028369
0.000982	0.00458362	0.004385	0.059012
0.00103	0.010489448	0.010036	0.064282
0.000116	0.000732123	0.0007	0.037285

0.001014	0.018345806	0.017552	0.112592
0.000263	0.009892873	0.009465	0.098566
0.000388	0.014397917	0.013775	0.124309
0.000312	0.010464117	0.010011	0.106383
0	0	0	0
0.000624	0.023023264	0.022027	0.131372
0.0001	0.000586298	0.000561	0.0214
0.000396	0.004260307	0.004076	0.041452
0.000335	0.003374016	0.003228	0.028315
0.000977	0.004519722	0.004324	0.058849
0.001021	0.010501932	0.010048	0.064101
0.000115	0.000710787	0.00068	0.037187
0.001002	0.017304161	0.016556	0.112209
0.000263	0.009890641	0.009463	0.098181
0.000389	0.014459017	0.013834	0.12402
0.000291	0.010149482	0.00971	0.105189
0	0	0	0
0.000624	0.023033	0.022037	0.130882
9.95E-05	0.000576909	0.000552	0.021376
0.000387	0.004142084	0.003963	0.041246
0.000335	0.003377433	0.003231	0.028272
0.000973	0.004468643	0.004275	0.058707
0.001013	0.010516899	0.010062	0.063948
0.000114	0.000693198	0.000663	0.037103
0.000991	0.016337209	0.01563	0.111848
0.000263	0.00989268	0.009465	0.097842
0.000389	0.01450715	0.01388	0.123776
0.000277	0.009934167	0.009504	0.104143
0	0	0	0
0.000624	0.023038476	0.022042	0.130467
9.92E-05	0.000569847	0.000545	0.021357
0.00038	0.004042541	0.003868	0.041067
0.000335	0.003380622	0.003234	0.028238
0.000969	0.004424752	0.004233	0.05858

0.001005	0.010527307	0.010072	0.063809
0.000113	0.000678522	0.000649	0.037034
0.000982	0.015505288	0.014835	0.111521
0.000263	0.009894645	0.009467	0.097535
0.000389	0.01453883	0.01391	0.123546
0.000268	0.009810208	0.009386	0.10325
0	0	0	0
0.000624	0.023041921	0.022045	0.130102
9.89E-05	0.000564071	0.00054	0.021343
0.00036	0.003771092	0.003608	0.040763
0.000335	0.003383562	0.003237	0.028209
0.000967	0.004388875	0.004199	0.05847
0.001	0.010541569	0.010086	0.063693
0.000113	0.000666862	0.000638	0.036976
0.000975	0.014807992	0.014167	0.111223
0.000263	0.009896644	0.009469	0.097256
0.00039	0.014564182	0.013934	0.123341
0.000264	0.009759606	0.009337	0.102503
0	0	0	0
0.000624	0.023044083	0.022047	0.12978
9.87E-05	0.000559522	0.000535	0.021332
0.000352	0.003664679	0.003506	0.040602
0.000335	0.00338623	0.00324	0.028185
0.000964	0.004354978	0.004167	0.05837
0.000994	0.010548204	0.010092	0.063585
0.000112	0.000656724	0.000628	0.036929
0.00097	0.014081113	0.013472	0.110947
0.000263	0.009899588	0.009471	0.097012
0.00039	0.014561961	0.013932	0.123112
0.000262	0.009762747	0.00934	0.101879
0	0	0	0
0.000624	0.023050197	0.022053	0.129524
9.86E-05	0.000556319	0.000532	0.021324
0.00035	0.00364026	0.003483	0.040514

0.000335	0.003388821	0.003242	0.028164
0.000963	0.00432434	0.004137	0.058283
0.000989	0.010552351	0.010096	0.063489
0.000112	0.000647957	0.00062	0.03689
0.000966	0.013398404	0.012819	0.11069
0.000263	0.009904496	0.009476	0.096799
0.000389	0.014543774	0.013915	0.122869
0.000262	0.009799608	0.009376	0.101352
0	0	0	0
0.000624	0.023060362	0.022063	0.129745
9.84E-05	0.000553572	0.00053	0.021318
0.000349	0.003627188	0.00347	0.040447
0.000335	0.003390447	0.003244	0.028147
0.000961	0.004297015	0.004111	0.058207
0.000981	0.01053989	0.010084	0.06339
0.000111	0.000639557	0.000612	0.036857
0.000963	0.012799549	0.012246	0.110456
0.000263	0.009910934	0.009482	0.096778
0.000389	0.014505281	0.013878	0.122717
0.000262	0.009854296	0.009428	0.100999
0	0	0	0
0.001753	0.042457803	0.040621	0.211687
0.000578	0.008598573	0.008227	0.034082
0.008322	0.136618397	0.130708	0.073471
0.000433	0.005007259	0.004791	0.046034
0.002333	0.012323481	0.01179	0.073755
0.002279	0.013802944	0.013206	0.079009
0.00031	0.00417747	0.003997	0.060465
0.002091	0.098079756	0.093837	0.138717
0.001851	0.05125135	0.049034	0.147692
0.002068	0.03982026	0.038098	0.18945
0	0	0	0
0.03467	0.02121016	0.020293	0.20784
0.000925	0.035263691	0.033738	0.204778

0.000489	0.007185459	0.006875	0.033182
0.007893	0.129357974	0.123762	0.072472
0.000401	0.00451363	0.004318	0.044776
0.002114	0.011195351	0.010711	0.072612
0.002076	0.013030618	0.012467	0.077793
0.00028	0.003719594	0.003559	0.058766
0.001963	0.089195688	0.085337	0.137041
0.000384	0.014407874	0.013785	0.143997
0.000591	0.02328754	0.02228	0.186552
0	0	0	0
0.03467	0.02121016	0.020293	0.20784
0.000925	0.035573812	0.034035	0.20111
0.000397	0.005733116	0.005485	0.032277
0.007342	0.120269539	0.115067	0.071328
0.000359	0.003865908	0.003699	0.043525
0.001931	0.010257589	0.009814	0.071461
0.001907	0.012453283	0.011915	0.076571
0.000258	0.003388223	0.003242	0.057125
0.001852	0.081661811	0.078129	0.134844
0.000385	0.014663733	0.014029	0.141736
0.000605	0.024208976	0.023162	0.185604
0	0	0	0
0.03467	0.02121016	0.020293	0.20784
0.000922	0.035570286	0.034032	0.197011
0.000341	0.004801987	0.004594	0.031376
0.006877	0.112514705	0.107647	0.070045
0.000342	0.003593716	0.003438	0.042289
0.001775	0.009465139	0.009056	0.070301
0.001766	0.012030735	0.01151	0.075344
0.000237	0.003032014	0.002901	0.055492
0.001758	0.075125915	0.071876	0.132751
0.000385	0.01486505	0.014222	0.139382
0.000601	0.023914912	0.02288	0.181346
0	0	0	0

0.03467	0.02121016	0.020293	0.20784
0.000916	0.035384301	0.033854	0.1928
0.000287	0.003892873	0.003724	0.030603
0.006008	0.096973967	0.092779	0.068523
0.000336	0.003510399	0.003359	0.041259
0.001642	0.008781328	0.008401	0.069134
0.001645	0.011694346	0.011188	0.074109
0.000216	0.002689477	0.002573	0.054099
0.001673	0.069226344	0.066232	0.130901
0.000384	0.015000115	0.014351	0.137116
0.000597	0.023675965	0.022652	0.177485
0	0	0	0
0.03467	0.02121016	0.020293	0.20784
0.000909	0.03511452	0.033595	0.188263
0.000237	0.003037435	0.002906	0.029933
0.004372	0.067022885	0.064124	0.06642
0.000323	0.003291582	0.003149	0.040345
0.001528	0.008186355	0.007832	0.067969
0.001544	0.011427142	0.010933	0.072876
0.000191	0.002248213	0.002151	0.05288
0.001595	0.063943846	0.061178	0.128974
0.000383	0.015078321	0.014426	0.13472
0.000593	0.02339941	0.022387	0.173628
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0.03467	0.02121016	0.020293	0.20784
0.000903	0.034845985	0.033339	0.183812
0.000206	0.002353336	0.002252	0.029354
0.003744	0.050897895	0.048696	0.064592
0.000321	0.003252165	0.003111	0.039567
0.001431	0.007667901	0.007336	0.066945
0.001458	0.011211216	0.010726	0.071787
0.000177	0.001939393	0.001855	0.051835
0.001526	0.059237922	0.056675	0.127191
0.000383	0.015179994	0.014523	0.132518

0.000592	0.023372607	0.022362	0.170476
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0.000897	0.034562539	0.033067	0.1797
0.000174	0.0018915	0.00181	0.02886
0.00279	0.037546922	0.035923	0.063032
0.000318	0.003230127	0.00309	0.038871
0.001349	0.007213375	0.006901	0.066062
0.001386	0.011031293	0.010554	0.070843
0.000162	0.001703783	0.00163	0.050923
0.001463	0.054991087	0.052612	0.12559
0.000382	0.015266794	0.014606	0.130514
0.000592	0.023448243	0.022434	0.167845
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0.000891	0.034330179	0.032845	0.175895
0.000149	0.001518794	0.001453	0.028426
0.002042	0.027096608	0.025924	0.061482
0.000315	0.003209427	0.003071	0.038248
0.001279	0.006818138	0.006523	0.065292
0.001325	0.010901241	0.01043	0.070012
0.000153	0.001548898	0.001482	0.050131
0.001406	0.051217269	0.049002	0.124167
0.000382	0.015327829	0.014665	0.128658
0.000594	0.023600219	0.022579	0.165697
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0.000886	0.034137263	0.03266	0.172422
0.000139	0.001351478	0.001293	0.028061
0.001513	0.01971292	0.01886	0.060027
0.000314	0.003201194	0.003063	0.037686
0.001219	0.006476648	0.006196	0.064616
0.001273	0.010769039	0.010303	0.069279
0.000144	0.00140892	0.001348	0.04943

0.001352	0.047666127	0.045604	0.122894
0.000381	0.015371211	0.014706	0.126962
0.000604	0.024047538	0.023007	0.165415
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0.000881	0.033949951	0.032481	0.169307
0.000126	0.001149908	0.0011	0.02773
0.001218	0.015621612	0.014946	0.058723
0.000314	0.003209722	0.003071	0.037182
0.00117	0.006187956	0.00592	0.064019
0.001226	0.010641242	0.010181	0.068626
0.000139	0.001305266	0.001249	0.04881
0.001306	0.044491379	0.042567	0.121758
0.000381	0.015408632	0.014742	0.125483
0.000605	0.024093507	0.023051	0.163754
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0.000877	0.033784864	0.032323	0.166576
0.00012	0.001052088	0.001007	0.027449
0.001072	0.013610606	0.013022	0.057595
0.000314	0.003215453	0.003076	0.036727
0.001128	0.005935165	0.005678	0.063488
0.001186	0.010524483	0.010069	0.068045
0.000134	0.001216166	0.001164	0.048259
0.001261	0.041485285	0.039691	0.120732
0.00038	0.015444735	0.014777	0.124171
0.000604	0.024069391	0.023028	0.162173
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0.000873	0.033599383	0.032146	0.164109
0.000115	0.000964832	0.000923	0.027202
0.000947	0.011901718	0.011387	0.056574
0.000314	0.003222307	0.003083	0.03632
0.001093	0.005714438	0.005467	0.063015

0.001151	0.010385488	0.009936	0.067527
0.00013	0.001138053	0.001089	0.047772
0.001219	0.03865434	0.036982	0.119805
0.00038	0.015453529	0.014785	0.122947
0.000602	0.023926382	0.022891	0.160604
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0.000748	0.009145643	0.00875	0.055598
0.000314	0.003232949	0.003093	0.035964
0.001063	0.005511748	0.005273	0.062589
0.00112	0.010237325	0.009794	0.067056
0.000126	0.001062041	0.001016	0.047338
0.001181	0.036044833	0.034486	0.118972
0.000379	0.015439796	0.014772	0.121844
0.000599	0.023744864	0.022718	0.159094
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0.000867	0.033302858	0.031862	0.160062
0.000107	0.000819928	0.000784	0.026801
0.000646	0.007745515	0.00741	0.054756
0.000314	0.003240824	0.003101	0.035656
0.001037	0.005336251	0.005105	0.062206
0.001096	0.010243136	0.0098	0.066644
0.000123	0.00099726	0.000954	0.046955
0.001147	0.033628075	0.032173	0.118219
0.000378	0.015421066	0.014754	0.120855
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0.000865	0.033202945	0.031767	0.158397
0.000104	0.000763198	0.00073	0.026642
0.000599	0.007111245	0.006804	0.054044

0.000314	0.003248766	0.003108	0.035391
0.001014	0.005171297	0.004948	0.061857
0.001074	0.010245028	0.009802	0.066267
0.00012	0.000937419	0.000897	0.046618
0.001114	0.031314487	0.02996	0.117531
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0.000594	0.023373538	0.022362	0.156438
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0.000864	0.033131907	0.031699	0.156932
0.000102	0.000717269	0.000686	0.026508
0.000561	0.006602376	0.006317	0.053348
0.000315	0.003255353	0.003115	0.035167
0.000995	0.005024761	0.004807	0.061541
0.001055	0.010246874	0.009804	0.065923
0.000117	0.000887473	0.000849	0.046322
0.001083	0.0291539	0.027893	0.116902
0.000377	0.015378747	0.014713	0.119101
0.000592	0.023238494	0.022233	0.155315
0	0	0	0
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0.000863	0.033087879	0.031657	0.155652
9.99E-05	0.000679061	0.00065	0.026396
0.00053	0.006191623	0.005924	0.052763
0.000315	0.003260816	0.00312	0.034979
0.000978	0.004892551	0.004681	0.061256
0.001036	0.010241776	0.009799	0.065606
0.000115	0.000843446	0.000807	0.046063
0.001055	0.027199662	0.026023	0.116332
0.000377	0.015354008	0.01469	0.118353
0.00059	0.023108735	0.022109	0.154305
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0.000862	0.033065106	0.031635	0.154532

9.82E-05	0.000646115	0.000618	0.026303
0.000502	0.005827858	0.005576	0.052249
0.000315	0.00326596	0.003125	0.034824
0.000964	0.004774221	0.004568	0.060997
0.001023	0.010252247	0.009809	0.065331
0.000113	0.000803875	0.000769	0.045837
0.001031	0.025382515	0.024284	0.115802
0.000376	0.015332091	0.014669	0.117685
0.000589	0.023036548	0.02204	0.153448
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0.000861	0.033056538	0.031627	0.153568
9.68E-05	0.000620433	0.000594	0.026227
0.000464	0.005312863	0.005083	0.051649
0.000315	0.003270548	0.003129	0.034699
0.000953	0.004671783	0.00447	0.060765
0.001011	0.01026607	0.009822	0.065083
0.000112	0.000769567	0.000736	0.045642
0.001009	0.023650573	0.022627	0.115315
0.000376	0.015312072	0.01465	0.117066
0.000589	0.023039397	0.022043	0.152742
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0.000861	0.033058457	0.031628	0.152743
9.58E-05	0.000600249	0.000574	0.026167
0.000436	0.004952953	0.004739	0.051186
0.000315	0.003274498	0.003133	0.034597
0.000943	0.004578068	0.00438	0.060554
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0.00011	0.000739686	0.000708	0.045475
0.000989	0.022025555	0.021073	0.114867
0.000376	0.015300398	0.014639	0.116518
0.000589	0.023093857	0.022095	0.152177
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0.00086	0.033062581	0.031632	0.152019
9.5E-05	0.000584244	0.000559	0.026119
0.000411	0.004610497	0.004411	0.05076
0.000315	0.003278249	0.003136	0.034516
0.000936	0.004501324	0.004307	0.060369
0.000997	0.01030496	0.009859	0.064676
0.000109	0.000714737	0.000684	0.045333
0.000971	0.020479964	0.019594	0.114446
0.000376	0.015292043	0.014631	0.116016
0.00059	0.023189171	0.022186	0.151728
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0.00086	0.033068892	0.031638	0.151396
9.44E-05	0.000571842	0.000547	0.026081
0.000394	0.004384418	0.004195	0.050434
0.000315	0.003281744	0.00314	0.034451
0.000929	0.004430251	0.004239	0.060202
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0.000108	0.000693746	0.000664	0.045213
0.000955	0.019025716	0.018203	0.114056
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0.000591	0.023276579	0.02227	0.151352
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0.00086	0.033075563	0.031645	0.150855
9.39E-05	0.000562379	0.000538	0.026052
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0.000923	0.004373549	0.004184	0.060057
0.000975	0.010311165	0.009865	0.06434
0.000107	0.000676518	0.000647	0.045111
0.000939	0.017671572	0.016907	0.113689
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0.000592	0.023347394	0.022337	0.151042
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0.000918	0.004324545	0.004137	0.059927
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0.000915	0.004284924	0.0041	0.059814
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0.000106	0.000650566	0.000622	0.044957
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0.000592	0.023433387	0.02242	0.150508
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0.000375	0.015316192	0.014654	0.113962
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0	0	0	0
0	0	0	0
0.000858	0.033077133	0.031646	0.149974
9.27E-05	0.000538477	0.000515	0.025981
0.000332	0.003565787	0.003412	0.049211
0.000316	0.003297066	0.003154	0.034245
0.000906	0.004183811	0.004003	0.059545
0.000931	0.010281849	0.009837	0.063779
0.000105	0.000622622	0.000596	0.044811
0.000907	0.012810121	0.012256	0.112275
0.000375	0.015326716	0.014664	0.113941
0.000592	0.023368446	0.022358	0.149859
0	0	0	0
0	0	0	0

Arroyo Specific Plan
EMFAC2017 WebDataBase Output file
Los Angeles South Coast Vehicle Population Data

EMFAC2017 (v1.0.2) Emission Rates
Region Type: Sub-Area
Region: Los Angeles (SC)
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	VMT	Trips	ROG_RUNE	ROG_IDLEX	ROG_STRE	ROG_HOTS
Los Angeles	2022	HHDT	Aggregatec	Aggregatec	DSL	56923.27	6812046	566695.2	0.077671	4.606194	0	0
Los Angeles	2022	LDA	Aggregatec	Aggregatec	DSL	34750.74	1365564	164528.3	0.021286	0	0	0
Los Angeles	2022	LDT1	Aggregatec	Aggregatec	DSL	270.6503	6627.201	961.471	0.191727	0	0	0
Los Angeles	2022	LDT2	Aggregatec	Aggregatec	DSL	8920.377	378460.6	44003.2	0.023132	0	0	0
Los Angeles	2022	LHDT1	Aggregatec	Aggregatec	DSL	64097.23	2744971	806262.5	0.065313	0.10976	0	0
Los Angeles	2022	LHDT2	Aggregatec	Aggregatec	DSL	25927.31	1067421	326132.9	0.064442	0.10976	0	0
Los Angeles	2022	MDV	Aggregatec	Aggregatec	DSL	19516.67	771652.4	96044.42	0.015776	0	0	0
Los Angeles	2022	MH	Aggregatec	Aggregatec	DSL	5865.305	61785.31	586.5305	0.06719	0	0	0
Los Angeles	2022	MHDT	Aggregatec	Aggregatec	DSL	64993.29	4140797	639139.1	0.061871	0.093974	0	0
Los Angeles	2022	OBUS	Aggregatec	Aggregatec	DSL	3063.907	235354.5	29929.83	0.061934	1.031986	0	0
Los Angeles	2022	SBUS	Aggregatec	Aggregatec	DSL	3460.157	109535.7	39929.73	0.112169	0.286858	0	0
Los Angeles	2022	UBUS	Aggregatec	Aggregatec	DSL	10.1389	1181.23	40.5556	0.001159	0	0	0

and DIURN

ROG_RUNL	ROG_RESTI	ROG_DIUR	TOG_RUNE	TOG_IDLEX	TOG_STRE	TOG_HOTS	TOG_RUNL	TOG_RESTI	TOG_DIUR	CO_RUNEX	CO_IDLEX	CO_STREX
0	0	0	0.088422	5.243801	0	0	0	0	0	0.355332	62.30323	0
0	0	0	0.024233	0	0	0	0	0	0	0.294415	0	0
0	0	0	0.218268	0	0	0	0	0	0	1.12312	0	0
0	0	0	0.026334	0	0	0	0	0	0	0.191116	0	0
0	0	0	0.074355	0.124954	0	0	0	0	0	0.33048	0.909745	0
0	0	0	0.073363	0.124954	0	0	0	0	0	0.324112	0.909745	0
0	0	0	0.01796	0	0	0	0	0	0	0.277361	0	0
0	0	0	0.076492	0	0	0	0	0	0	0.269043	0	0
0	0	0	0.070435	0.106983	0	0	0	0	0	0.24236	2.434588	0
0	0	0	0.070508	1.174837	0	0	0	0	0	0.262003	13.78649	0
0	0	0	0.127696	0.326566	0	0	0	0	0	0.325319	6.568771	0
0	0	0	0.082805	0	0	0	0	0	0	0.138037	0	0

NOx_RUNE	NOx_IDLEX	NOx_STREX	CO2_RUNE	CO2_IDLEX	CO2_STREX	CH4_RUNE	CH4_IDLEX	CH4_STREX	PM10_RUN	PM10_IDLE	PM10_STR	PM10_PMT
3.60506	63.08184	2.103887	1451.961	11718.19	0	0.003608	0.213946	0	0.02856	0.037879	0	0.035596
0.077574	0	0	215.2423	0	0	0.000989	0	0	0.009891	0	0	0.008
1.043121	0	0	467.3854	0	0	0.008905	0	0	0.143295	0	0	0.008
0.048336	0	0	292.8436	0	0	0.001074	0	0	0.006399	0	0	0.008
1.215693	1.882319	0	464.7443	130.5222	0	0.003034	0.005098	0	0.013152	0.027795	0	0.012
1.165018	1.90161	0	514.181	209.9226	0	0.002993	0.005098	0	0.014926	0.028376	0	0.012
0.04687	0	0	378.6242	0	0	0.000733	0	0	0.005332	0	0	0.008
3.432833	0	0	965.3296	0	0	0.003121	0	0	0.074965	0	0	0.016
1.858006	6.770241	1.707577	954.2618	841.0778	0	0.002874	0.004365	0	0.037714	0.015346	0	0.012
2.33374	16.23003	1.895212	1178.738	2873.598	0	0.002877	0.047933	0	0.029155	0.028183	0	0.012
6.80758	40.91345	0.944657	1219.865	3626.861	0	0.00521	0.013324	0	0.04025	0.051926	0	0.012
0.832392	0	0	1797.118	0	0	0.081135	0	0	0.006137	0	0	0.036

PM10_PMI	PM2_5_RU	PM2_5_IDI	PM2_5_ST	PM2_5_PM	PM2_5_PM	SOx_RUNE	SOx_IDLEX	SOx_STREX	N2O_RUNE	N2O_IDLEX	N2O_STREX
0.061047	0.027324	0.03624	0	0.008899	0.026163	0.013717	0.110708	0	0.228228	1.841936	0
0.03675	0.009463	0	0	0.002	0.01575	0.002035	0	0	0.033833	0	0
0.03675	0.137096	0	0	0.002	0.01575	0.004418	0	0	0.073466	0	0
0.03675	0.006122	0	0	0.002	0.01575	0.002768	0	0	0.046031	0	0
0.07644	0.012583	0.026592	0	0.003	0.03276	0.004394	0.001234	0	0.073051	0.020516	0
0.08918	0.01428	0.027148	0	0.003	0.03822	0.004861	0.001985	0	0.080822	0.032997	0
0.03675	0.005102	0	0	0.002	0.01575	0.003579	0	0	0.059514	0	0
0.13034	0.071722	0	0	0.004	0.05586	0.009126	0	0	0.151736	0	0
0.13034	0.036083	0.014682	0	0.003	0.05586	0.009015	0.007946	0	0.149997	0.132206	0
0.13034	0.027894	0.026964	0	0.003	0.05586	0.011136	0.027148	0	0.185281	0.45169	0
0.7448	0.038509	0.049679	0	0.003	0.3192	0.011525	0.034265	0	0.191746	0.570092	0
0.06174	0.005872	0	0	0.009	0.02646	0.016989	0	0	0.282482	0	0

APPENDIX B: HARP2 OUTPUTS

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Arroyo Specific Plan
HARP2 Output (Cancer)

*HARP - HRACalc v19044 2/27/2019 1:32:19 PM - Cancer Risk
Input File: C:\Users\pgleason\Desktop\Arroyo_Ground_Afternoon\Arroyo_Ground_CancerHRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBRE	CONC	RISK_SUM	SCENARIO	DETAILS	INH_RISK
1			9901	DieselExhP	0.04136	2.82E-05	30YrCancer	*	2.82E-05

Arroyo Specific Plan
HARP2 Output (Chronic Risk; Non-Cancer)

*HARP - HRACalc v19044 2/27/2019 1:33:23 PM - Chronic Risk
Input File:('C'):\Users\pgleason\Desktop\Arroyo_Ground_Afternoon\Arroyo_Ground_Non-CancerHRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	SCENARIO	RESP
1			9901	DieselExhPM	0.04136	NonCancerChronicHighEnd	8.27E-03

APPENDIX C: AERMOD REPORT SUMMARY

Control Pathway

AERMOD

Dispersion Options

Titles

C:\Lakes\Monrovia_Arroyo_20190226\Monrovia_Arroyo_20190226.isc

Dispersion Options

☑ Regulatory Default ☐ Non-Default Options

Dispersion Coefficient

Urban

Population:
Name (Optional):
Roughness Length:

Output Type

☑ Concentration
☐ Total Deposition (Dry & Wet)
☐ Dry Deposition
☐ Wet Deposition

Plume Depletion

☐ Dry Removal
☐ Wet Removal

Output Warnings

☐ No Output Warnings
☐ Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type

PM10

Averaging Time Options

Hours

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 6 ☐ 8 ☐ 12 ☐ 24

☐ Month ☑ Period ☐ Annual

Exponential Decay

Half-life of 4 hrs will be used

Terrain Height Options

☐ Flat ☑ Elevated

SO: Meters
RE: Meters
TG: Meters

Flagpole Receptors

☐ Yes ☑ No

Default Height = 0.00 m

Control Pathway

Optional Files

Re-Start File	Init File	Multi-Year Analyses	Event Input File	Error Listing File
☐	☐	☐	☐	■

Detailed Error Listing File

Filename: Monrovia_Arroyo_20190226.err

Source Pathway - Source Inputs

Polygon Area Sources

Source Type: AREA POLY

Source: PAREA1 (I-210 Freeway)

Base Elevation (Optional)	Release Height [m]	Emission Rate [g/ (s-m^2)]	Initial Vertical Dim. [m]	Number of Vertices (or sides)	X Coordinate for Vertices [m]	Y Coordinate for Vertices [m]
134.65	3.28	2.23E-8		12	406923.38	3777744.10
		2.23E-8			406923.15	3777692.99
		2.23E-8			407044.35	3777651.56
		2.23E-8			407100.89	3777632.81
		2.23E-8			407157.16	3777619.02
		2.23E-8			407179.22	3777614.61
		2.23E-8			407242.93	3777610.19
		2.23E-8			407904.75	3777603.57
		2.23E-8			407902.46	3777650.91
		2.23E-8			407248.69	3777655.40
		2.23E-8			407196.03	3777659.79
		2.23E-8			407159.41	3777665.35

Source Pathway

Building Downwash Information

Option not in use

Emission Rate Units for Output

For Concentration

Unit Factor:	1E6
Emission Unit Label:	GRAMS/SEC
Concentration Unit Label:	MICROGRAMS/M**3

Receptor Pathway

Receptor Networks

Note: Terrain Elavations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	407531.47	3777567.04	FENCEGRD	137.75	
2	407531.52	3777562.12	FENCEGRD	137.75	
3	407531.57	3777557.21	FENCEGRD	137.66	
4	407531.61	3777552.29	FENCEGRD	137.56	
5	407531.66	3777547.38	FENCEGRD	137.39	
6	407531.71	3777542.47	FENCEGRD	137.23	
7	407531.76	3777537.55	FENCEGRD	137.12	
8	407531.80	3777532.64	FENCEGRD	137.02	
9	407531.85	3777527.72	FENCEGRD	136.88	
10	407531.90	3777522.81	FENCEGRD	136.74	
11	407531.95	3777517.89	FENCEGRD	136.61	
12	407531.99	3777512.98	FENCEGRD	136.48	
13	407532.04	3777508.06	FENCEGRD	136.34	
14	407532.09	3777503.15	FENCEGRD	136.20	
15	407534.98	3777570.60	FENCEGRD	137.69	
16	407529.95	3777575.55	FENCEGRD	137.79	
17	407536.52	3777562.17	FENCEGRD	137.54	
18	407536.56	3777557.26	FENCEGRD	137.43	
19	407536.61	3777552.34	FENCEGRD	137.32	
20	407536.66	3777547.43	FENCEGRD	137.19	
21	407536.71	3777542.51	FENCEGRD	137.07	
22	407536.76	3777537.60	FENCEGRD	136.95	
23	407536.80	3777532.68	FENCEGRD	136.84	
24	407536.85	3777527.77	FENCEGRD	136.74	
25	407536.90	3777522.86	FENCEGRD	136.65	
26	407536.95	3777517.94	FENCEGRD	136.53	
27	407536.99	3777513.03	FENCEGRD	136.41	
28	407537.04	3777508.11	FENCEGRD	136.28	
29	407537.09	3777503.20	FENCEGRD	136.15	
30	407539.98	3777570.65	FENCEGRD	137.70	

31	407533.45	3777579.12	FENCEGRD	137.98
32	407541.52	3777562.22	FENCEGRD	137.59
33	407541.56	3777557.31	FENCEGRD	137.49
34	407541.61	3777552.39	FENCEGRD	137.38
35	407541.66	3777547.48	FENCEGRD	137.27
36	407541.71	3777542.56	FENCEGRD	137.16
37	407541.76	3777537.65	FENCEGRD	137.04
38	407541.80	3777532.73	FENCEGRD	136.92
39	407541.85	3777527.82	FENCEGRD	136.81
40	407541.90	3777522.90	FENCEGRD	136.71
41	407541.95	3777517.99	FENCEGRD	136.59
42	407541.99	3777513.07	FENCEGRD	136.47
43	407542.04	3777508.16	FENCEGRD	136.35
44	407542.09	3777503.25	FENCEGRD	136.23
45	407544.98	3777570.70	FENCEGRD	137.74
46	407541.99	3777577.73	FENCEGRD	137.95
47	407536.96	3777582.68	FENCEGRD	138.14
48	407529.88	3777585.55	FENCEGRD	138.75
49	407546.52	3777562.27	FENCEGRD	137.69
50	407546.56	3777557.35	FENCEGRD	137.59
51	407546.61	3777552.44	FENCEGRD	137.50
52	407546.66	3777547.53	FENCEGRD	137.39
53	407546.71	3777542.61	FENCEGRD	137.28
54	407546.76	3777537.70	FENCEGRD	137.15
55	407546.80	3777532.78	FENCEGRD	137.01
56	407546.85	3777527.87	FENCEGRD	136.91
57	407546.90	3777522.95	FENCEGRD	136.80
58	407546.95	3777518.04	FENCEGRD	136.68
59	407546.99	3777513.12	FENCEGRD	136.56
60	407547.04	3777508.21	FENCEGRD	136.42
61	407547.09	3777503.29	FENCEGRD	136.27
62	407549.60	3777571.63	FENCEGRD	137.79
63	407547.74	3777576.02	FENCEGRD	137.90
64	407545.87	3777580.41	FENCEGRD	138.10
65	407539.58	3777586.60	FENCEGRD	138.99
66	407535.16	3777588.40	FENCEGRD	139.55
67	407530.74	3777590.19	FENCEGRD	140.17
68	407551.47	3777567.23	FENCEGRD	137.84

69	407551.52	3777562.32	FENCEGRD	137.85
70	407551.56	3777557.40	FENCEGRD	137.78
71	407551.61	3777552.49	FENCEGRD	137.70
72	407551.66	3777547.57	FENCEGRD	137.58
73	407551.71	3777542.66	FENCEGRD	137.45
74	407551.75	3777537.74	FENCEGRD	137.29
75	407551.80	3777532.83	FENCEGRD	137.13
76	407551.85	3777527.92	FENCEGRD	137.03
77	407551.90	3777523.00	FENCEGRD	136.93
78	407551.95	3777518.09	FENCEGRD	136.80
79	407551.99	3777513.17	FENCEGRD	136.67
80	407552.04	3777508.26	FENCEGRD	136.49
81	407552.09	3777503.34	FENCEGRD	136.30
82	407649.60	3777572.60	FENCEGRD	138.35
83	407647.73	3777576.99	FENCEGRD	138.34
84	407645.87	3777581.38	FENCEGRD	138.34
85	407644.00	3777585.78	FENCEGRD	138.53
86	407642.14	3777590.17	FENCEGRD	138.78
87	407640.27	3777594.57	FENCEGRD	139.67
88	407638.40	3777598.96	FENCEGRD	141.88
89	407636.54	3777603.35	FENCEGRD	144.11
90	407634.67	3777607.75	FENCEGRD	144.99
91	407632.81	3777612.14	FENCEGRD	145.81
92	407630.94	3777616.54	FENCEGRD	146.13
93	407629.07	3777620.93	FENCEGRD	146.17
94	407627.21	3777625.32	FENCEGRD	146.18
95	407625.34	3777629.72	FENCEGRD	146.16
96	407623.48	3777634.11	FENCEGRD	146.14
97	407621.61	3777638.51	FENCEGRD	146.05
98	407619.75	3777642.90	FENCEGRD	145.94
99	407617.88	3777647.29	FENCEGRD	145.71
100	407616.01	3777651.69	FENCEGRD	145.39
101	407609.73	3777657.88	FENCEGRD	143.97
102	407605.30	3777659.67	FENCEGRD	143.25
103	407600.88	3777661.47	FENCEGRD	142.53
104	407596.46	3777663.26	FENCEGRD	141.87
105	407592.03	3777665.06	FENCEGRD	141.29
106	407587.61	3777666.85	FENCEGRD	141.10

107	407583.19	3777668.65	FENCEGRD	141.00
108	407578.76	3777670.44	FENCEGRD	140.86
109	407574.34	3777672.24	FENCEGRD	140.66
110	407569.92	3777674.03	FENCEGRD	140.42
111	407565.49	3777675.83	FENCEGRD	140.13
112	407561.07	3777677.63	FENCEGRD	140.13
113	407556.65	3777679.42	FENCEGRD	140.16
114	407552.22	3777681.22	FENCEGRD	140.16
115	407547.80	3777683.01	FENCEGRD	140.11
116	407543.38	3777684.81	FENCEGRD	140.04
117	407538.95	3777686.60	FENCEGRD	139.98
118	407534.53	3777688.40	FENCEGRD	140.00
119	407530.11	3777690.19	FENCEGRD	140.06
120	407651.46	3777568.20	FENCEGRD	138.31
121	407651.51	3777563.29	FENCEGRD	138.23
122	407651.56	3777558.37	FENCEGRD	138.15
123	407651.61	3777553.46	FENCEGRD	138.08
124	407651.65	3777548.54	FENCEGRD	138.01
125	407651.70	3777543.63	FENCEGRD	137.94
126	407651.75	3777538.72	FENCEGRD	137.87
127	407651.80	3777533.80	FENCEGRD	137.79
128	407651.85	3777528.89	FENCEGRD	137.71
129	407651.89	3777523.97	FENCEGRD	137.62
130	407651.94	3777519.06	FENCEGRD	137.52
131	407651.99	3777514.14	FENCEGRD	137.41
132	407652.04	3777509.23	FENCEGRD	137.30
133	407652.08	3777504.31	FENCEGRD	137.18
134	407749.54	3777573.69	FENCEGRD	139.69
135	407747.62	3777578.21	FENCEGRD	139.62
136	407745.70	3777582.73	FENCEGRD	139.63
137	407743.78	3777587.25	FENCEGRD	139.90
138	407741.86	3777591.77	FENCEGRD	140.13
139	407739.94	3777596.29	FENCEGRD	140.98
140	407738.03	3777600.81	FENCEGRD	141.38
141	407736.11	3777605.33	FENCEGRD	141.04
142	407734.19	3777609.85	FENCEGRD	140.39
143	407732.27	3777614.37	FENCEGRD	140.03
144	407730.35	3777618.89	FENCEGRD	140.10

145	407728.43	3777623.41	FENCEGRD	140.16
146	407726.51	3777627.93	FENCEGRD	140.23
147	407724.59	3777632.45	FENCEGRD	140.31
148	407722.67	3777636.97	FENCEGRD	140.41
149	407720.75	3777641.49	FENCEGRD	140.51
150	407718.84	3777646.01	FENCEGRD	140.63
151	407716.92	3777650.52	FENCEGRD	140.76
152	407715.00	3777655.04	FENCEGRD	141.00
153	407713.08	3777659.56	FENCEGRD	141.15
154	407711.16	3777664.08	FENCEGRD	141.20
155	407709.24	3777668.60	FENCEGRD	141.23
156	407707.32	3777673.12	FENCEGRD	141.21
157	407705.40	3777677.64	FENCEGRD	141.29
158	407703.48	3777682.16	FENCEGRD	141.50
159	407701.56	3777686.68	FENCEGRD	141.83
160	407699.64	3777691.20	FENCEGRD	142.29
161	407697.73	3777695.72	FENCEGRD	142.64
162	407695.81	3777700.24	FENCEGRD	142.66
163	407693.89	3777704.76	FENCEGRD	142.70
164	407691.97	3777709.28	FENCEGRD	142.73
165	407690.05	3777713.80	FENCEGRD	142.65
166	407688.13	3777718.32	FENCEGRD	142.60
167	407686.21	3777722.84	FENCEGRD	142.63
168	407679.74	3777729.20	FENCEGRD	142.68
169	407675.19	3777731.05	FENCEGRD	142.65
170	407670.64	3777732.90	FENCEGRD	142.53
171	407666.09	3777734.74	FENCEGRD	142.42
172	407661.54	3777736.59	FENCEGRD	142.55
173	407656.99	3777738.44	FENCEGRD	142.69
174	407652.44	3777740.28	FENCEGRD	142.64
175	407647.89	3777742.13	FENCEGRD	142.58
176	407643.34	3777743.98	FENCEGRD	142.49
177	407638.80	3777745.82	FENCEGRD	142.48
178	407634.25	3777747.67	FENCEGRD	142.55
179	407629.70	3777749.51	FENCEGRD	142.67
180	407625.15	3777751.36	FENCEGRD	142.82
181	407620.60	3777753.21	FENCEGRD	142.84
182	407616.05	3777755.05	FENCEGRD	142.79

183	407611.50	3777756.90	FENCEGRD	142.78
184	407606.95	3777758.75	FENCEGRD	142.76
185	407602.40	3777760.59	FENCEGRD	142.46
186	407597.85	3777762.44	FENCEGRD	142.19
187	407593.30	3777764.29	FENCEGRD	142.18
188	407588.75	3777766.13	FENCEGRD	142.17
189	407584.20	3777767.98	FENCEGRD	142.10
190	407579.65	3777769.83	FENCEGRD	142.02
191	407575.10	3777771.67	FENCEGRD	141.97
192	407570.55	3777773.52	FENCEGRD	141.94
193	407566.00	3777775.37	FENCEGRD	141.90
194	407561.45	3777777.21	FENCEGRD	141.84
195	407556.90	3777779.06	FENCEGRD	141.76
196	407552.35	3777780.91	FENCEGRD	141.69
197	407547.80	3777782.75	FENCEGRD	141.63
198	407543.25	3777784.60	FENCEGRD	141.54
199	407538.70	3777786.45	FENCEGRD	141.42
200	407534.15	3777788.29	FENCEGRD	141.44
201	407529.60	3777790.14	FENCEGRD	141.48
202	407751.46	3777569.17	FENCEGRD	139.69
203	407751.51	3777564.26	FENCEGRD	139.65
204	407751.55	3777559.34	FENCEGRD	139.55
205	407751.60	3777554.43	FENCEGRD	139.37
206	407751.65	3777549.51	FENCEGRD	139.24
207	407751.70	3777544.60	FENCEGRD	139.21
208	407751.75	3777539.69	FENCEGRD	139.17
209	407751.79	3777534.77	FENCEGRD	139.06
210	407751.84	3777529.86	FENCEGRD	138.94
211	407751.89	3777524.94	FENCEGRD	138.74
212	407751.94	3777520.03	FENCEGRD	138.55
213	407751.98	3777515.11	FENCEGRD	138.34
214	407752.03	3777510.20	FENCEGRD	138.13
215	407752.08	3777505.28	FENCEGRD	138.04
216	407849.55	3777574.62	FENCEGRD	140.75
217	407847.65	3777579.10	FENCEGRD	140.68
218	407845.75	3777583.58	FENCEGRD	140.67
219	407843.85	3777588.06	FENCEGRD	140.72
220	407841.94	3777592.54	FENCEGRD	141.47

221	407840.04	3777597.02	FENCEGRD	143.76
222	407838.14	3777601.50	FENCEGRD	146.02
223	407836.24	3777605.98	FENCEGRD	146.63
224	407834.33	3777610.46	FENCEGRD	147.26
225	407832.43	3777614.94	FENCEGRD	147.51
226	407830.53	3777619.43	FENCEGRD	147.59
227	407828.63	3777623.91	FENCEGRD	147.64
228	407826.72	3777628.39	FENCEGRD	147.66
229	407824.82	3777632.87	FENCEGRD	147.67
230	407822.92	3777637.35	FENCEGRD	147.61
231	407821.02	3777641.83	FENCEGRD	147.55
232	407819.11	3777646.31	FENCEGRD	147.22
233	407817.21	3777650.79	FENCEGRD	146.81
234	407815.31	3777655.27	FENCEGRD	145.72
235	407813.41	3777659.75	FENCEGRD	143.91
236	407811.51	3777664.23	FENCEGRD	142.37
237	407809.60	3777668.71	FENCEGRD	142.28
238	407807.70	3777673.19	FENCEGRD	142.22
239	407805.80	3777677.67	FENCEGRD	142.36
240	407803.90	3777682.15	FENCEGRD	142.53
241	407801.99	3777686.63	FENCEGRD	142.69
242	407800.09	3777691.11	FENCEGRD	142.86
243	407798.19	3777695.59	FENCEGRD	142.98
244	407796.29	3777700.07	FENCEGRD	143.09
245	407794.38	3777704.55	FENCEGRD	143.20
246	407792.48	3777709.03	FENCEGRD	143.30
247	407790.58	3777713.51	FENCEGRD	143.40
248	407788.68	3777717.99	FENCEGRD	143.55
249	407786.77	3777722.47	FENCEGRD	143.73
250	407784.87	3777726.95	FENCEGRD	143.84
251	407782.97	3777731.43	FENCEGRD	143.81
252	407781.07	3777735.91	FENCEGRD	143.82
253	407779.17	3777740.39	FENCEGRD	143.86
254	407777.26	3777744.87	FENCEGRD	143.90
255	407775.36	3777749.35	FENCEGRD	143.87
256	407773.46	3777753.83	FENCEGRD	143.90
257	407771.56	3777758.31	FENCEGRD	143.98
258	407769.65	3777762.79	FENCEGRD	144.09

259	407767.75	3777767.27	FENCEGRD	144.20
260	407765.85	3777771.75	FENCEGRD	144.28
261	407763.95	3777776.23	FENCEGRD	144.35
262	407762.04	3777780.71	FENCEGRD	144.40
263	407760.14	3777785.19	FENCEGRD	144.46
264	407758.24	3777789.67	FENCEGRD	144.50
265	407756.34	3777794.15	FENCEGRD	144.55
266	407749.92	3777800.46	FENCEGRD	144.60
267	407745.41	3777802.29	FENCEGRD	144.60
268	407740.90	3777804.12	FENCEGRD	144.58
269	407736.39	3777805.95	FENCEGRD	144.57
270	407731.88	3777807.78	FENCEGRD	144.57
271	407727.37	3777809.61	FENCEGRD	144.57
272	407722.86	3777811.44	FENCEGRD	144.53
273	407718.35	3777813.27	FENCEGRD	144.48
274	407713.84	3777815.10	FENCEGRD	144.57
275	407709.33	3777816.93	FENCEGRD	144.67
276	407704.82	3777818.77	FENCEGRD	144.68
277	407700.31	3777820.60	FENCEGRD	144.69
278	407695.80	3777822.43	FENCEGRD	144.65
279	407691.29	3777824.26	FENCEGRD	144.63
280	407686.78	3777826.09	FENCEGRD	144.60
281	407682.27	3777827.92	FENCEGRD	144.60
282	407677.76	3777829.75	FENCEGRD	144.62
283	407673.25	3777831.58	FENCEGRD	144.65
284	407668.74	3777833.41	FENCEGRD	144.67
285	407664.23	3777835.24	FENCEGRD	144.60
286	407659.72	3777837.07	FENCEGRD	144.48
287	407655.21	3777838.90	FENCEGRD	144.46
288	407650.70	3777840.73	FENCEGRD	144.46
289	407646.19	3777842.56	FENCEGRD	144.42
290	407641.68	3777844.39	FENCEGRD	144.39
291	407637.17	3777846.22	FENCEGRD	144.41
292	407632.66	3777848.05	FENCEGRD	144.42
293	407628.15	3777849.88	FENCEGRD	144.40
294	407623.64	3777851.71	FENCEGRD	144.38
295	407619.14	3777853.54	FENCEGRD	144.33
296	407614.63	3777855.37	FENCEGRD	144.26

297	407610.12	3777857.20	FENCEGRD	144.16
298	407605.61	3777859.04	FENCEGRD	144.08
299	407601.10	3777860.87	FENCEGRD	144.02
300	407596.59	3777862.70	FENCEGRD	143.97
301	407592.08	3777864.53	FENCEGRD	143.94
302	407587.57	3777866.36	FENCEGRD	143.87
303	407583.06	3777868.19	FENCEGRD	143.77
304	407578.55	3777870.02	FENCEGRD	143.73
305	407574.04	3777871.85	FENCEGRD	143.69
306	407569.53	3777873.68	FENCEGRD	143.72
307	407565.02	3777875.51	FENCEGRD	143.74
308	407560.51	3777877.34	FENCEGRD	143.77
309	407556.00	3777879.17	FENCEGRD	143.79
310	407551.49	3777881.00	FENCEGRD	143.69
311	407546.98	3777882.83	FENCEGRD	143.62
312	407542.47	3777884.66	FENCEGRD	143.66
313	407537.96	3777886.49	FENCEGRD	143.69
314	407533.45	3777888.32	FENCEGRD	143.66
315	407528.94	3777890.15	FENCEGRD	143.63
316	407851.45	3777570.14	FENCEGRD	140.82
317	407851.50	3777565.23	FENCEGRD	140.66
318	407851.55	3777560.31	FENCEGRD	140.50
319	407851.60	3777555.40	FENCEGRD	140.28
320	407851.65	3777550.49	FENCEGRD	140.05
321	407851.69	3777545.57	FENCEGRD	139.93
322	407851.74	3777540.66	FENCEGRD	139.83
323	407851.79	3777535.74	FENCEGRD	139.74
324	407851.84	3777530.83	FENCEGRD	139.66
325	407851.88	3777525.91	FENCEGRD	139.61
326	407851.93	3777521.00	FENCEGRD	139.56
327	407851.98	3777516.08	FENCEGRD	139.46
328	407852.03	3777511.17	FENCEGRD	139.33
329	407852.07	3777506.25	FENCEGRD	139.17
330	407949.56	3777575.57	FENCEGRD	141.81
331	407947.66	3777580.03	FENCEGRD	141.72
332	407945.77	3777584.49	FENCEGRD	142.02
333	407943.88	3777588.95	FENCEGRD	142.28
334	407941.98	3777593.41	FENCEGRD	143.45

335	407940.09	3777597.87	FENCEGRD	145.03
336	407938.19	3777602.33	FENCEGRD	146.26
337	407936.30	3777606.79	FENCEGRD	146.94
338	407934.41	3777611.25	FENCEGRD	147.55
339	407932.51	3777615.71	FENCEGRD	147.60
340	407930.62	3777620.17	FENCEGRD	147.65
341	407928.73	3777624.63	FENCEGRD	147.66
342	407926.83	3777629.09	FENCEGRD	147.67
343	407924.94	3777633.55	FENCEGRD	147.63
344	407923.05	3777638.01	FENCEGRD	147.55
345	407921.15	3777642.47	FENCEGRD	147.42
346	407919.26	3777646.93	FENCEGRD	147.07
347	407917.36	3777651.39	FENCEGRD	146.71
348	407915.47	3777655.85	FENCEGRD	145.37
349	407913.58	3777660.31	FENCEGRD	143.85
350	407911.68	3777664.76	FENCEGRD	143.18
351	407909.79	3777669.22	FENCEGRD	143.24
352	407907.90	3777673.68	FENCEGRD	143.33
353	407906.00	3777678.14	FENCEGRD	143.48
354	407904.11	3777682.60	FENCEGRD	143.64
355	407902.22	3777687.06	FENCEGRD	143.76
356	407900.32	3777691.52	FENCEGRD	143.86
357	407898.43	3777695.98	FENCEGRD	143.95
358	407896.53	3777700.44	FENCEGRD	144.05
359	407894.64	3777704.90	FENCEGRD	144.15
360	407892.75	3777709.36	FENCEGRD	144.22
361	407890.85	3777713.82	FENCEGRD	144.28
362	407888.96	3777718.28	FENCEGRD	144.29
363	407887.07	3777722.74	FENCEGRD	144.30
364	407885.17	3777727.20	FENCEGRD	144.48
365	407883.28	3777731.66	FENCEGRD	144.68
366	407881.39	3777736.12	FENCEGRD	144.76
367	407879.49	3777740.58	FENCEGRD	144.74
368	407877.60	3777745.04	FENCEGRD	144.82
369	407875.71	3777749.50	FENCEGRD	144.88
370	407873.81	3777753.96	FENCEGRD	144.95
371	407871.92	3777758.42	FENCEGRD	145.07
372	407870.02	3777762.87	FENCEGRD	145.20

373	407868.13	3777767.33	FENCEGRD	145.26
374	407866.24	3777771.79	FENCEGRD	145.23
375	407864.34	3777776.25	FENCEGRD	145.23
376	407862.45	3777780.71	FENCEGRD	145.45
377	407860.56	3777785.17	FENCEGRD	145.65
378	407858.66	3777789.63	FENCEGRD	145.74
379	407856.77	3777794.09	FENCEGRD	145.84
380	407854.88	3777798.55	FENCEGRD	145.91
381	407852.98	3777803.01	FENCEGRD	145.95
382	407851.09	3777807.47	FENCEGRD	145.99
383	407849.19	3777811.93	FENCEGRD	146.13
384	407847.30	3777816.39	FENCEGRD	146.27
385	407845.41	3777820.85	FENCEGRD	146.38
386	407843.51	3777825.31	FENCEGRD	146.48
387	407841.62	3777829.77	FENCEGRD	146.56
388	407839.73	3777834.23	FENCEGRD	146.63
389	407837.83	3777838.69	FENCEGRD	146.68
390	407835.94	3777843.15	FENCEGRD	146.68
391	407834.05	3777847.61	FENCEGRD	146.70
392	407832.15	3777852.07	FENCEGRD	146.75
393	407830.26	3777856.53	FENCEGRD	146.78
394	407828.36	3777860.99	FENCEGRD	146.80
395	407826.47	3777865.44	FENCEGRD	146.84
396	407820.09	3777871.73	FENCEGRD	146.94
397	407815.60	3777873.55	FENCEGRD	146.90
398	407811.11	3777875.37	FENCEGRD	146.90
399	407806.62	3777877.19	FENCEGRD	146.94
400	407802.13	3777879.01	FENCEGRD	146.95
401	407797.64	3777880.84	FENCEGRD	146.99
402	407793.15	3777882.66	FENCEGRD	147.02
403	407788.66	3777884.48	FENCEGRD	147.03
404	407784.17	3777886.30	FENCEGRD	147.04
405	407779.68	3777888.12	FENCEGRD	147.04
406	407775.20	3777889.95	FENCEGRD	147.06
407	407770.71	3777891.77	FENCEGRD	147.07
408	407766.22	3777893.59	FENCEGRD	147.06
409	407761.73	3777895.41	FENCEGRD	147.03
410	407757.24	3777897.23	FENCEGRD	147.01

411	407752.75	3777899.06	FENCEGRD	146.98
412	407748.26	3777900.88	FENCEGRD	146.95
413	407743.77	3777902.70	FENCEGRD	146.92
414	407739.28	3777904.52	FENCEGRD	146.87
415	407734.79	3777906.35	FENCEGRD	146.82
416	407730.30	3777908.17	FENCEGRD	146.80
417	407725.81	3777909.99	FENCEGRD	146.78
418	407721.32	3777911.81	FENCEGRD	146.73
419	407716.83	3777913.63	FENCEGRD	146.71
420	407712.35	3777915.46	FENCEGRD	146.78
421	407707.86	3777917.28	FENCEGRD	146.87
422	407703.37	3777919.10	FENCEGRD	146.91
423	407698.88	3777920.92	FENCEGRD	146.94
424	407694.39	3777922.74	FENCEGRD	146.88
425	407689.90	3777924.57	FENCEGRD	146.79
426	407685.41	3777926.39	FENCEGRD	146.70
427	407680.92	3777928.21	FENCEGRD	146.64
428	407676.43	3777930.03	FENCEGRD	146.56
429	407671.94	3777931.85	FENCEGRD	146.52
430	407667.45	3777933.68	FENCEGRD	146.47
431	407662.96	3777935.50	FENCEGRD	146.40
432	407658.47	3777937.32	FENCEGRD	146.37
433	407653.99	3777939.14	FENCEGRD	146.44
434	407649.50	3777940.96	FENCEGRD	146.46
435	407645.01	3777942.79	FENCEGRD	146.36
436	407640.52	3777944.61	FENCEGRD	146.30
437	407636.03	3777946.43	FENCEGRD	146.30
438	407631.54	3777948.25	FENCEGRD	146.29
439	407627.05	3777950.07	FENCEGRD	146.25
440	407622.56	3777951.90	FENCEGRD	146.20
441	407618.07	3777953.72	FENCEGRD	146.15
442	407613.58	3777955.54	FENCEGRD	146.14
443	407609.09	3777957.36	FENCEGRD	146.17
444	407604.60	3777959.18	FENCEGRD	146.18
445	407600.11	3777961.01	FENCEGRD	146.20
446	407595.62	3777962.83	FENCEGRD	146.13
447	407591.14	3777964.65	FENCEGRD	146.03
448	407586.65	3777966.47	FENCEGRD	146.02

449	407582.16	3777968.29	FENCEGRD	146.00
450	407577.67	3777970.12	FENCEGRD	145.95
451	407573.18	3777971.94	FENCEGRD	145.92
452	407568.69	3777973.76	FENCEGRD	145.94
453	407564.20	3777975.58	FENCEGRD	145.98
454	407559.71	3777977.41	FENCEGRD	146.00
455	407555.22	3777979.23	FENCEGRD	145.99
456	407550.73	3777981.05	FENCEGRD	145.93
457	407546.24	3777982.87	FENCEGRD	145.91
458	407541.75	3777984.69	FENCEGRD	145.95
459	407537.26	3777986.52	FENCEGRD	145.86
460	407532.77	3777988.34	FENCEGRD	145.70
461	407528.29	3777990.16	FENCEGRD	145.59
462	407951.45	3777571.11	FENCEGRD	141.95
463	407951.50	3777566.20	FENCEGRD	141.95
464	407951.55	3777561.28	FENCEGRD	141.90
465	407951.59	3777556.37	FENCEGRD	141.82
466	407951.64	3777551.46	FENCEGRD	141.71
467	407951.69	3777546.54	FENCEGRD	141.61
468	407951.74	3777541.63	FENCEGRD	141.51
469	407951.78	3777536.71	FENCEGRD	141.39
470	407951.83	3777531.80	FENCEGRD	141.25
471	407951.88	3777526.88	FENCEGRD	141.14
472	407951.93	3777521.97	FENCEGRD	141.10
473	407951.97	3777517.05	FENCEGRD	141.03
474	407952.02	3777512.14	FENCEGRD	140.86
475	407952.07	3777507.22	FENCEGRD	140.65
476	407527.06	3777498.10	FENCEGRD	136.13
477	407522.10	3777498.13	FENCEGRD	136.07
478	407517.14	3777498.15	FENCEGRD	136.04
479	407512.18	3777498.18	FENCEGRD	136.05
480	407507.22	3777498.20	FENCEGRD	136.04
481	407502.26	3777498.23	FENCEGRD	136.01
482	407497.30	3777498.25	FENCEGRD	135.99
483	407492.34	3777498.28	FENCEGRD	135.96
484	407487.38	3777498.30	FENCEGRD	135.92
485	407482.42	3777498.33	FENCEGRD	135.87
486	407477.46	3777498.36	FENCEGRD	135.79

487	407472.50	3777498.38	FENCEGRD	135.73
488	407467.54	3777498.41	FENCEGRD	135.67
489	407462.58	3777498.43	FENCEGRD	135.55
490	407457.62	3777498.46	FENCEGRD	135.43
491	407452.66	3777498.48	FENCEGRD	135.38
492	407447.70	3777498.51	FENCEGRD	135.30
493	407442.74	3777498.53	FENCEGRD	135.19
494	407437.78	3777498.56	FENCEGRD	135.08
495	407432.81	3777498.58	FENCEGRD	134.98
496	407427.85	3777498.61	FENCEGRD	134.90
497	407422.89	3777498.64	FENCEGRD	134.81
498	407417.93	3777498.66	FENCEGRD	134.72
499	407412.97	3777498.69	FENCEGRD	134.64
500	407408.01	3777498.71	FENCEGRD	134.56
501	407403.05	3777498.74	FENCEGRD	134.53
502	407398.09	3777498.76	FENCEGRD	134.50
503	407393.13	3777498.79	FENCEGRD	134.45
504	407388.17	3777498.81	FENCEGRD	134.40
505	407383.21	3777498.84	FENCEGRD	134.35
506	407378.25	3777498.87	FENCEGRD	134.30
507	407373.29	3777498.89	FENCEGRD	134.25
508	407368.33	3777498.92	FENCEGRD	134.20
509	407363.37	3777498.94	FENCEGRD	134.15
510	407358.41	3777498.97	FENCEGRD	134.11
511	407353.45	3777498.99	FENCEGRD	134.06
512	407348.49	3777499.02	FENCEGRD	134.02
513	407343.53	3777499.04	FENCEGRD	133.97
514	407338.57	3777499.07	FENCEGRD	133.92
515	407333.60	3777499.09	FENCEGRD	133.81
516	407328.64	3777499.12	FENCEGRD	133.79
517	407530.61	3777494.57	FENCEGRD	135.98
518	407522.08	3777493.13	FENCEGRD	135.94
519	407517.12	3777493.15	FENCEGRD	135.91
520	407512.16	3777493.18	FENCEGRD	135.90
521	407507.20	3777493.20	FENCEGRD	135.88
522	407502.24	3777493.23	FENCEGRD	135.86
523	407497.28	3777493.25	FENCEGRD	135.83
524	407492.32	3777493.28	FENCEGRD	135.80

525	407487.35	3777493.30	FENCEGRD	135.77
526	407482.39	3777493.33	FENCEGRD	135.73
527	407477.43	3777493.36	FENCEGRD	135.68
528	407472.47	3777493.38	FENCEGRD	135.62
529	407467.51	3777493.41	FENCEGRD	135.54
530	407462.55	3777493.43	FENCEGRD	135.45
531	407457.59	3777493.46	FENCEGRD	135.36
532	407452.63	3777493.48	FENCEGRD	135.27
533	407447.67	3777493.51	FENCEGRD	135.19
534	407442.71	3777493.53	FENCEGRD	135.09
535	407437.75	3777493.56	FENCEGRD	135.00
536	407432.79	3777493.58	FENCEGRD	134.91
537	407427.83	3777493.61	FENCEGRD	134.81
538	407422.87	3777493.64	FENCEGRD	134.72
539	407417.91	3777493.66	FENCEGRD	134.63
540	407412.95	3777493.69	FENCEGRD	134.55
541	407407.99	3777493.71	FENCEGRD	134.48
542	407403.03	3777493.74	FENCEGRD	134.42
543	407398.07	3777493.76	FENCEGRD	134.37
544	407393.11	3777493.79	FENCEGRD	134.32
545	407388.14	3777493.81	FENCEGRD	134.27
546	407383.18	3777493.84	FENCEGRD	134.21
547	407378.22	3777493.87	FENCEGRD	134.16
548	407373.26	3777493.89	FENCEGRD	134.11
549	407368.30	3777493.92	FENCEGRD	134.06
550	407363.34	3777493.94	FENCEGRD	134.01
551	407358.38	3777493.97	FENCEGRD	133.96
552	407353.42	3777493.99	FENCEGRD	133.91
553	407348.46	3777494.02	FENCEGRD	133.88
554	407343.50	3777494.04	FENCEGRD	133.84
555	407338.54	3777494.07	FENCEGRD	133.80
556	407333.58	3777494.09	FENCEGRD	133.72
557	407328.62	3777494.12	FENCEGRD	133.72
558	407530.58	3777489.57	FENCEGRD	135.89
559	407539.18	3777496.09	FENCEGRD	136.02
560	407522.05	3777488.13	FENCEGRD	135.89
561	407517.09	3777488.15	FENCEGRD	135.89
562	407512.13	3777488.18	FENCEGRD	135.90

563	407507.17	3777488.20	FENCEGRD	135.88
564	407502.21	3777488.23	FENCEGRD	135.86
565	407497.25	3777488.25	FENCEGRD	135.83
566	407492.29	3777488.28	FENCEGRD	135.79
567	407487.33	3777488.30	FENCEGRD	135.75
568	407482.37	3777488.33	FENCEGRD	135.72
569	407477.41	3777488.36	FENCEGRD	135.69
570	407472.45	3777488.38	FENCEGRD	135.62
571	407467.49	3777488.41	FENCEGRD	135.55
572	407462.53	3777488.43	FENCEGRD	135.42
573	407457.57	3777488.46	FENCEGRD	135.31
574	407452.61	3777488.48	FENCEGRD	135.21
575	407447.64	3777488.51	FENCEGRD	135.11
576	407442.68	3777488.53	FENCEGRD	135.01
577	407437.72	3777488.56	FENCEGRD	134.94
578	407432.76	3777488.58	FENCEGRD	134.87
579	407427.80	3777488.61	FENCEGRD	134.73
580	407422.84	3777488.64	FENCEGRD	134.60
581	407417.88	3777488.66	FENCEGRD	134.51
582	407412.92	3777488.69	FENCEGRD	134.44
583	407407.96	3777488.71	FENCEGRD	134.41
584	407403.00	3777488.74	FENCEGRD	134.35
585	407398.04	3777488.76	FENCEGRD	134.29
586	407393.08	3777488.79	FENCEGRD	134.25
587	407388.12	3777488.81	FENCEGRD	134.20
588	407383.16	3777488.84	FENCEGRD	134.15
589	407378.20	3777488.87	FENCEGRD	134.13
590	407373.24	3777488.89	FENCEGRD	134.12
591	407368.28	3777488.92	FENCEGRD	134.07
592	407363.32	3777488.94	FENCEGRD	134.03
593	407358.36	3777488.97	FENCEGRD	133.98
594	407353.40	3777488.99	FENCEGRD	133.94
595	407348.43	3777489.02	FENCEGRD	133.90
596	407343.47	3777489.04	FENCEGRD	133.84
597	407338.51	3777489.07	FENCEGRD	133.77
598	407333.55	3777489.09	FENCEGRD	133.68
599	407328.59	3777489.12	FENCEGRD	133.65
600	407530.56	3777484.57	FENCEGRD	135.87

601	407537.70	3777487.52	FENCEGRD	135.87
602	407542.72	3777492.57	FENCEGRD	135.97
603	407522.03	3777483.13	FENCEGRD	135.89
604	407517.07	3777483.15	FENCEGRD	135.92
605	407512.11	3777483.18	FENCEGRD	135.95
606	407507.15	3777483.20	FENCEGRD	135.95
607	407502.18	3777483.23	FENCEGRD	135.92
608	407497.22	3777483.25	FENCEGRD	135.87
609	407492.26	3777483.28	FENCEGRD	135.82
610	407487.30	3777483.30	FENCEGRD	135.78
611	407482.34	3777483.33	FENCEGRD	135.75
612	407477.38	3777483.36	FENCEGRD	135.73
613	407472.42	3777483.38	FENCEGRD	135.67
614	407467.46	3777483.41	FENCEGRD	135.59
615	407462.50	3777483.43	FENCEGRD	135.42
616	407457.54	3777483.46	FENCEGRD	135.26
617	407452.58	3777483.48	FENCEGRD	135.15
618	407447.62	3777483.51	FENCEGRD	135.04
619	407442.66	3777483.53	FENCEGRD	134.93
620	407437.70	3777483.56	FENCEGRD	134.89
621	407432.74	3777483.58	FENCEGRD	134.85
622	407427.78	3777483.61	FENCEGRD	134.65
623	407422.82	3777483.64	FENCEGRD	134.48
624	407417.86	3777483.66	FENCEGRD	134.37
625	407412.90	3777483.69	FENCEGRD	134.33
626	407407.94	3777483.71	FENCEGRD	134.34
627	407402.97	3777483.74	FENCEGRD	134.29
628	407398.01	3777483.76	FENCEGRD	134.23
629	407393.05	3777483.79	FENCEGRD	134.18
630	407388.09	3777483.81	FENCEGRD	134.15
631	407383.13	3777483.84	FENCEGRD	134.12
632	407378.17	3777483.87	FENCEGRD	134.12
633	407373.21	3777483.89	FENCEGRD	134.14
634	407368.25	3777483.92	FENCEGRD	134.11
635	407363.29	3777483.94	FENCEGRD	134.08
636	407358.33	3777483.97	FENCEGRD	134.04
637	407353.37	3777483.99	FENCEGRD	134.00
638	407348.41	3777484.02	FENCEGRD	133.95

639	407343.45	3777484.04	FENCEGRD	133.86
640	407338.49	3777484.07	FENCEGRD	133.76
641	407333.53	3777484.09	FENCEGRD	133.64
642	407328.57	3777484.12	FENCEGRD	133.58
643	407531.42	3777479.94	FENCEGRD	135.82
644	407535.88	3777481.78	FENCEGRD	135.85
645	407540.35	3777483.62	FENCEGRD	135.81
646	407546.63	3777489.93	FENCEGRD	135.92
647	407548.45	3777494.40	FENCEGRD	136.04
648	407550.27	3777498.87	FENCEGRD	136.16
649	407526.96	3777478.10	FENCEGRD	135.80
650	407522.00	3777478.13	FENCEGRD	135.89
651	407517.04	3777478.15	FENCEGRD	135.97
652	407512.08	3777478.18	FENCEGRD	136.01
653	407507.12	3777478.20	FENCEGRD	136.00
654	407502.16	3777478.23	FENCEGRD	135.95
655	407497.20	3777478.25	FENCEGRD	135.90
656	407492.24	3777478.28	FENCEGRD	135.85
657	407487.28	3777478.30	FENCEGRD	135.81
658	407482.32	3777478.33	FENCEGRD	135.78
659	407477.36	3777478.36	FENCEGRD	135.76
660	407472.40	3777478.38	FENCEGRD	135.70
661	407467.44	3777478.41	FENCEGRD	135.63
662	407462.47	3777478.43	FENCEGRD	135.41
663	407457.51	3777478.46	FENCEGRD	135.19
664	407452.55	3777478.48	FENCEGRD	135.00
665	407447.59	3777478.51	FENCEGRD	134.87
666	407442.63	3777478.53	FENCEGRD	134.80
667	407437.67	3777478.56	FENCEGRD	134.78
668	407432.71	3777478.58	FENCEGRD	134.76
669	407427.75	3777478.61	FENCEGRD	134.55
670	407422.79	3777478.64	FENCEGRD	134.38
671	407417.83	3777478.66	FENCEGRD	134.30
672	407412.87	3777478.69	FENCEGRD	134.27
673	407407.91	3777478.71	FENCEGRD	134.27
674	407402.95	3777478.74	FENCEGRD	134.22
675	407397.99	3777478.76	FENCEGRD	134.18
676	407393.03	3777478.79	FENCEGRD	134.17

677	407388.07	3777478.81	FENCEGRD	134.16
678	407383.11	3777478.84	FENCEGRD	134.14
679	407378.15	3777478.87	FENCEGRD	134.15
680	407373.19	3777478.89	FENCEGRD	134.16
681	407368.23	3777478.92	FENCEGRD	134.13
682	407363.26	3777478.94	FENCEGRD	134.10
683	407358.30	3777478.97	FENCEGRD	134.07
684	407353.34	3777478.99	FENCEGRD	134.02
685	407348.38	3777479.02	FENCEGRD	133.97
686	407343.42	3777479.04	FENCEGRD	133.87
687	407338.46	3777479.07	FENCEGRD	133.76
688	407333.50	3777479.09	FENCEGRD	133.58
689	407328.54	3777479.12	FENCEGRD	133.49
690	407530.91	3777379.94	FENCEGRD	133.82
691	407535.37	3777381.78	FENCEGRD	133.78
692	407539.83	3777383.62	FENCEGRD	133.77
693	407544.29	3777385.46	FENCEGRD	133.78
694	407548.76	3777387.30	FENCEGRD	133.83
695	407553.22	3777389.15	FENCEGRD	133.86
696	407557.68	3777390.99	FENCEGRD	133.86
697	407562.14	3777392.83	FENCEGRD	134.00
698	407566.60	3777394.67	FENCEGRD	134.29
699	407571.06	3777396.51	FENCEGRD	134.60
700	407575.53	3777398.35	FENCEGRD	134.87
701	407579.99	3777400.19	FENCEGRD	134.95
702	407584.45	3777402.03	FENCEGRD	134.97
703	407588.91	3777403.87	FENCEGRD	134.97
704	407593.37	3777405.71	FENCEGRD	134.97
705	407597.83	3777407.55	FENCEGRD	134.97
706	407602.29	3777409.39	FENCEGRD	134.97
707	407606.76	3777411.23	FENCEGRD	134.96
708	407611.22	3777413.07	FENCEGRD	134.92
709	407617.50	3777419.38	FENCEGRD	134.81
710	407619.32	3777423.85	FENCEGRD	135.08
711	407621.14	3777428.32	FENCEGRD	135.37
712	407622.96	3777432.79	FENCEGRD	135.52
713	407624.78	3777437.26	FENCEGRD	135.63
714	407626.60	3777441.73	FENCEGRD	135.74

715	407628.42	3777446.20	FENCEGRD	135.87
716	407630.24	3777450.67	FENCEGRD	135.96
717	407632.06	3777455.14	FENCEGRD	135.96
718	407633.88	3777459.61	FENCEGRD	135.98
719	407635.70	3777464.08	FENCEGRD	135.92
720	407637.52	3777468.55	FENCEGRD	135.85
721	407639.34	3777473.02	FENCEGRD	135.89
722	407641.16	3777477.49	FENCEGRD	135.98
723	407642.98	3777481.96	FENCEGRD	136.14
724	407644.80	3777486.43	FENCEGRD	136.41
725	407646.62	3777490.90	FENCEGRD	136.68
726	407648.44	3777495.37	FENCEGRD	136.85
727	407650.26	3777499.84	FENCEGRD	137.03
728	407526.45	3777378.10	FENCEGRD	133.84
729	407521.49	3777378.13	FENCEGRD	133.87
730	407516.53	3777378.15	FENCEGRD	133.88
731	407511.57	3777378.18	FENCEGRD	133.85
732	407506.61	3777378.20	FENCEGRD	133.83
733	407501.64	3777378.23	FENCEGRD	133.80
734	407496.68	3777378.25	FENCEGRD	133.78
735	407491.72	3777378.28	FENCEGRD	133.76
736	407486.76	3777378.31	FENCEGRD	133.66
737	407481.80	3777378.33	FENCEGRD	133.57
738	407476.84	3777378.36	FENCEGRD	133.51
739	407471.88	3777378.38	FENCEGRD	133.48
740	407466.92	3777378.41	FENCEGRD	133.46
741	407461.96	3777378.43	FENCEGRD	133.45
742	407457.00	3777378.46	FENCEGRD	133.45
743	407452.04	3777378.48	FENCEGRD	133.44
744	407447.08	3777378.51	FENCEGRD	133.41
745	407442.12	3777378.54	FENCEGRD	133.37
746	407437.16	3777378.56	FENCEGRD	133.31
747	407432.20	3777378.59	FENCEGRD	133.24
748	407427.24	3777378.61	FENCEGRD	133.17
749	407422.28	3777378.64	FENCEGRD	133.10
750	407417.32	3777378.66	FENCEGRD	133.07
751	407412.36	3777378.69	FENCEGRD	133.03
752	407407.40	3777378.71	FENCEGRD	132.99

753	407402.43	3777378.74	FENCEGRD	132.89
754	407397.47	3777378.76	FENCEGRD	132.79
755	407392.51	3777378.79	FENCEGRD	132.69
756	407387.55	3777378.82	FENCEGRD	132.58
757	407382.59	3777378.84	FENCEGRD	132.44
758	407377.63	3777378.87	FENCEGRD	132.27
759	407372.67	3777378.89	FENCEGRD	132.09
760	407367.71	3777378.92	FENCEGRD	132.36
761	407362.75	3777378.94	FENCEGRD	132.60
762	407357.79	3777378.97	FENCEGRD	132.51
763	407352.83	3777378.99	FENCEGRD	132.42
764	407347.87	3777379.02	FENCEGRD	132.35
765	407342.91	3777379.05	FENCEGRD	132.29
766	407337.95	3777379.07	FENCEGRD	132.22
767	407332.99	3777379.10	FENCEGRD	132.08
768	407328.03	3777379.12	FENCEGRD	131.97
769	407530.39	3777279.94	FENCEGRD	131.26
770	407534.86	3777281.78	FENCEGRD	131.40
771	407539.32	3777283.62	FENCEGRD	131.47
772	407543.78	3777285.47	FENCEGRD	131.54
773	407548.24	3777287.31	FENCEGRD	131.65
774	407552.70	3777289.15	FENCEGRD	131.76
775	407557.16	3777290.99	FENCEGRD	131.85
776	407561.63	3777292.83	FENCEGRD	131.92
777	407566.09	3777294.67	FENCEGRD	131.99
778	407570.55	3777296.51	FENCEGRD	132.05
779	407575.01	3777298.35	FENCEGRD	132.06
780	407579.47	3777300.19	FENCEGRD	132.05
781	407583.93	3777302.03	FENCEGRD	132.06
782	407588.40	3777303.87	FENCEGRD	132.09
783	407592.86	3777305.71	FENCEGRD	132.17
784	407597.32	3777307.55	FENCEGRD	132.40
785	407601.78	3777309.39	FENCEGRD	132.66
786	407606.24	3777311.23	FENCEGRD	132.85
787	407610.70	3777313.07	FENCEGRD	133.05
788	407615.17	3777314.91	FENCEGRD	133.19
789	407619.63	3777316.76	FENCEGRD	133.30
790	407624.09	3777318.60	FENCEGRD	133.37

791	407628.55	3777320.44	FENCEGRD	133.42
792	407633.01	3777322.28	FENCEGRD	133.43
793	407637.47	3777324.12	FENCEGRD	133.45
794	407641.94	3777325.96	FENCEGRD	133.45
795	407646.40	3777327.80	FENCEGRD	133.60
796	407650.86	3777329.64	FENCEGRD	133.90
797	407655.32	3777331.48	FENCEGRD	134.03
798	407659.78	3777333.32	FENCEGRD	134.03
799	407664.24	3777335.16	FENCEGRD	134.04
800	407668.71	3777337.00	FENCEGRD	134.07
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802	407677.63	3777340.68	FENCEGRD	134.14
803	407682.09	3777342.52	FENCEGRD	134.17
804	407688.37	3777348.83	FENCEGRD	134.31
805	407690.19	3777353.30	FENCEGRD	134.45
806	407692.01	3777357.77	FENCEGRD	134.57
807	407693.83	3777362.24	FENCEGRD	134.70
808	407695.65	3777366.71	FENCEGRD	134.76
809	407697.47	3777371.18	FENCEGRD	134.96
810	407699.29	3777375.65	FENCEGRD	135.15
811	407701.11	3777380.12	FENCEGRD	135.14
812	407702.93	3777384.59	FENCEGRD	135.10
813	407704.75	3777389.06	FENCEGRD	135.14
814	407706.57	3777393.53	FENCEGRD	135.24
815	407708.39	3777398.00	FENCEGRD	135.32
816	407710.21	3777402.47	FENCEGRD	135.38
817	407712.03	3777406.94	FENCEGRD	135.45
818	407713.85	3777411.41	FENCEGRD	135.52
819	407715.68	3777415.88	FENCEGRD	135.67
820	407717.50	3777420.35	FENCEGRD	135.82
821	407719.32	3777424.82	FENCEGRD	135.97
822	407721.14	3777429.29	FENCEGRD	136.11
823	407722.96	3777433.76	FENCEGRD	136.26
824	407724.78	3777438.23	FENCEGRD	136.36
825	407726.60	3777442.70	FENCEGRD	136.44
826	407728.42	3777447.17	FENCEGRD	136.51
827	407730.24	3777451.64	FENCEGRD	136.61
828	407732.06	3777456.11	FENCEGRD	136.77

829	407733.88	3777460.58	FENCEGRD	136.92
830	407735.70	3777465.05	FENCEGRD	137.03
831	407737.52	3777469.52	FENCEGRD	137.16
832	407739.34	3777473.99	FENCEGRD	137.38
833	407741.16	3777478.46	FENCEGRD	137.57
834	407742.98	3777482.93	FENCEGRD	137.60
835	407744.80	3777487.40	FENCEGRD	137.61
836	407746.62	3777491.87	FENCEGRD	137.70
837	407748.44	3777496.34	FENCEGRD	137.83
838	407750.26	3777500.81	FENCEGRD	137.95
839	407525.93	3777278.10	FENCEGRD	131.13
840	407520.97	3777278.13	FENCEGRD	131.16
841	407516.01	3777278.15	FENCEGRD	131.20
842	407511.05	3777278.18	FENCEGRD	131.13
843	407506.09	3777278.20	FENCEGRD	131.10
844	407501.13	3777278.23	FENCEGRD	131.12
845	407496.17	3777278.26	FENCEGRD	131.13
846	407491.21	3777278.28	FENCEGRD	131.13
847	407486.25	3777278.31	FENCEGRD	131.05
848	407481.29	3777278.33	FENCEGRD	130.97
849	407476.33	3777278.36	FENCEGRD	130.93
850	407471.37	3777278.38	FENCEGRD	130.90
851	407466.41	3777278.41	FENCEGRD	130.88
852	407461.45	3777278.43	FENCEGRD	130.87
853	407456.49	3777278.46	FENCEGRD	130.85
854	407451.53	3777278.49	FENCEGRD	130.84
855	407446.57	3777278.51	FENCEGRD	130.81
856	407441.60	3777278.54	FENCEGRD	130.77
857	407436.64	3777278.56	FENCEGRD	130.72
858	407431.68	3777278.59	FENCEGRD	130.68
859	407426.72	3777278.61	FENCEGRD	130.62
860	407421.76	3777278.64	FENCEGRD	130.56
861	407416.80	3777278.66	FENCEGRD	130.53
862	407411.84	3777278.69	FENCEGRD	130.50
863	407406.88	3777278.71	FENCEGRD	130.47
864	407401.92	3777278.74	FENCEGRD	130.44
865	407396.96	3777278.77	FENCEGRD	130.41
866	407392.00	3777278.79	FENCEGRD	130.38

867	407387.04	3777278.82	FENCEGRD	130.35
868	407382.08	3777278.84	FENCEGRD	130.32
869	407377.12	3777278.87	FENCEGRD	130.28
870	407372.16	3777278.89	FENCEGRD	130.25
871	407367.20	3777278.92	FENCEGRD	130.22
872	407362.24	3777278.94	FENCEGRD	130.19
873	407357.28	3777278.97	FENCEGRD	130.18
874	407352.32	3777279.00	FENCEGRD	130.15
875	407347.36	3777279.02	FENCEGRD	130.10
876	407342.39	3777279.05	FENCEGRD	130.06
877	407337.43	3777279.07	FENCEGRD	130.04
878	407332.47	3777279.10	FENCEGRD	130.03
879	407327.51	3777279.12	FENCEGRD	130.01
880	407529.97	3777179.98	FENCEGRD	129.52
881	407534.52	3777181.86	FENCEGRD	129.56
882	407539.07	3777183.73	FENCEGRD	129.62
883	407543.62	3777185.61	FENCEGRD	129.66
884	407548.16	3777187.49	FENCEGRD	129.68
885	407552.71	3777189.36	FENCEGRD	129.86
886	407557.26	3777191.24	FENCEGRD	130.20
887	407561.81	3777193.12	FENCEGRD	130.21
888	407566.36	3777194.99	FENCEGRD	130.10
889	407570.91	3777196.87	FENCEGRD	130.14
890	407575.46	3777198.75	FENCEGRD	130.19
891	407580.01	3777200.62	FENCEGRD	130.24
892	407584.56	3777202.50	FENCEGRD	130.33
893	407589.11	3777204.38	FENCEGRD	130.57
894	407593.66	3777206.25	FENCEGRD	130.66
895	407598.20	3777208.13	FENCEGRD	130.66
896	407602.75	3777210.01	FENCEGRD	130.71
897	407607.30	3777211.88	FENCEGRD	130.74
898	407611.85	3777213.76	FENCEGRD	130.79
899	407616.40	3777215.64	FENCEGRD	130.87
900	407620.95	3777217.51	FENCEGRD	130.86
901	407625.50	3777219.39	FENCEGRD	130.82
902	407630.05	3777221.27	FENCEGRD	130.83
903	407634.60	3777223.14	FENCEGRD	130.83
904	407639.15	3777225.02	FENCEGRD	130.79

905	407643.70	3777226.90	FENCEGRD	130.74
906	407648.25	3777228.77	FENCEGRD	131.00
907	407652.79	3777230.65	FENCEGRD	131.25
908	407657.34	3777232.53	FENCEGRD	131.43
909	407661.89	3777234.40	FENCEGRD	131.59
910	407666.44	3777236.28	FENCEGRD	131.71
911	407670.99	3777238.16	FENCEGRD	131.78
912	407675.54	3777240.03	FENCEGRD	131.86
913	407680.09	3777241.91	FENCEGRD	131.90
914	407684.64	3777243.79	FENCEGRD	131.85
915	407689.19	3777245.66	FENCEGRD	131.93
916	407693.74	3777247.54	FENCEGRD	132.08
917	407698.29	3777249.42	FENCEGRD	132.37
918	407702.83	3777251.30	FENCEGRD	132.65
919	407707.38	3777253.17	FENCEGRD	132.77
920	407711.93	3777255.05	FENCEGRD	132.86
921	407716.48	3777256.93	FENCEGRD	132.94
922	407721.03	3777258.80	FENCEGRD	133.03
923	407725.58	3777260.68	FENCEGRD	133.08
924	407730.13	3777262.56	FENCEGRD	133.14
925	407734.68	3777264.43	FENCEGRD	133.13
926	407739.23	3777266.31	FENCEGRD	133.06
927	407743.78	3777268.19	FENCEGRD	133.00
928	407748.33	3777270.06	FENCEGRD	132.92
929	407752.87	3777271.94	FENCEGRD	132.84
930	407759.28	3777278.37	FENCEGRD	131.63
931	407761.14	3777282.93	FENCEGRD	130.56
932	407762.99	3777287.49	FENCEGRD	131.50
933	407764.85	3777292.05	FENCEGRD	133.00
934	407766.70	3777296.60	FENCEGRD	133.65
935	407768.56	3777301.16	FENCEGRD	133.60
936	407770.41	3777305.72	FENCEGRD	133.63
937	407772.27	3777310.28	FENCEGRD	133.83
938	407774.13	3777314.83	FENCEGRD	134.05
939	407775.98	3777319.39	FENCEGRD	134.28
940	407777.84	3777323.95	FENCEGRD	134.50
941	407779.69	3777328.51	FENCEGRD	134.64
942	407781.55	3777333.06	FENCEGRD	134.76

943	407783.41	3777337.62	FENCEGRD	134.85
944	407785.26	3777342.18	FENCEGRD	134.91
945	407787.12	3777346.74	FENCEGRD	134.98
946	407788.97	3777351.29	FENCEGRD	135.05
947	407790.83	3777355.85	FENCEGRD	135.09
948	407792.69	3777360.41	FENCEGRD	135.19
949	407794.54	3777364.97	FENCEGRD	135.27
950	407796.40	3777369.53	FENCEGRD	135.44
951	407798.25	3777374.08	FENCEGRD	135.63
952	407800.11	3777378.64	FENCEGRD	135.81
953	407801.97	3777383.20	FENCEGRD	135.97
954	407803.82	3777387.76	FENCEGRD	136.07
955	407805.68	3777392.31	FENCEGRD	136.13
956	407807.53	3777396.87	FENCEGRD	136.23
957	407809.39	3777401.43	FENCEGRD	136.32
958	407811.24	3777405.99	FENCEGRD	136.42
959	407813.10	3777410.54	FENCEGRD	136.56
960	407814.96	3777415.10	FENCEGRD	136.69
961	407816.81	3777419.66	FENCEGRD	136.82
962	407818.67	3777424.22	FENCEGRD	136.97
963	407820.52	3777428.77	FENCEGRD	137.13
964	407822.38	3777433.33	FENCEGRD	137.28
965	407824.24	3777437.89	FENCEGRD	137.46
966	407826.09	3777442.45	FENCEGRD	137.63
967	407827.95	3777447.00	FENCEGRD	137.76
968	407829.80	3777451.56	FENCEGRD	137.78
969	407831.66	3777456.12	FENCEGRD	137.84
970	407833.52	3777460.68	FENCEGRD	137.98
971	407835.37	3777465.24	FENCEGRD	138.15
972	407837.23	3777469.79	FENCEGRD	138.30
973	407839.08	3777474.35	FENCEGRD	138.45
974	407840.94	3777478.91	FENCEGRD	138.58
975	407842.80	3777483.47	FENCEGRD	138.62
976	407844.65	3777488.02	FENCEGRD	138.66
977	407846.51	3777492.58	FENCEGRD	138.77
978	407848.36	3777497.14	FENCEGRD	138.86
979	407850.22	3777501.70	FENCEGRD	139.01
980	407525.42	3777178.10	FENCEGRD	129.48

981	407520.46	3777178.13	FENCEGRD	129.43
982	407515.50	3777178.16	FENCEGRD	129.39
983	407510.54	3777178.18	FENCEGRD	129.35
984	407505.58	3777178.21	FENCEGRD	129.33
985	407500.62	3777178.23	FENCEGRD	129.34
986	407495.66	3777178.26	FENCEGRD	129.39
987	407490.70	3777178.28	FENCEGRD	129.46
988	407485.74	3777178.31	FENCEGRD	129.59
989	407480.77	3777178.33	FENCEGRD	129.72
990	407475.81	3777178.36	FENCEGRD	129.73
991	407470.85	3777178.38	FENCEGRD	129.73
992	407465.89	3777178.41	FENCEGRD	129.72
993	407460.93	3777178.44	FENCEGRD	129.70
994	407455.97	3777178.46	FENCEGRD	129.67
995	407451.01	3777178.49	FENCEGRD	129.29
996	407446.05	3777178.51	FENCEGRD	128.96
997	407441.09	3777178.54	FENCEGRD	128.94
998	407436.13	3777178.56	FENCEGRD	128.99
999	407431.17	3777178.59	FENCEGRD	129.11
1,000	407426.21	3777178.61	FENCEGRD	129.07
1,001	407421.25	3777178.64	FENCEGRD	128.98
1,002	407416.29	3777178.67	FENCEGRD	128.94
1,003	407411.33	3777178.69	FENCEGRD	128.91
1,004	407406.37	3777178.72	FENCEGRD	128.89
1,005	407401.41	3777178.74	FENCEGRD	128.90
1,006	407396.45	3777178.77	FENCEGRD	128.92
1,007	407391.49	3777178.79	FENCEGRD	128.93
1,008	407386.53	3777178.82	FENCEGRD	128.92
1,009	407381.56	3777178.84	FENCEGRD	128.88
1,010	407376.60	3777178.87	FENCEGRD	128.83
1,011	407371.64	3777178.89	FENCEGRD	128.76
1,012	407366.68	3777178.92	FENCEGRD	128.74
1,013	407361.72	3777178.95	FENCEGRD	128.75
1,014	407356.76	3777178.97	FENCEGRD	128.76
1,015	407351.80	3777179.00	FENCEGRD	128.75
1,016	407346.84	3777179.02	FENCEGRD	128.73
1,017	407341.88	3777179.05	FENCEGRD	128.54
1,018	407336.92	3777179.07	FENCEGRD	128.20

1,019	407331.96	3777179.10	FENCEGRD	128.13
1,020	407327.00	3777179.12	FENCEGRD	128.12
1,021	407529.43	3777079.97	FENCEGRD	127.84
1,022	407533.96	3777081.84	FENCEGRD	127.89
1,023	407538.49	3777083.71	FENCEGRD	127.95
1,024	407543.02	3777085.58	FENCEGRD	128.01
1,025	407547.55	3777087.45	FENCEGRD	128.08
1,026	407552.07	3777089.31	FENCEGRD	128.14
1,027	407556.60	3777091.18	FENCEGRD	128.21
1,028	407561.13	3777093.05	FENCEGRD	128.23
1,029	407565.66	3777094.92	FENCEGRD	128.26
1,030	407570.19	3777096.79	FENCEGRD	128.31
1,031	407574.72	3777098.65	FENCEGRD	128.36
1,032	407579.24	3777100.52	FENCEGRD	128.42
1,033	407583.77	3777102.39	FENCEGRD	128.47
1,034	407588.30	3777104.26	FENCEGRD	128.51
1,035	407592.83	3777106.13	FENCEGRD	128.55
1,036	407597.36	3777107.99	FENCEGRD	128.60
1,037	407601.88	3777109.86	FENCEGRD	128.66
1,038	407606.41	3777111.73	FENCEGRD	128.75
1,039	407610.94	3777113.60	FENCEGRD	128.79
1,040	407615.47	3777115.47	FENCEGRD	128.79
1,041	407620.00	3777117.34	FENCEGRD	128.70
1,042	407624.53	3777119.20	FENCEGRD	128.54
1,043	407629.05	3777121.07	FENCEGRD	128.51
1,044	407633.58	3777122.94	FENCEGRD	128.61
1,045	407638.11	3777124.81	FENCEGRD	128.60
1,046	407642.64	3777126.68	FENCEGRD	128.52
1,047	407647.17	3777128.54	FENCEGRD	128.76
1,048	407651.70	3777130.41	FENCEGRD	128.98
1,049	407656.22	3777132.28	FENCEGRD	129.20
1,050	407660.75	3777134.15	FENCEGRD	129.37
1,051	407665.28	3777136.02	FENCEGRD	129.34
1,052	407669.81	3777137.88	FENCEGRD	129.35
1,053	407674.34	3777139.75	FENCEGRD	129.39
1,054	407678.86	3777141.62	FENCEGRD	129.41
1,055	407683.39	3777143.49	FENCEGRD	129.40
1,056	407687.92	3777145.36	FENCEGRD	129.47

1,057	407692.45	3777147.22	FENCEGRD	129.56
1,058	407696.98	3777149.09	FENCEGRD	129.64
1,059	407701.51	3777150.96	FENCEGRD	129.77
1,060	407706.03	3777152.83	FENCEGRD	129.80
1,061	407710.56	3777154.70	FENCEGRD	129.80
1,062	407715.09	3777156.56	FENCEGRD	129.92
1,063	407719.62	3777158.43	FENCEGRD	130.02
1,064	407724.15	3777160.30	FENCEGRD	130.15
1,065	407728.67	3777162.17	FENCEGRD	130.30
1,066	407733.20	3777164.04	FENCEGRD	130.37
1,067	407737.73	3777165.90	FENCEGRD	130.45
1,068	407742.26	3777167.77	FENCEGRD	130.53
1,069	407746.79	3777169.64	FENCEGRD	130.59
1,070	407751.32	3777171.51	FENCEGRD	130.68
1,071	407755.84	3777173.38	FENCEGRD	130.82
1,072	407760.37	3777175.25	FENCEGRD	130.95
1,073	407764.90	3777177.11	FENCEGRD	131.08
1,074	407769.43	3777178.98	FENCEGRD	131.24
1,075	407773.96	3777180.85	FENCEGRD	131.39
1,076	407778.48	3777182.72	FENCEGRD	131.51
1,077	407783.01	3777184.59	FENCEGRD	131.63
1,078	407787.54	3777186.45	FENCEGRD	131.74
1,079	407792.07	3777188.32	FENCEGRD	131.82
1,080	407796.60	3777190.19	FENCEGRD	131.91
1,081	407801.13	3777192.06	FENCEGRD	131.97
1,082	407805.65	3777193.93	FENCEGRD	132.02
1,083	407810.18	3777195.79	FENCEGRD	132.04
1,084	407814.71	3777197.66	FENCEGRD	132.06
1,085	407819.24	3777199.53	FENCEGRD	132.07
1,086	407823.77	3777201.40	FENCEGRD	132.10
1,087	407830.14	3777207.80	FENCEGRD	132.29
1,088	407831.99	3777212.34	FENCEGRD	132.40
1,089	407833.84	3777216.88	FENCEGRD	132.52
1,090	407835.68	3777221.41	FENCEGRD	132.64
1,091	407837.53	3777225.95	FENCEGRD	132.74
1,092	407839.38	3777230.49	FENCEGRD	132.85
1,093	407841.23	3777235.02	FENCEGRD	132.97
1,094	407843.07	3777239.56	FENCEGRD	133.10

1,095	407844.92	3777244.10	FENCEGRD	133.23
1,096	407846.77	3777248.63	FENCEGRD	133.35
1,097	407848.62	3777253.17	FENCEGRD	133.45
1,098	407850.46	3777257.71	FENCEGRD	133.49
1,099	407852.31	3777262.24	FENCEGRD	133.56
1,100	407854.16	3777266.78	FENCEGRD	133.56
1,101	407856.01	3777271.32	FENCEGRD	133.54
1,102	407857.85	3777275.85	FENCEGRD	133.99
1,103	407859.70	3777280.39	FENCEGRD	134.66
1,104	407861.55	3777284.93	FENCEGRD	135.02
1,105	407863.40	3777289.46	FENCEGRD	134.95
1,106	407865.24	3777294.00	FENCEGRD	134.89
1,107	407867.09	3777298.54	FENCEGRD	134.95
1,108	407868.94	3777303.07	FENCEGRD	135.05
1,109	407870.79	3777307.61	FENCEGRD	135.14
1,110	407872.63	3777312.15	FENCEGRD	135.22
1,111	407874.48	3777316.68	FENCEGRD	135.31
1,112	407876.33	3777321.22	FENCEGRD	135.39
1,113	407878.17	3777325.76	FENCEGRD	135.47
1,114	407880.02	3777330.29	FENCEGRD	135.56
1,115	407881.87	3777334.83	FENCEGRD	135.67
1,116	407883.72	3777339.37	FENCEGRD	135.77
1,117	407885.56	3777343.90	FENCEGRD	135.87
1,118	407887.41	3777348.44	FENCEGRD	135.96
1,119	407889.26	3777352.98	FENCEGRD	136.00
1,120	407891.11	3777357.51	FENCEGRD	136.06
1,121	407892.95	3777362.05	FENCEGRD	136.15
1,122	407894.80	3777366.59	FENCEGRD	136.30
1,123	407896.65	3777371.12	FENCEGRD	136.48
1,124	407898.50	3777375.66	FENCEGRD	136.57
1,125	407900.34	3777380.20	FENCEGRD	136.63
1,126	407902.19	3777384.73	FENCEGRD	136.74
1,127	407904.04	3777389.27	FENCEGRD	136.88
1,128	407905.89	3777393.81	FENCEGRD	137.01
1,129	407907.73	3777398.34	FENCEGRD	137.14
1,130	407909.58	3777402.88	FENCEGRD	137.27
1,131	407911.43	3777407.42	FENCEGRD	137.45
1,132	407913.27	3777411.95	FENCEGRD	137.70

1,133	407915.12	3777416.49	FENCEGRD	137.93
1,134	407916.97	3777421.03	FENCEGRD	138.10
1,135	407918.82	3777425.56	FENCEGRD	138.26
1,136	407920.66	3777430.10	FENCEGRD	138.32
1,137	407922.51	3777434.64	FENCEGRD	138.35
1,138	407924.36	3777439.17	FENCEGRD	138.48
1,139	407926.21	3777443.71	FENCEGRD	138.65
1,140	407928.05	3777448.25	FENCEGRD	138.79
1,141	407929.90	3777452.78	FENCEGRD	138.90
1,142	407931.75	3777457.32	FENCEGRD	139.01
1,143	407933.60	3777461.86	FENCEGRD	139.17
1,144	407935.44	3777466.39	FENCEGRD	139.36
1,145	407937.29	3777470.93	FENCEGRD	139.43
1,146	407939.14	3777475.47	FENCEGRD	139.46
1,147	407940.99	3777480.00	FENCEGRD	139.51
1,148	407942.83	3777484.54	FENCEGRD	139.58
1,149	407944.68	3777489.08	FENCEGRD	139.64
1,150	407946.53	3777493.61	FENCEGRD	139.73
1,151	407948.38	3777498.15	FENCEGRD	139.85
1,152	407950.22	3777502.69	FENCEGRD	140.25
1,153	407524.91	3777078.11	FENCEGRD	127.81
1,154	407519.94	3777078.13	FENCEGRD	127.78
1,155	407514.98	3777078.16	FENCEGRD	127.76
1,156	407510.02	3777078.18	FENCEGRD	127.74
1,157	407505.06	3777078.21	FENCEGRD	127.72
1,158	407500.10	3777078.23	FENCEGRD	127.69
1,159	407495.14	3777078.26	FENCEGRD	127.66
1,160	407490.18	3777078.28	FENCEGRD	127.64
1,161	407485.22	3777078.31	FENCEGRD	127.62
1,162	407480.26	3777078.34	FENCEGRD	127.60
1,163	407475.30	3777078.36	FENCEGRD	127.60
1,164	407470.34	3777078.39	FENCEGRD	127.60
1,165	407465.38	3777078.41	FENCEGRD	127.56
1,166	407460.42	3777078.44	FENCEGRD	127.55
1,167	407455.46	3777078.46	FENCEGRD	127.56
1,168	407450.50	3777078.49	FENCEGRD	127.36
1,169	407445.54	3777078.51	FENCEGRD	127.14
1,170	407440.58	3777078.54	FENCEGRD	127.13

1,171	407435.62	3777078.56	FENCEGRD	127.14
1,172	407430.66	3777078.59	FENCEGRD	127.20
1,173	407425.70	3777078.62	FENCEGRD	127.24
1,174	407420.73	3777078.64	FENCEGRD	127.28
1,175	407415.77	3777078.67	FENCEGRD	127.26
1,176	407410.81	3777078.69	FENCEGRD	127.24
1,177	407405.85	3777078.72	FENCEGRD	127.23
1,178	407400.89	3777078.74	FENCEGRD	127.23
1,179	407395.93	3777078.77	FENCEGRD	127.22
1,180	407390.97	3777078.79	FENCEGRD	127.23
1,181	407386.01	3777078.82	FENCEGRD	127.26
1,182	407381.05	3777078.85	FENCEGRD	127.26
1,183	407376.09	3777078.87	FENCEGRD	127.26
1,184	407371.13	3777078.90	FENCEGRD	127.26
1,185	407366.17	3777078.92	FENCEGRD	127.22
1,186	407361.21	3777078.95	FENCEGRD	127.17
1,187	407356.25	3777078.97	FENCEGRD	127.11
1,188	407351.29	3777079.00	FENCEGRD	127.06
1,189	407346.33	3777079.02	FENCEGRD	127.06
1,190	407341.37	3777079.05	FENCEGRD	127.18
1,191	407336.41	3777079.07	FENCEGRD	127.45
1,192	407331.45	3777079.10	FENCEGRD	127.52
1,193	407326.49	3777079.13	FENCEGRD	127.51
1,194	407323.67	3777504.05	FENCEGRD	134.01
1,195	407323.60	3777508.79	FENCEGRD	134.10
1,196	407323.53	3777513.53	FENCEGRD	134.19
1,197	407323.47	3777518.27	FENCEGRD	134.27
1,198	407323.40	3777523.01	FENCEGRD	134.35
1,199	407323.33	3777527.75	FENCEGRD	134.43
1,200	407323.26	3777532.49	FENCEGRD	134.52
1,201	407323.19	3777537.23	FENCEGRD	134.61
1,202	407323.12	3777541.97	FENCEGRD	134.71
1,203	407323.05	3777546.71	FENCEGRD	134.79
1,204	407322.99	3777551.45	FENCEGRD	134.88
1,205	407322.92	3777556.19	FENCEGRD	134.95
1,206	407322.85	3777560.93	FENCEGRD	135.03
1,207	407322.78	3777565.67	FENCEGRD	135.11
1,208	407320.15	3777500.50	FENCEGRD	133.97

1,209	407318.60	3777508.72	FENCEGRD	134.12
1,210	407318.53	3777513.46	FENCEGRD	134.21
1,211	407318.47	3777518.20	FENCEGRD	134.28
1,212	407318.40	3777522.94	FENCEGRD	134.35
1,213	407318.33	3777527.68	FENCEGRD	134.43
1,214	407318.26	3777532.42	FENCEGRD	134.50
1,215	407318.19	3777537.16	FENCEGRD	134.58
1,216	407318.12	3777541.90	FENCEGRD	134.67
1,217	407318.05	3777546.64	FENCEGRD	134.75
1,218	407317.99	3777551.38	FENCEGRD	134.81
1,219	407317.92	3777556.12	FENCEGRD	134.89
1,220	407317.85	3777560.86	FENCEGRD	135.00
1,221	407317.78	3777565.60	FENCEGRD	135.12
1,222	407315.15	3777500.42	FENCEGRD	133.91
1,223	407321.61	3777492.02	FENCEGRD	133.81
1,224	407313.60	3777508.64	FENCEGRD	134.10
1,225	407313.53	3777513.38	FENCEGRD	134.20
1,226	407313.47	3777518.12	FENCEGRD	134.27
1,227	407313.40	3777522.86	FENCEGRD	134.33
1,228	407313.33	3777527.60	FENCEGRD	134.39
1,229	407313.26	3777532.34	FENCEGRD	134.46
1,230	407313.19	3777537.08	FENCEGRD	134.53
1,231	407313.12	3777541.82	FENCEGRD	134.62
1,232	407313.06	3777546.56	FENCEGRD	134.70
1,233	407312.99	3777551.30	FENCEGRD	134.74
1,234	407312.92	3777556.04	FENCEGRD	134.80
1,235	407312.85	3777560.78	FENCEGRD	134.95
1,236	407312.78	3777565.52	FENCEGRD	135.09
1,237	407310.15	3777500.35	FENCEGRD	133.90
1,238	407313.11	3777493.39	FENCEGRD	133.70
1,239	407318.09	3777488.46	FENCEGRD	133.68
1,240	407308.60	3777508.57	FENCEGRD	134.07
1,241	407308.54	3777513.31	FENCEGRD	134.15
1,242	407308.47	3777518.05	FENCEGRD	134.21
1,243	407308.40	3777522.79	FENCEGRD	134.26
1,244	407308.33	3777527.53	FENCEGRD	134.32
1,245	407308.26	3777532.27	FENCEGRD	134.40
1,246	407308.19	3777537.01	FENCEGRD	134.48

1,247	407308.12	3777541.75	FENCEGRD	134.58
1,248	407308.06	3777546.49	FENCEGRD	134.65
1,249	407307.99	3777551.23	FENCEGRD	134.65
1,250	407307.92	3777555.97	FENCEGRD	134.67
1,251	407307.85	3777560.71	FENCEGRD	134.83
1,252	407307.78	3777565.45	FENCEGRD	134.98
1,253	407305.52	3777499.41	FENCEGRD	133.91
1,254	407307.37	3777495.06	FENCEGRD	133.81
1,255	407309.22	3777490.71	FENCEGRD	133.70
1,256	407315.44	3777484.55	FENCEGRD	133.57
1,257	407319.81	3777482.74	FENCEGRD	133.59
1,258	407324.17	3777480.93	FENCEGRD	133.56
1,259	407303.67	3777503.76	FENCEGRD	133.96
1,260	407303.60	3777508.50	FENCEGRD	134.03
1,261	407303.54	3777513.24	FENCEGRD	134.10
1,262	407303.47	3777517.98	FENCEGRD	134.15
1,263	407303.40	3777522.72	FENCEGRD	134.20
1,264	407303.33	3777527.46	FENCEGRD	134.26
1,265	407303.26	3777532.20	FENCEGRD	134.33
1,266	407303.19	3777536.94	FENCEGRD	134.42
1,267	407303.12	3777541.68	FENCEGRD	134.53
1,268	407303.06	3777546.42	FENCEGRD	134.61
1,269	407302.99	3777551.16	FENCEGRD	134.60
1,270	407302.92	3777555.90	FENCEGRD	134.61
1,271	407302.85	3777560.64	FENCEGRD	134.75
1,272	407302.78	3777565.38	FENCEGRD	134.89
1,273	407205.53	3777497.97	FENCEGRD	132.69
1,274	407207.38	3777493.62	FENCEGRD	132.61
1,275	407209.23	3777489.27	FENCEGRD	132.58
1,276	407211.09	3777484.92	FENCEGRD	132.55
1,277	407212.94	3777480.57	FENCEGRD	132.52
1,278	407214.79	3777476.22	FENCEGRD	132.51
1,279	407216.64	3777471.87	FENCEGRD	132.72
1,280	407218.49	3777467.52	FENCEGRD	133.12
1,281	407220.34	3777463.17	FENCEGRD	133.32
1,282	407222.19	3777458.82	FENCEGRD	132.83
1,283	407224.04	3777454.47	FENCEGRD	132.61
1,284	407225.89	3777450.12	FENCEGRD	131.88

1,285	407227.74	3777445.77	FENCEGRD	130.68
1,286	407229.59	3777441.42	FENCEGRD	129.92
1,287	407231.44	3777437.07	FENCEGRD	129.97
1,288	407233.29	3777432.72	FENCEGRD	130.00
1,289	407235.14	3777428.37	FENCEGRD	129.98
1,290	407236.99	3777424.02	FENCEGRD	130.08
1,291	407238.84	3777419.67	FENCEGRD	130.31
1,292	407245.06	3777413.51	FENCEGRD	131.04
1,293	407249.43	3777411.70	FENCEGRD	131.24
1,294	407253.79	3777409.89	FENCEGRD	131.42
1,295	407258.16	3777408.08	FENCEGRD	131.47
1,296	407262.53	3777406.27	FENCEGRD	131.48
1,297	407266.89	3777404.46	FENCEGRD	131.45
1,298	407271.26	3777402.65	FENCEGRD	131.45
1,299	407275.63	3777400.84	FENCEGRD	131.45
1,300	407279.99	3777399.03	FENCEGRD	131.43
1,301	407284.36	3777397.22	FENCEGRD	131.44
1,302	407288.73	3777395.41	FENCEGRD	131.45
1,303	407293.09	3777393.60	FENCEGRD	131.49
1,304	407297.46	3777391.79	FENCEGRD	131.56
1,305	407301.83	3777389.98	FENCEGRD	131.66
1,306	407306.19	3777388.17	FENCEGRD	131.76
1,307	407310.56	3777386.36	FENCEGRD	131.88
1,308	407314.93	3777384.55	FENCEGRD	131.98
1,309	407319.29	3777382.74	FENCEGRD	132.06
1,310	407323.66	3777380.93	FENCEGRD	132.04
1,311	407203.68	3777502.31	FENCEGRD	132.74
1,312	407203.61	3777507.05	FENCEGRD	132.81
1,313	407203.55	3777511.79	FENCEGRD	132.88
1,314	407203.48	3777516.53	FENCEGRD	132.95
1,315	407203.41	3777521.27	FENCEGRD	133.05
1,316	407203.34	3777526.01	FENCEGRD	133.16
1,317	407203.27	3777530.75	FENCEGRD	133.38
1,318	407203.20	3777535.49	FENCEGRD	133.60
1,319	407203.14	3777540.23	FENCEGRD	133.64
1,320	407203.07	3777544.97	FENCEGRD	133.67
1,321	407203.00	3777549.71	FENCEGRD	133.78
1,322	407202.93	3777554.45	FENCEGRD	133.91

1,323	407202.86	3777559.19	FENCEGRD	134.01
1,324	407202.79	3777563.93	FENCEGRD	134.09
1,325	407105.54	3777496.52	FENCEGRD	133.64
1,326	407107.39	3777492.17	FENCEGRD	132.95
1,327	407109.25	3777487.82	FENCEGRD	131.96
1,328	407111.10	3777483.47	FENCEGRD	131.39
1,329	407112.95	3777479.12	FENCEGRD	131.36
1,330	407114.80	3777474.77	FENCEGRD	131.35
1,331	407116.65	3777470.42	FENCEGRD	131.32
1,332	407118.50	3777466.07	FENCEGRD	131.27
1,333	407120.35	3777461.72	FENCEGRD	131.25
1,334	407122.20	3777457.37	FENCEGRD	131.24
1,335	407124.05	3777453.02	FENCEGRD	131.22
1,336	407125.90	3777448.67	FENCEGRD	131.19
1,337	407127.75	3777444.32	FENCEGRD	131.18
1,338	407129.60	3777439.98	FENCEGRD	131.19
1,339	407131.45	3777435.63	FENCEGRD	131.20
1,340	407133.30	3777431.28	FENCEGRD	131.20
1,341	407135.15	3777426.93	FENCEGRD	131.14
1,342	407137.00	3777422.58	FENCEGRD	131.09
1,343	407138.85	3777418.23	FENCEGRD	131.06
1,344	407140.70	3777413.88	FENCEGRD	131.01
1,345	407142.55	3777409.53	FENCEGRD	131.03
1,346	407144.41	3777405.18	FENCEGRD	131.06
1,347	407146.26	3777400.83	FENCEGRD	131.00
1,348	407148.11	3777396.48	FENCEGRD	130.90
1,349	407149.96	3777392.13	FENCEGRD	130.79
1,350	407151.81	3777387.78	FENCEGRD	130.77
1,351	407153.66	3777383.43	FENCEGRD	130.73
1,352	407155.51	3777379.08	FENCEGRD	130.67
1,353	407157.36	3777374.73	FENCEGRD	130.58
1,354	407159.21	3777370.38	FENCEGRD	130.49
1,355	407161.06	3777366.03	FENCEGRD	130.43
1,356	407162.91	3777361.68	FENCEGRD	130.40
1,357	407164.76	3777357.33	FENCEGRD	130.39
1,358	407166.61	3777352.98	FENCEGRD	130.36
1,359	407168.46	3777348.63	FENCEGRD	130.27
1,360	407174.68	3777342.47	FENCEGRD	130.10

1,361	407179.05	3777340.66	FENCEGRD	130.11
1,362	407183.41	3777338.85	FENCEGRD	130.14
1,363	407187.78	3777337.04	FENCEGRD	130.08
1,364	407192.15	3777335.23	FENCEGRD	130.03
1,365	407196.51	3777333.42	FENCEGRD	130.05
1,366	407200.88	3777331.61	FENCEGRD	130.05
1,367	407205.25	3777329.80	FENCEGRD	130.09
1,368	407209.61	3777327.99	FENCEGRD	130.08
1,369	407213.98	3777326.18	FENCEGRD	130.08
1,370	407218.35	3777324.37	FENCEGRD	130.06
1,371	407222.71	3777322.56	FENCEGRD	129.95
1,372	407227.08	3777320.75	FENCEGRD	129.83
1,373	407231.45	3777318.94	FENCEGRD	129.79
1,374	407235.81	3777317.13	FENCEGRD	129.68
1,375	407240.18	3777315.32	FENCEGRD	129.27
1,376	407244.55	3777313.51	FENCEGRD	129.06
1,377	407248.91	3777311.70	FENCEGRD	128.52
1,378	407253.28	3777309.89	FENCEGRD	128.12
1,379	407257.65	3777308.08	FENCEGRD	128.74
1,380	407262.01	3777306.27	FENCEGRD	129.27
1,381	407266.38	3777304.46	FENCEGRD	129.63
1,382	407270.75	3777302.65	FENCEGRD	129.90
1,383	407275.11	3777300.84	FENCEGRD	130.03
1,384	407279.48	3777299.03	FENCEGRD	130.13
1,385	407283.85	3777297.22	FENCEGRD	130.12
1,386	407288.21	3777295.41	FENCEGRD	130.11
1,387	407292.58	3777293.60	FENCEGRD	130.07
1,388	407296.95	3777291.79	FENCEGRD	130.06
1,389	407301.31	3777289.98	FENCEGRD	130.08
1,390	407305.68	3777288.17	FENCEGRD	130.09
1,391	407310.05	3777286.36	FENCEGRD	130.09
1,392	407314.41	3777284.55	FENCEGRD	130.01
1,393	407318.78	3777282.74	FENCEGRD	129.95
1,394	407323.15	3777280.93	FENCEGRD	129.98
1,395	407103.69	3777500.87	FENCEGRD	133.49
1,396	407103.63	3777505.61	FENCEGRD	133.41
1,397	407103.56	3777510.35	FENCEGRD	133.03
1,398	407103.49	3777515.09	FENCEGRD	132.60

1,399	407103.42	3777519.83	FENCEGRD	132.64
1,400	407103.35	3777524.57	FENCEGRD	132.84
1,401	407103.28	3777529.31	FENCEGRD	132.97
1,402	407103.21	3777534.05	FENCEGRD	133.04
1,403	407103.15	3777538.79	FENCEGRD	133.11
1,404	407103.08	3777543.53	FENCEGRD	133.15
1,405	407103.01	3777548.27	FENCEGRD	133.20
1,406	407102.94	3777553.01	FENCEGRD	133.28
1,407	407102.87	3777557.75	FENCEGRD	133.35
1,408	407102.80	3777562.49	FENCEGRD	133.41
1,409	407005.55	3777495.08	FENCEGRD	132.69
1,410	407007.40	3777490.73	FENCEGRD	132.46
1,411	407009.26	3777486.38	FENCEGRD	132.27
1,412	407011.11	3777482.03	FENCEGRD	131.98
1,413	407012.96	3777477.68	FENCEGRD	131.83
1,414	407014.81	3777473.33	FENCEGRD	131.87
1,415	407016.66	3777468.98	FENCEGRD	131.94
1,416	407018.51	3777464.63	FENCEGRD	132.00
1,417	407020.36	3777460.28	FENCEGRD	132.04
1,418	407022.21	3777455.93	FENCEGRD	132.08
1,419	407024.06	3777451.58	FENCEGRD	131.90
1,420	407025.91	3777447.23	FENCEGRD	131.70
1,421	407027.76	3777442.88	FENCEGRD	131.61
1,422	407029.61	3777438.53	FENCEGRD	131.62
1,423	407031.46	3777434.18	FENCEGRD	131.62
1,424	407033.31	3777429.83	FENCEGRD	131.58
1,425	407035.16	3777425.48	FENCEGRD	131.55
1,426	407037.01	3777421.13	FENCEGRD	131.59
1,427	407038.86	3777416.78	FENCEGRD	131.71
1,428	407040.71	3777412.43	FENCEGRD	131.53
1,429	407042.57	3777408.08	FENCEGRD	131.12
1,430	407044.42	3777403.73	FENCEGRD	130.71
1,431	407046.27	3777399.38	FENCEGRD	130.30
1,432	407048.12	3777395.03	FENCEGRD	129.94
1,433	407049.97	3777390.68	FENCEGRD	129.90
1,434	407051.82	3777386.34	FENCEGRD	129.79
1,435	407053.67	3777381.99	FENCEGRD	129.77
1,436	407055.52	3777377.64	FENCEGRD	130.07

1,437	407057.37	3777373.29	FENCEGRD	130.48
1,438	407059.22	3777368.94	FENCEGRD	130.85
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1,440	407062.92	3777360.24	FENCEGRD	130.93
1,441	407064.77	3777355.89	FENCEGRD	130.79
1,442	407066.62	3777351.54	FENCEGRD	130.71
1,443	407068.47	3777347.19	FENCEGRD	130.68
1,444	407070.32	3777342.84	FENCEGRD	130.67
1,445	407072.17	3777338.49	FENCEGRD	130.69
1,446	407074.02	3777334.14	FENCEGRD	130.71
1,447	407075.87	3777329.79	FENCEGRD	130.73
1,448	407077.73	3777325.44	FENCEGRD	130.71
1,449	407079.58	3777321.09	FENCEGRD	130.66
1,450	407081.43	3777316.74	FENCEGRD	130.64
1,451	407083.28	3777312.39	FENCEGRD	130.61
1,452	407085.13	3777308.04	FENCEGRD	130.59
1,453	407086.98	3777303.69	FENCEGRD	130.57
1,454	407088.83	3777299.34	FENCEGRD	130.56
1,455	407090.68	3777294.99	FENCEGRD	130.55
1,456	407092.53	3777290.64	FENCEGRD	130.52
1,457	407094.38	3777286.29	FENCEGRD	130.18
1,458	407096.23	3777281.94	FENCEGRD	129.83
1,459	407098.08	3777277.59	FENCEGRD	129.70
1,460	407104.30	3777271.43	FENCEGRD	129.70
1,461	407108.66	3777269.62	FENCEGRD	129.68
1,462	407113.03	3777267.81	FENCEGRD	129.66
1,463	407117.40	3777266.00	FENCEGRD	129.63
1,464	407121.77	3777264.19	FENCEGRD	129.60
1,465	407126.13	3777262.38	FENCEGRD	129.58
1,466	407130.50	3777260.57	FENCEGRD	129.58
1,467	407134.87	3777258.76	FENCEGRD	129.56
1,468	407139.23	3777256.95	FENCEGRD	129.44
1,469	407143.60	3777255.14	FENCEGRD	129.24
1,470	407147.97	3777253.33	FENCEGRD	128.98
1,471	407152.33	3777251.52	FENCEGRD	128.97
1,472	407156.70	3777249.71	FENCEGRD	129.16
1,473	407161.07	3777247.90	FENCEGRD	129.06
1,474	407165.43	3777246.09	FENCEGRD	128.79

1,475	407169.80	3777244.28	FENCEGRD	128.34
1,476	407174.17	3777242.47	FENCEGRD	127.94
1,477	407178.53	3777240.66	FENCEGRD	127.72
1,478	407182.90	3777238.85	FENCEGRD	127.53
1,479	407187.27	3777237.04	FENCEGRD	128.08
1,480	407191.63	3777235.23	FENCEGRD	128.58
1,481	407196.00	3777233.42	FENCEGRD	128.57
1,482	407200.37	3777231.61	FENCEGRD	128.54
1,483	407204.73	3777229.80	FENCEGRD	128.44
1,484	407209.10	3777227.99	FENCEGRD	128.33
1,485	407213.47	3777226.18	FENCEGRD	128.30
1,486	407217.83	3777224.37	FENCEGRD	128.31
1,487	407222.20	3777222.56	FENCEGRD	128.28
1,488	407226.57	3777220.75	FENCEGRD	128.24
1,489	407230.93	3777218.94	FENCEGRD	128.25
1,490	407235.30	3777217.13	FENCEGRD	128.27
1,491	407239.67	3777215.32	FENCEGRD	128.30
1,492	407244.03	3777213.51	FENCEGRD	128.31
1,493	407248.40	3777211.70	FENCEGRD	128.29
1,494	407252.77	3777209.89	FENCEGRD	128.28
1,495	407257.13	3777208.08	FENCEGRD	128.26
1,496	407261.50	3777206.27	FENCEGRD	128.27
1,497	407265.87	3777204.46	FENCEGRD	128.32
1,498	407270.23	3777202.65	FENCEGRD	128.38
1,499	407274.60	3777200.84	FENCEGRD	128.42
1,500	407278.97	3777199.03	FENCEGRD	128.46
1,501	407283.33	3777197.22	FENCEGRD	128.48
1,502	407287.70	3777195.41	FENCEGRD	128.46
1,503	407292.07	3777193.60	FENCEGRD	128.38
1,504	407296.43	3777191.79	FENCEGRD	128.20
1,505	407300.80	3777189.98	FENCEGRD	128.05
1,506	407305.17	3777188.17	FENCEGRD	128.03
1,507	407309.53	3777186.36	FENCEGRD	128.01
1,508	407313.90	3777184.55	FENCEGRD	128.01
1,509	407318.27	3777182.74	FENCEGRD	128.05
1,510	407322.63	3777180.93	FENCEGRD	128.08
1,511	407003.70	3777499.43	FENCEGRD	132.97
1,512	407003.64	3777504.17	FENCEGRD	132.94

1,513	407003.57	3777508.91	FENCEGRD	132.71
1,514	407003.50	3777513.65	FENCEGRD	132.16
1,515	407003.43	3777518.39	FENCEGRD	131.86
1,516	407003.36	3777523.13	FENCEGRD	132.39
1,517	407003.29	3777527.87	FENCEGRD	132.92
1,518	407003.22	3777532.61	FENCEGRD	133.55
1,519	407003.16	3777537.35	FENCEGRD	134.19
1,520	407003.09	3777542.09	FENCEGRD	133.47
1,521	407003.02	3777546.83	FENCEGRD	132.60
1,522	407002.95	3777551.57	FENCEGRD	132.33
1,523	407002.88	3777556.31	FENCEGRD	132.27
1,524	407002.81	3777561.05	FENCEGRD	132.25
1,525	406905.56	3777493.63	FENCEGRD	133.09
1,526	406907.42	3777489.28	FENCEGRD	132.99
1,527	406909.27	3777484.93	FENCEGRD	132.88
1,528	406911.12	3777480.58	FENCEGRD	132.78
1,529	406912.97	3777476.23	FENCEGRD	132.70
1,530	406914.82	3777471.88	FENCEGRD	132.64
1,531	406916.67	3777467.53	FENCEGRD	132.59
1,532	406918.52	3777463.18	FENCEGRD	132.54
1,533	406920.37	3777458.84	FENCEGRD	132.50
1,534	406922.22	3777454.49	FENCEGRD	132.40
1,535	406924.07	3777450.14	FENCEGRD	132.30
1,536	406925.92	3777445.79	FENCEGRD	132.21
1,537	406927.77	3777441.44	FENCEGRD	132.11
1,538	406929.62	3777437.09	FENCEGRD	132.06
1,539	406931.47	3777432.74	FENCEGRD	132.06
1,540	406933.32	3777428.39	FENCEGRD	132.08
1,541	406935.17	3777424.04	FENCEGRD	132.11
1,542	406937.02	3777419.69	FENCEGRD	132.16
1,543	406938.87	3777415.34	FENCEGRD	132.16
1,544	406940.72	3777410.99	FENCEGRD	132.10
1,545	406942.58	3777406.64	FENCEGRD	132.02
1,546	406944.43	3777402.29	FENCEGRD	131.93
1,547	406946.28	3777397.94	FENCEGRD	131.87
1,548	406948.13	3777393.59	FENCEGRD	131.79
1,549	406949.98	3777389.24	FENCEGRD	131.74
1,550	406951.83	3777384.89	FENCEGRD	131.71

1,551	406953.68	3777380.54	FENCEGRD	131.72
1,552	406955.53	3777376.19	FENCEGRD	131.74
1,553	406957.38	3777371.84	FENCEGRD	131.70
1,554	406959.23	3777367.49	FENCEGRD	131.61
1,555	406961.08	3777363.14	FENCEGRD	131.54
1,556	406962.93	3777358.79	FENCEGRD	131.49
1,557	406964.78	3777354.44	FENCEGRD	131.43
1,558	406966.63	3777350.09	FENCEGRD	131.33
1,559	406968.48	3777345.74	FENCEGRD	131.20
1,560	406970.33	3777341.39	FENCEGRD	131.08
1,561	406972.18	3777337.04	FENCEGRD	130.99
1,562	406974.03	3777332.70	FENCEGRD	130.90
1,563	406975.89	3777328.35	FENCEGRD	130.84
1,564	406977.74	3777324.00	FENCEGRD	130.78
1,565	406979.59	3777319.65	FENCEGRD	130.70
1,566	406981.44	3777315.30	FENCEGRD	130.63
1,567	406983.29	3777310.95	FENCEGRD	130.56
1,568	406985.14	3777306.60	FENCEGRD	130.51
1,569	406986.99	3777302.25	FENCEGRD	130.47
1,570	406988.84	3777297.90	FENCEGRD	130.46
1,571	406990.69	3777293.55	FENCEGRD	130.42
1,572	406992.54	3777289.20	FENCEGRD	130.32
1,573	406994.39	3777284.85	FENCEGRD	130.17
1,574	406996.24	3777280.50	FENCEGRD	130.06
1,575	406998.09	3777276.15	FENCEGRD	130.11
1,576	406999.94	3777271.80	FENCEGRD	130.15
1,577	407001.79	3777267.45	FENCEGRD	130.08
1,578	407003.64	3777263.10	FENCEGRD	129.98
1,579	407005.49	3777258.75	FENCEGRD	129.90
1,580	407007.34	3777254.40	FENCEGRD	129.86
1,581	407009.19	3777250.05	FENCEGRD	129.83
1,582	407011.05	3777245.70	FENCEGRD	129.83
1,583	407012.90	3777241.35	FENCEGRD	129.76
1,584	407014.75	3777237.00	FENCEGRD	129.76
1,585	407016.60	3777232.65	FENCEGRD	129.74
1,586	407018.45	3777228.30	FENCEGRD	129.70
1,587	407020.30	3777223.95	FENCEGRD	129.65
1,588	407022.15	3777219.60	FENCEGRD	129.61

1,589	407024.00	3777215.25	FENCEGRD	129.61
1,590	407025.85	3777210.90	FENCEGRD	129.62
1,591	407027.70	3777206.55	FENCEGRD	129.60
1,592	407033.92	3777200.40	FENCEGRD	129.55
1,593	407038.28	3777198.59	FENCEGRD	129.53
1,594	407042.65	3777196.78	FENCEGRD	129.53
1,595	407047.02	3777194.97	FENCEGRD	129.53
1,596	407051.38	3777193.16	FENCEGRD	129.49
1,597	407055.75	3777191.35	FENCEGRD	129.40
1,598	407060.12	3777189.54	FENCEGRD	129.27
1,599	407064.48	3777187.73	FENCEGRD	129.20
1,600	407068.85	3777185.92	FENCEGRD	129.23
1,601	407073.22	3777184.11	FENCEGRD	129.25
1,602	407077.58	3777182.30	FENCEGRD	129.29
1,603	407081.95	3777180.49	FENCEGRD	129.32
1,604	407086.32	3777178.68	FENCEGRD	129.30
1,605	407090.68	3777176.87	FENCEGRD	129.27
1,606	407095.05	3777175.06	FENCEGRD	129.24
1,607	407099.42	3777173.25	FENCEGRD	129.18
1,608	407103.78	3777171.44	FENCEGRD	129.11
1,609	407108.15	3777169.63	FENCEGRD	129.08
1,610	407112.52	3777167.82	FENCEGRD	129.06
1,611	407116.88	3777166.01	FENCEGRD	129.07
1,612	407121.25	3777164.20	FENCEGRD	129.05
1,613	407125.62	3777162.39	FENCEGRD	128.93
1,614	407129.98	3777160.58	FENCEGRD	128.75
1,615	407134.35	3777158.77	FENCEGRD	128.66
1,616	407138.72	3777156.96	FENCEGRD	128.59
1,617	407143.08	3777155.15	FENCEGRD	128.48
1,618	407147.45	3777153.34	FENCEGRD	128.39
1,619	407151.82	3777151.53	FENCEGRD	128.23
1,620	407156.18	3777149.72	FENCEGRD	128.04
1,621	407160.55	3777147.91	FENCEGRD	127.89
1,622	407164.92	3777146.10	FENCEGRD	127.74
1,623	407169.28	3777144.29	FENCEGRD	127.73
1,624	407173.65	3777142.48	FENCEGRD	127.73
1,625	407178.02	3777140.67	FENCEGRD	127.96
1,626	407182.38	3777138.86	FENCEGRD	128.19

1,627	407186.75	3777137.05	FENCEGRD	128.26
1,628	407191.12	3777135.24	FENCEGRD	128.30
1,629	407195.48	3777133.43	FENCEGRD	128.28
1,630	407199.85	3777131.62	FENCEGRD	128.26
1,631	407204.22	3777129.81	FENCEGRD	128.23
1,632	407208.58	3777128.00	FENCEGRD	128.19
1,633	407212.95	3777126.19	FENCEGRD	128.08
1,634	407217.32	3777124.38	FENCEGRD	128.01
1,635	407221.68	3777122.57	FENCEGRD	128.03
1,636	407226.05	3777120.76	FENCEGRD	128.05
1,637	407230.42	3777118.95	FENCEGRD	128.03
1,638	407234.78	3777117.14	FENCEGRD	127.89
1,639	407239.15	3777115.33	FENCEGRD	127.81
1,640	407243.52	3777113.52	FENCEGRD	127.05
1,641	407247.88	3777111.71	FENCEGRD	125.51
1,642	407252.25	3777109.90	FENCEGRD	124.89
1,643	407256.62	3777108.09	FENCEGRD	124.21
1,644	407260.98	3777106.28	FENCEGRD	124.49
1,645	407265.35	3777104.47	FENCEGRD	126.31
1,646	407269.72	3777102.66	FENCEGRD	127.09
1,647	407274.09	3777100.85	FENCEGRD	127.33
1,648	407278.45	3777099.04	FENCEGRD	127.43
1,649	407282.82	3777097.23	FENCEGRD	127.39
1,650	407287.19	3777095.42	FENCEGRD	127.51
1,651	407291.55	3777093.61	FENCEGRD	127.62
1,652	407295.92	3777091.80	FENCEGRD	127.64
1,653	407300.29	3777089.99	FENCEGRD	127.66
1,654	407304.65	3777088.18	FENCEGRD	127.60
1,655	407309.02	3777086.37	FENCEGRD	127.56
1,656	407313.39	3777084.56	FENCEGRD	127.55
1,657	407317.75	3777082.75	FENCEGRD	127.52
1,658	407322.12	3777080.94	FENCEGRD	127.51
1,659	406903.71	3777497.98	FENCEGRD	133.17
1,660	406903.65	3777502.72	FENCEGRD	133.20
1,661	406903.58	3777507.46	FENCEGRD	133.23
1,662	406903.51	3777512.20	FENCEGRD	133.29
1,663	406903.44	3777516.94	FENCEGRD	133.36
1,664	406903.37	3777521.68	FENCEGRD	133.39

1,665	406903.30	3777526.42	FENCEGRD	133.40
1,666	406903.24	3777531.16	FENCEGRD	133.48
1,667	406903.17	3777535.90	FENCEGRD	133.60
1,668	406903.10	3777540.64	FENCEGRD	133.70
1,669	406903.03	3777545.38	FENCEGRD	133.76
1,670	406902.96	3777550.12	FENCEGRD	133.84
1,671	406902.89	3777554.86	FENCEGRD	134.00
1,672	406902.82	3777559.60	FENCEGRD	134.18
1,673	407327.75	3777570.74	FENCEGRD	135.05
1,674	407332.72	3777570.77	FENCEGRD	134.98
1,675	407337.68	3777570.80	FENCEGRD	135.09
1,676	407342.65	3777570.83	FENCEGRD	135.17
1,677	407347.62	3777570.86	FENCEGRD	135.21
1,678	407352.58	3777570.90	FENCEGRD	135.24
1,679	407357.55	3777570.93	FENCEGRD	135.27
1,680	407362.52	3777570.96	FENCEGRD	135.32
1,681	407367.49	3777570.99	FENCEGRD	135.36
1,682	407372.45	3777571.02	FENCEGRD	135.39
1,683	407377.42	3777571.05	FENCEGRD	135.45
1,684	407382.39	3777571.08	FENCEGRD	135.52
1,685	407387.36	3777571.11	FENCEGRD	135.60
1,686	407392.32	3777571.15	FENCEGRD	135.67
1,687	407397.29	3777571.18	FENCEGRD	135.73
1,688	407402.26	3777571.21	FENCEGRD	135.78
1,689	407407.22	3777571.24	FENCEGRD	135.82
1,690	407412.19	3777571.27	FENCEGRD	135.91
1,691	407417.16	3777571.30	FENCEGRD	136.00
1,692	407422.13	3777571.33	FENCEGRD	136.10
1,693	407427.09	3777571.36	FENCEGRD	136.19
1,694	407432.06	3777571.40	FENCEGRD	136.27
1,695	407437.03	3777571.43	FENCEGRD	136.36
1,696	407442.00	3777571.46	FENCEGRD	136.44
1,697	407446.96	3777571.49	FENCEGRD	136.53
1,698	407451.93	3777571.52	FENCEGRD	136.61
1,699	407456.90	3777571.55	FENCEGRD	136.72
1,700	407461.86	3777571.58	FENCEGRD	136.81
1,701	407466.83	3777571.61	FENCEGRD	136.86
1,702	407471.80	3777571.65	FENCEGRD	136.93

1,703	407476.77	3777571.68	FENCEGRD	137.01
1,704	407481.73	3777571.71	FENCEGRD	137.11
1,705	407486.70	3777571.74	FENCEGRD	137.20
1,706	407491.67	3777571.77	FENCEGRD	137.26
1,707	407496.64	3777571.80	FENCEGRD	137.34
1,708	407501.60	3777571.83	FENCEGRD	137.43
1,709	407506.57	3777571.86	FENCEGRD	137.49
1,710	407511.54	3777571.90	FENCEGRD	137.54
1,711	407516.50	3777571.93	FENCEGRD	137.60
1,712	407521.47	3777571.96	FENCEGRD	137.65
1,713	407526.44	3777571.99	FENCEGRD	137.71
1,714	407324.18	3777574.24	FENCEGRD	135.22
1,715	407332.68	3777575.77	FENCEGRD	135.07
1,716	407337.65	3777575.80	FENCEGRD	135.12
1,717	407342.62	3777575.83	FENCEGRD	135.16
1,718	407347.59	3777575.86	FENCEGRD	135.20
1,719	407352.55	3777575.90	FENCEGRD	135.23
1,720	407357.52	3777575.93	FENCEGRD	135.25
1,721	407362.49	3777575.96	FENCEGRD	135.30
1,722	407367.46	3777575.99	FENCEGRD	135.35
1,723	407372.42	3777576.02	FENCEGRD	135.39
1,724	407377.39	3777576.05	FENCEGRD	135.45
1,725	407382.36	3777576.08	FENCEGRD	135.50
1,726	407387.32	3777576.11	FENCEGRD	135.57
1,727	407392.29	3777576.15	FENCEGRD	135.64
1,728	407397.26	3777576.18	FENCEGRD	135.70
1,729	407402.23	3777576.21	FENCEGRD	135.77
1,730	407407.19	3777576.24	FENCEGRD	135.84
1,731	407412.16	3777576.27	FENCEGRD	135.94
1,732	407417.13	3777576.30	FENCEGRD	136.05
1,733	407422.09	3777576.33	FENCEGRD	136.10
1,734	407427.06	3777576.36	FENCEGRD	136.15
1,735	407432.03	3777576.40	FENCEGRD	136.24
1,736	407437.00	3777576.43	FENCEGRD	136.33
1,737	407441.96	3777576.46	FENCEGRD	136.43
1,738	407446.93	3777576.49	FENCEGRD	136.53
1,739	407451.90	3777576.52	FENCEGRD	136.63
1,740	407456.87	3777576.55	FENCEGRD	136.73

1,741	407461.83	3777576.58	FENCEGRD	136.84
1,742	407466.80	3777576.61	FENCEGRD	136.95
1,743	407471.77	3777576.65	FENCEGRD	137.03
1,744	407476.73	3777576.68	FENCEGRD	137.10
1,745	407481.70	3777576.71	FENCEGRD	137.19
1,746	407486.67	3777576.74	FENCEGRD	137.27
1,747	407491.64	3777576.77	FENCEGRD	137.37
1,748	407496.60	3777576.80	FENCEGRD	137.45
1,749	407501.57	3777576.83	FENCEGRD	137.53
1,750	407506.54	3777576.86	FENCEGRD	137.60
1,751	407511.51	3777576.90	FENCEGRD	137.68
1,752	407516.47	3777576.93	FENCEGRD	137.76
1,753	407521.44	3777576.96	FENCEGRD	137.83
1,754	407324.15	3777579.24	FENCEGRD	135.33
1,755	407315.64	3777572.67	FENCEGRD	135.14
1,756	407332.65	3777580.77	FENCEGRD	135.27
1,757	407337.62	3777580.80	FENCEGRD	135.39
1,758	407342.59	3777580.83	FENCEGRD	135.47
1,759	407347.55	3777580.86	FENCEGRD	135.49
1,760	407352.52	3777580.90	FENCEGRD	135.50
1,761	407357.49	3777580.93	FENCEGRD	135.51
1,762	407362.46	3777580.96	FENCEGRD	135.57
1,763	407367.42	3777580.99	FENCEGRD	135.64
1,764	407372.39	3777581.02	FENCEGRD	135.71
1,765	407377.36	3777581.05	FENCEGRD	135.77
1,766	407382.33	3777581.08	FENCEGRD	135.83
1,767	407387.29	3777581.11	FENCEGRD	135.92
1,768	407392.26	3777581.15	FENCEGRD	135.99
1,769	407397.23	3777581.18	FENCEGRD	136.00
1,770	407402.19	3777581.21	FENCEGRD	136.04
1,771	407407.16	3777581.24	FENCEGRD	136.11
1,772	407412.13	3777581.27	FENCEGRD	136.27
1,773	407417.10	3777581.30	FENCEGRD	136.44
1,774	407422.06	3777581.33	FENCEGRD	136.35
1,775	407427.03	3777581.36	FENCEGRD	136.31
1,776	407432.00	3777581.40	FENCEGRD	136.38
1,777	407436.97	3777581.43	FENCEGRD	136.48
1,778	407441.93	3777581.46	FENCEGRD	136.58

1,779	407446.90	3777581.49	FENCEGRD	136.70
1,780	407451.87	3777581.52	FENCEGRD	136.82
1,781	407456.83	3777581.55	FENCEGRD	136.94
1,782	407461.80	3777581.58	FENCEGRD	137.08
1,783	407466.77	3777581.61	FENCEGRD	137.23
1,784	407471.74	3777581.65	FENCEGRD	137.31
1,785	407476.70	3777581.68	FENCEGRD	137.36
1,786	407481.67	3777581.71	FENCEGRD	137.44
1,787	407486.64	3777581.74	FENCEGRD	137.53
1,788	407491.60	3777581.77	FENCEGRD	137.64
1,789	407496.57	3777581.80	FENCEGRD	137.73
1,790	407501.54	3777581.83	FENCEGRD	137.82
1,791	407506.51	3777581.86	FENCEGRD	137.88
1,792	407511.47	3777581.90	FENCEGRD	137.96
1,793	407516.44	3777581.93	FENCEGRD	138.07
1,794	407521.41	3777581.96	FENCEGRD	138.14
1,795	407526.38	3777581.99	FENCEGRD	138.15
1,796	407324.11	3777584.24	FENCEGRD	135.45
1,797	407317.03	3777581.24	FENCEGRD	135.36
1,798	407312.06	3777576.16	FENCEGRD	135.11
1,799	407332.62	3777585.77	FENCEGRD	135.47
1,800	407337.59	3777585.80	FENCEGRD	135.66
1,801	407342.56	3777585.83	FENCEGRD	135.77
1,802	407347.52	3777585.86	FENCEGRD	135.79
1,803	407352.49	3777585.90	FENCEGRD	135.79
1,804	407357.46	3777585.93	FENCEGRD	135.79
1,805	407362.42	3777585.96	FENCEGRD	135.87
1,806	407367.39	3777585.99	FENCEGRD	135.97
1,807	407372.36	3777586.02	FENCEGRD	136.09
1,808	407377.33	3777586.05	FENCEGRD	136.17
1,809	407382.29	3777586.08	FENCEGRD	136.25
1,810	407387.26	3777586.11	FENCEGRD	136.37
1,811	407392.23	3777586.15	FENCEGRD	136.47
1,812	407397.20	3777586.18	FENCEGRD	136.47
1,813	407402.16	3777586.21	FENCEGRD	136.52
1,814	407407.13	3777586.24	FENCEGRD	136.64
1,815	407412.10	3777586.27	FENCEGRD	136.88
1,816	407417.06	3777586.30	FENCEGRD	137.16

1,817	407422.03	3777586.33	FENCEGRD	137.06
1,818	407427.00	3777586.36	FENCEGRD	137.02
1,819	407431.97	3777586.40	FENCEGRD	137.12
1,820	407436.93	3777586.43	FENCEGRD	137.24
1,821	407441.90	3777586.46	FENCEGRD	137.38
1,822	407446.87	3777586.49	FENCEGRD	137.55
1,823	407451.84	3777586.52	FENCEGRD	137.72
1,824	407456.80	3777586.55	FENCEGRD	137.91
1,825	407461.77	3777586.58	FENCEGRD	138.10
1,826	407466.74	3777586.61	FENCEGRD	138.30
1,827	407471.70	3777586.65	FENCEGRD	138.41
1,828	407476.67	3777586.68	FENCEGRD	138.49
1,829	407481.64	3777586.71	FENCEGRD	138.58
1,830	407486.61	3777586.74	FENCEGRD	138.68
1,831	407491.57	3777586.77	FENCEGRD	138.81
1,832	407496.54	3777586.80	FENCEGRD	138.92
1,833	407501.51	3777586.83	FENCEGRD	138.99
1,834	407506.48	3777586.86	FENCEGRD	139.05
1,835	407511.44	3777586.90	FENCEGRD	139.11
1,836	407516.41	3777586.93	FENCEGRD	139.20
1,837	407521.38	3777586.96	FENCEGRD	139.24
1,838	407323.20	3777588.86	FENCEGRD	135.54
1,839	407318.77	3777586.99	FENCEGRD	135.53
1,840	407314.35	3777585.11	FENCEGRD	135.50
1,841	407308.14	3777578.77	FENCEGRD	135.20
1,842	407306.35	3777574.31	FENCEGRD	135.04
1,843	407304.57	3777569.84	FENCEGRD	134.96
1,844	407327.62	3777590.74	FENCEGRD	135.55
1,845	407332.59	3777590.77	FENCEGRD	135.59
1,846	407337.56	3777590.80	FENCEGRD	135.89
1,847	407342.52	3777590.83	FENCEGRD	136.09
1,848	407347.49	3777590.86	FENCEGRD	136.18
1,849	407352.46	3777590.90	FENCEGRD	136.30
1,850	407357.43	3777590.93	FENCEGRD	136.43
1,851	407362.39	3777590.96	FENCEGRD	136.60
1,852	407367.36	3777590.99	FENCEGRD	136.78
1,853	407372.33	3777591.02	FENCEGRD	136.99
1,854	407377.30	3777591.05	FENCEGRD	137.13

1,855	407382.26	3777591.08	FENCEGRD	137.23
1,856	407387.23	3777591.11	FENCEGRD	137.42
1,857	407392.20	3777591.15	FENCEGRD	137.59
1,858	407397.16	3777591.18	FENCEGRD	137.68
1,859	407402.13	3777591.21	FENCEGRD	137.83
1,860	407407.10	3777591.24	FENCEGRD	138.07
1,861	407412.07	3777591.27	FENCEGRD	138.43
1,862	407417.03	3777591.30	FENCEGRD	138.84
1,863	407422.00	3777591.33	FENCEGRD	139.02
1,864	407426.97	3777591.36	FENCEGRD	139.17
1,865	407431.93	3777591.40	FENCEGRD	139.27
1,866	407436.90	3777591.43	FENCEGRD	139.38
1,867	407441.87	3777591.46	FENCEGRD	139.51
1,868	407446.84	3777591.49	FENCEGRD	139.70
1,869	407451.80	3777591.52	FENCEGRD	139.91
1,870	407456.77	3777591.55	FENCEGRD	140.14
1,871	407461.74	3777591.58	FENCEGRD	140.35
1,872	407466.71	3777591.61	FENCEGRD	140.52
1,873	407471.67	3777591.65	FENCEGRD	140.63
1,874	407476.64	3777591.68	FENCEGRD	140.71
1,875	407481.61	3777591.71	FENCEGRD	140.77
1,876	407486.57	3777591.74	FENCEGRD	140.85
1,877	407491.54	3777591.77	FENCEGRD	140.94
1,878	407496.51	3777591.80	FENCEGRD	140.99
1,879	407501.48	3777591.83	FENCEGRD	141.01
1,880	407506.44	3777591.86	FENCEGRD	140.99
1,881	407511.41	3777591.90	FENCEGRD	140.98
1,882	407516.38	3777591.93	FENCEGRD	140.96
1,883	407521.35	3777591.96	FENCEGRD	140.91
1,884	407526.31	3777591.99	FENCEGRD	140.83
1,885	407322.57	3777688.86	FENCEGRD	137.23
1,886	407318.14	3777686.98	FENCEGRD	137.15
1,887	407313.72	3777685.11	FENCEGRD	137.03
1,888	407309.29	3777683.23	FENCEGRD	136.89
1,889	407304.87	3777681.35	FENCEGRD	136.78
1,890	407300.44	3777679.48	FENCEGRD	136.67
1,891	407296.01	3777677.60	FENCEGRD	136.75
1,892	407291.59	3777675.73	FENCEGRD	136.92

1,893	407287.16	3777673.85	FENCEGRD	137.02
1,894	407282.74	3777671.97	FENCEGRD	137.06
1,895	407278.31	3777670.10	FENCEGRD	137.05
1,896	407273.89	3777668.22	FENCEGRD	137.14
1,897	407269.46	3777666.34	FENCEGRD	137.76
1,898	407265.03	3777664.47	FENCEGRD	138.37
1,899	407260.61	3777662.59	FENCEGRD	139.03
1,900	407256.18	3777660.71	FENCEGRD	139.63
1,901	407251.76	3777658.84	FENCEGRD	140.17
1,902	407247.33	3777656.96	FENCEGRD	140.21
1,903	407242.91	3777655.08	FENCEGRD	140.20
1,904	407236.70	3777648.74	FENCEGRD	140.44
1,905	407234.91	3777644.28	FENCEGRD	140.68
1,906	407233.13	3777639.82	FENCEGRD	140.93
1,907	407231.34	3777635.35	FENCEGRD	141.17
1,908	407229.56	3777630.89	FENCEGRD	141.39
1,909	407227.77	3777626.43	FENCEGRD	141.63
1,910	407225.99	3777621.96	FENCEGRD	141.88
1,911	407224.21	3777617.50	FENCEGRD	142.04
1,912	407222.42	3777613.03	FENCEGRD	140.78
1,913	407220.64	3777608.57	FENCEGRD	139.47
1,914	407218.85	3777604.11	FENCEGRD	137.65
1,915	407217.07	3777599.64	FENCEGRD	135.75
1,916	407215.28	3777595.18	FENCEGRD	134.72
1,917	407213.50	3777590.72	FENCEGRD	134.58
1,918	407211.71	3777586.25	FENCEGRD	134.43
1,919	407209.93	3777581.79	FENCEGRD	134.22
1,920	407208.15	3777577.33	FENCEGRD	134.02
1,921	407206.36	3777572.86	FENCEGRD	134.07
1,922	407204.58	3777568.40	FENCEGRD	134.13
1,923	407326.99	3777690.74	FENCEGRD	137.28
1,924	407331.96	3777690.77	FENCEGRD	137.30
1,925	407336.93	3777690.80	FENCEGRD	137.40
1,926	407341.90	3777690.83	FENCEGRD	137.51
1,927	407346.86	3777690.86	FENCEGRD	137.58
1,928	407351.83	3777690.89	FENCEGRD	137.64
1,929	407356.80	3777690.93	FENCEGRD	137.69
1,930	407361.76	3777690.96	FENCEGRD	137.72

1,931	407366.73	3777690.99	FENCEGRD	137.76
1,932	407371.70	3777691.02	FENCEGRD	137.81
1,933	407376.67	3777691.05	FENCEGRD	137.87
1,934	407381.63	3777691.08	FENCEGRD	137.96
1,935	407386.60	3777691.11	FENCEGRD	138.07
1,936	407391.57	3777691.14	FENCEGRD	138.20
1,937	407396.54	3777691.18	FENCEGRD	138.17
1,938	407401.50	3777691.21	FENCEGRD	138.12
1,939	407406.47	3777691.24	FENCEGRD	138.16
1,940	407411.44	3777691.27	FENCEGRD	138.22
1,941	407416.40	3777691.30	FENCEGRD	138.32
1,942	407421.37	3777691.33	FENCEGRD	138.54
1,943	407426.34	3777691.36	FENCEGRD	138.80
1,944	407431.31	3777691.39	FENCEGRD	138.87
1,945	407436.27	3777691.43	FENCEGRD	138.93
1,946	407441.24	3777691.46	FENCEGRD	138.97
1,947	407446.21	3777691.49	FENCEGRD	139.00
1,948	407451.17	3777691.52	FENCEGRD	139.04
1,949	407456.14	3777691.55	FENCEGRD	139.09
1,950	407461.11	3777691.58	FENCEGRD	139.15
1,951	407466.08	3777691.61	FENCEGRD	139.20
1,952	407471.04	3777691.64	FENCEGRD	139.27
1,953	407476.01	3777691.68	FENCEGRD	139.35
1,954	407480.98	3777691.71	FENCEGRD	139.38
1,955	407485.95	3777691.74	FENCEGRD	139.38
1,956	407490.91	3777691.77	FENCEGRD	139.47
1,957	407495.88	3777691.80	FENCEGRD	139.57
1,958	407500.85	3777691.83	FENCEGRD	139.73
1,959	407505.81	3777691.86	FENCEGRD	139.79
1,960	407510.78	3777691.89	FENCEGRD	139.76
1,961	407515.75	3777691.93	FENCEGRD	139.88
1,962	407520.72	3777691.96	FENCEGRD	140.03
1,963	407525.68	3777691.99	FENCEGRD	140.07
1,964	407321.81	3777788.81	FENCEGRD	138.92
1,965	407317.26	3777786.88	FENCEGRD	138.84
1,966	407312.71	3777784.95	FENCEGRD	138.99
1,967	407308.16	3777783.02	FENCEGRD	139.17
1,968	407303.60	3777781.08	FENCEGRD	139.18

1,969	407299.05	3777779.15	FENCEGRD	139.04
1,970	407294.50	3777777.22	FENCEGRD	138.84
1,971	407289.95	3777775.29	FENCEGRD	138.68
1,972	407285.40	3777773.36	FENCEGRD	138.54
1,973	407280.84	3777771.43	FENCEGRD	138.40
1,974	407276.29	3777769.50	FENCEGRD	138.41
1,975	407271.74	3777767.57	FENCEGRD	138.44
1,976	407267.19	3777765.64	FENCEGRD	138.47
1,977	407262.63	3777763.71	FENCEGRD	138.49
1,978	407258.08	3777761.78	FENCEGRD	138.49
1,979	407253.53	3777759.85	FENCEGRD	138.47
1,980	407248.98	3777757.92	FENCEGRD	138.45
1,981	407244.43	3777755.99	FENCEGRD	138.44
1,982	407239.87	3777754.06	FENCEGRD	138.43
1,983	407235.32	3777752.13	FENCEGRD	138.41
1,984	407230.77	3777750.20	FENCEGRD	138.39
1,985	407226.22	3777748.27	FENCEGRD	138.00
1,986	407221.67	3777746.34	FENCEGRD	137.62
1,987	407217.11	3777744.41	FENCEGRD	137.56
1,988	407212.56	3777742.48	FENCEGRD	137.51
1,989	407208.01	3777740.55	FENCEGRD	137.41
1,990	407203.46	3777738.62	FENCEGRD	137.27
1,991	407198.91	3777736.69	FENCEGRD	137.12
1,992	407194.35	3777734.76	FENCEGRD	136.73
1,993	407189.80	3777732.83	FENCEGRD	135.98
1,994	407185.25	3777730.90	FENCEGRD	135.41
1,995	407180.70	3777728.97	FENCEGRD	134.96
1,996	407176.14	3777727.04	FENCEGRD	135.40
1,997	407171.59	3777725.11	FENCEGRD	136.26
1,998	407165.20	3777718.59	FENCEGRD	136.81
1,999	407163.37	3777714.00	FENCEGRD	136.88
2,000	407161.53	3777709.41	FENCEGRD	136.89
2,001	407159.70	3777704.82	FENCEGRD	136.60
2,002	407157.86	3777700.23	FENCEGRD	136.30
2,003	407156.03	3777695.63	FENCEGRD	135.92
2,004	407154.19	3777691.04	FENCEGRD	135.64
2,005	407152.36	3777686.45	FENCEGRD	135.62
2,006	407150.52	3777681.86	FENCEGRD	135.70

2,007	407148.69	3777677.27	FENCEGRD	136.59
2,008	407146.85	3777672.68	FENCEGRD	137.90
2,009	407145.02	3777668.09	FENCEGRD	138.79
2,010	407143.18	3777663.50	FENCEGRD	139.08
2,011	407141.35	3777658.90	FENCEGRD	139.37
2,012	407139.51	3777654.31	FENCEGRD	139.68
2,013	407137.67	3777649.72	FENCEGRD	139.97
2,014	407135.84	3777645.13	FENCEGRD	140.25
2,015	407134.00	3777640.54	FENCEGRD	140.54
2,016	407132.17	3777635.95	FENCEGRD	140.79
2,017	407130.33	3777631.36	FENCEGRD	140.99
2,018	407128.50	3777626.77	FENCEGRD	140.07
2,019	407126.66	3777622.18	FENCEGRD	137.86
2,020	407124.83	3777617.58	FENCEGRD	135.78
2,021	407122.99	3777612.99	FENCEGRD	134.66
2,022	407121.16	3777608.40	FENCEGRD	133.76
2,023	407119.32	3777603.81	FENCEGRD	133.78
2,024	407117.49	3777599.22	FENCEGRD	133.83
2,025	407115.65	3777594.63	FENCEGRD	133.85
2,026	407113.82	3777590.04	FENCEGRD	133.85
2,027	407111.98	3777585.45	FENCEGRD	133.77
2,028	407110.14	3777580.86	FENCEGRD	133.67
2,029	407108.31	3777576.26	FENCEGRD	133.59
2,030	407106.47	3777571.67	FENCEGRD	133.53
2,031	407104.64	3777567.08	FENCEGRD	133.48
2,032	407326.36	3777790.74	FENCEGRD	138.98
2,033	407331.33	3777790.77	FENCEGRD	138.94
2,034	407336.30	3777790.80	FENCEGRD	138.97
2,035	407341.27	3777790.83	FENCEGRD	139.05
2,036	407346.23	3777790.86	FENCEGRD	139.14
2,037	407351.20	3777790.89	FENCEGRD	139.22
2,038	407356.17	3777790.92	FENCEGRD	139.30
2,039	407361.14	3777790.95	FENCEGRD	139.37
2,040	407366.10	3777790.99	FENCEGRD	139.45
2,041	407371.07	3777791.02	FENCEGRD	139.54
2,042	407376.04	3777791.05	FENCEGRD	139.62
2,043	407381.00	3777791.08	FENCEGRD	139.72
2,044	407385.97	3777791.11	FENCEGRD	139.81

2,045	407390.94	3777791.14	FENCEGRD	139.85
2,046	407395.91	3777791.17	FENCEGRD	139.93
2,047	407400.87	3777791.20	FENCEGRD	140.05
2,048	407405.84	3777791.24	FENCEGRD	140.17
2,049	407410.81	3777791.27	FENCEGRD	140.27
2,050	407415.78	3777791.30	FENCEGRD	140.33
2,051	407420.74	3777791.33	FENCEGRD	140.39
2,052	407425.71	3777791.36	FENCEGRD	140.45
2,053	407430.68	3777791.39	FENCEGRD	140.51
2,054	407435.64	3777791.42	FENCEGRD	140.55
2,055	407440.61	3777791.45	FENCEGRD	140.59
2,056	407445.58	3777791.49	FENCEGRD	140.64
2,057	407450.55	3777791.52	FENCEGRD	140.68
2,058	407455.51	3777791.55	FENCEGRD	140.73
2,059	407460.48	3777791.58	FENCEGRD	140.80
2,060	407465.45	3777791.61	FENCEGRD	140.85
2,061	407470.41	3777791.64	FENCEGRD	140.91
2,062	407475.38	3777791.67	FENCEGRD	140.96
2,063	407480.35	3777791.70	FENCEGRD	141.01
2,064	407485.32	3777791.74	FENCEGRD	141.08
2,065	407490.28	3777791.77	FENCEGRD	141.12
2,066	407495.25	3777791.80	FENCEGRD	141.15
2,067	407500.22	3777791.83	FENCEGRD	141.21
2,068	407505.19	3777791.86	FENCEGRD	141.27
2,069	407510.15	3777791.89	FENCEGRD	141.34
2,070	407515.12	3777791.92	FENCEGRD	141.40
2,071	407520.09	3777791.95	FENCEGRD	141.46
2,072	407525.05	3777791.99	FENCEGRD	141.49
2,073	407321.22	3777888.82	FENCEGRD	140.68
2,074	407316.71	3777886.91	FENCEGRD	140.61
2,075	407312.20	3777884.99	FENCEGRD	140.75
2,076	407307.69	3777883.08	FENCEGRD	140.86
2,077	407303.17	3777881.17	FENCEGRD	140.85
2,078	407298.66	3777879.25	FENCEGRD	140.85
2,079	407294.15	3777877.34	FENCEGRD	140.84
2,080	407289.64	3777875.43	FENCEGRD	140.82
2,081	407285.12	3777873.51	FENCEGRD	140.75
2,082	407280.61	3777871.60	FENCEGRD	140.67

2,083	407276.10	3777869.69	FENCEGRD	140.55
2,084	407271.59	3777867.77	FENCEGRD	140.50
2,085	407267.07	3777865.86	FENCEGRD	140.49
2,086	407262.56	3777863.95	FENCEGRD	140.48
2,087	407258.05	3777862.03	FENCEGRD	140.35
2,088	407253.54	3777860.12	FENCEGRD	140.10
2,089	407249.02	3777858.21	FENCEGRD	139.92
2,090	407244.51	3777856.29	FENCEGRD	139.89
2,091	407240.00	3777854.38	FENCEGRD	139.86
2,092	407235.49	3777852.47	FENCEGRD	139.88
2,093	407230.97	3777850.55	FENCEGRD	139.87
2,094	407226.46	3777848.64	FENCEGRD	139.83
2,095	407221.95	3777846.73	FENCEGRD	139.77
2,096	407217.44	3777844.81	FENCEGRD	139.66
2,097	407212.92	3777842.90	FENCEGRD	139.60
2,098	407208.41	3777840.99	FENCEGRD	139.59
2,099	407203.90	3777839.07	FENCEGRD	139.56
2,100	407199.39	3777837.16	FENCEGRD	139.47
2,101	407194.87	3777835.25	FENCEGRD	139.41
2,102	407190.36	3777833.33	FENCEGRD	139.35
2,103	407185.85	3777831.42	FENCEGRD	139.38
2,104	407181.34	3777829.51	FENCEGRD	139.44
2,105	407176.82	3777827.59	FENCEGRD	139.45
2,106	407172.31	3777825.68	FENCEGRD	139.45
2,107	407167.80	3777823.77	FENCEGRD	139.49
2,108	407163.29	3777821.85	FENCEGRD	139.37
2,109	407158.77	3777819.94	FENCEGRD	139.15
2,110	407154.26	3777818.03	FENCEGRD	138.97
2,111	407149.75	3777816.11	FENCEGRD	138.83
2,112	407145.24	3777814.20	FENCEGRD	138.83
2,113	407140.72	3777812.29	FENCEGRD	138.81
2,114	407136.21	3777810.37	FENCEGRD	138.73
2,115	407131.70	3777808.46	FENCEGRD	138.40
2,116	407127.19	3777806.55	FENCEGRD	138.15
2,117	407122.68	3777804.63	FENCEGRD	138.09
2,118	407118.16	3777802.72	FENCEGRD	138.07
2,119	407113.65	3777800.81	FENCEGRD	138.09
2,120	407109.14	3777798.89	FENCEGRD	138.11

2,121	407104.63	3777796.98	FENCEGRD	138.14
2,122	407100.11	3777795.07	FENCEGRD	138.09
2,123	407093.78	3777788.60	FENCEGRD	137.59
2,124	407091.96	3777784.05	FENCEGRD	137.23
2,125	407090.14	3777779.50	FENCEGRD	137.18
2,126	407088.32	3777774.95	FENCEGRD	137.19
2,127	407086.50	3777770.40	FENCEGRD	137.25
2,128	407084.68	3777765.85	FENCEGRD	137.34
2,129	407082.86	3777761.30	FENCEGRD	137.38
2,130	407081.05	3777756.75	FENCEGRD	137.35
2,131	407079.23	3777752.19	FENCEGRD	137.31
2,132	407077.41	3777747.64	FENCEGRD	137.23
2,133	407075.59	3777743.09	FENCEGRD	137.16
2,134	407073.77	3777738.54	FENCEGRD	136.98
2,135	407071.95	3777733.99	FENCEGRD	136.76
2,136	407070.13	3777729.44	FENCEGRD	136.55
2,137	407068.31	3777724.89	FENCEGRD	136.32
2,138	407066.49	3777720.34	FENCEGRD	136.16
2,139	407064.67	3777715.79	FENCEGRD	136.11
2,140	407062.85	3777711.23	FENCEGRD	136.22
2,141	407061.03	3777706.68	FENCEGRD	137.37
2,142	407059.21	3777702.13	FENCEGRD	138.78
2,143	407057.39	3777697.58	FENCEGRD	139.39
2,144	407055.57	3777693.03	FENCEGRD	139.79
2,145	407053.76	3777688.48	FENCEGRD	140.04
2,146	407051.94	3777683.93	FENCEGRD	140.24
2,147	407050.12	3777679.38	FENCEGRD	140.42
2,148	407048.30	3777674.83	FENCEGRD	140.59
2,149	407046.48	3777670.27	FENCEGRD	140.76
2,150	407044.66	3777665.72	FENCEGRD	140.94
2,151	407042.84	3777661.17	FENCEGRD	141.11
2,152	407041.02	3777656.62	FENCEGRD	139.90
2,153	407039.20	3777652.07	FENCEGRD	138.25
2,154	407037.38	3777647.52	FENCEGRD	136.35
2,155	407035.56	3777642.97	FENCEGRD	134.64
2,156	407033.74	3777638.42	FENCEGRD	133.66
2,157	407031.92	3777633.86	FENCEGRD	133.62
2,158	407030.10	3777629.31	FENCEGRD	133.67

2,159	407028.28	3777624.76	FENCEGRD	133.77
2,160	407026.47	3777620.21	FENCEGRD	133.83
2,161	407024.65	3777615.66	FENCEGRD	133.61
2,162	407022.83	3777611.11	FENCEGRD	133.37
2,163	407021.01	3777606.56	FENCEGRD	133.25
2,164	407019.19	3777602.01	FENCEGRD	133.16
2,165	407017.37	3777597.46	FENCEGRD	133.08
2,166	407015.55	3777592.90	FENCEGRD	133.03
2,167	407013.73	3777588.35	FENCEGRD	132.88
2,168	407011.91	3777583.80	FENCEGRD	132.38
2,169	407010.09	3777579.25	FENCEGRD	132.09
2,170	407008.27	3777574.70	FENCEGRD	132.24
2,171	407006.45	3777570.15	FENCEGRD	132.21
2,172	407004.63	3777565.60	FENCEGRD	132.22
2,173	407325.74	3777890.73	FENCEGRD	140.79
2,174	407330.70	3777890.76	FENCEGRD	140.93
2,175	407335.67	3777890.80	FENCEGRD	141.05
2,176	407340.64	3777890.83	FENCEGRD	141.08
2,177	407345.60	3777890.86	FENCEGRD	141.11
2,178	407350.57	3777890.89	FENCEGRD	141.13
2,179	407355.54	3777890.92	FENCEGRD	141.19
2,180	407360.51	3777890.95	FENCEGRD	141.25
2,181	407365.47	3777890.98	FENCEGRD	141.32
2,182	407370.44	3777891.01	FENCEGRD	141.41
2,183	407375.41	3777891.05	FENCEGRD	141.53
2,184	407380.38	3777891.08	FENCEGRD	141.64
2,185	407385.34	3777891.11	FENCEGRD	141.76
2,186	407390.31	3777891.14	FENCEGRD	141.82
2,187	407395.28	3777891.17	FENCEGRD	141.88
2,188	407400.24	3777891.20	FENCEGRD	142.01
2,189	407405.21	3777891.23	FENCEGRD	142.12
2,190	407410.18	3777891.26	FENCEGRD	142.22
2,191	407415.15	3777891.30	FENCEGRD	142.30
2,192	407420.11	3777891.33	FENCEGRD	142.38
2,193	407425.08	3777891.36	FENCEGRD	142.47
2,194	407430.05	3777891.39	FENCEGRD	142.54
2,195	407435.01	3777891.42	FENCEGRD	142.58
2,196	407439.98	3777891.45	FENCEGRD	142.66

2,197	407444.95	3777891.48	FENCEGRD	142.77
2,198	407449.92	3777891.51	FENCEGRD	142.85
2,199	407454.88	3777891.55	FENCEGRD	142.92
2,200	407459.85	3777891.58	FENCEGRD	142.97
2,201	407464.82	3777891.61	FENCEGRD	143.04
2,202	407469.79	3777891.64	FENCEGRD	143.14
2,203	407474.75	3777891.67	FENCEGRD	143.09
2,204	407479.72	3777891.70	FENCEGRD	142.99
2,205	407484.69	3777891.73	FENCEGRD	143.05
2,206	407489.65	3777891.76	FENCEGRD	143.09
2,207	407494.62	3777891.80	FENCEGRD	143.11
2,208	407499.59	3777891.83	FENCEGRD	143.17
2,209	407504.56	3777891.86	FENCEGRD	143.26
2,210	407509.52	3777891.89	FENCEGRD	143.36
2,211	407514.49	3777891.92	FENCEGRD	143.45
2,212	407519.46	3777891.95	FENCEGRD	143.49
2,213	407524.43	3777891.98	FENCEGRD	143.56
2,214	407320.55	3777988.80	FENCEGRD	143.13
2,215	407315.99	3777986.86	FENCEGRD	143.19
2,216	407311.43	3777984.93	FENCEGRD	143.30
2,217	407306.87	3777983.00	FENCEGRD	143.30
2,218	407302.31	3777981.06	FENCEGRD	143.28
2,219	407297.75	3777979.13	FENCEGRD	143.24
2,220	407293.19	3777977.20	FENCEGRD	143.21
2,221	407288.63	3777975.26	FENCEGRD	143.10
2,222	407284.07	3777973.33	FENCEGRD	143.00
2,223	407279.51	3777971.40	FENCEGRD	142.91
2,224	407274.95	3777969.46	FENCEGRD	142.84
2,225	407270.39	3777967.53	FENCEGRD	142.74
2,226	407265.83	3777965.60	FENCEGRD	142.64
2,227	407261.27	3777963.66	FENCEGRD	142.57
2,228	407256.71	3777961.73	FENCEGRD	142.52
2,229	407252.15	3777959.80	FENCEGRD	142.48
2,230	407247.59	3777957.86	FENCEGRD	142.45
2,231	407243.03	3777955.93	FENCEGRD	142.44
2,232	407238.47	3777954.00	FENCEGRD	142.35
2,233	407233.91	3777952.06	FENCEGRD	142.24
2,234	407229.35	3777950.13	FENCEGRD	142.13

2,235	407224.79	3777948.20	FENCEGRD	142.03
2,236	407220.23	3777946.26	FENCEGRD	141.94
2,237	407215.67	3777944.33	FENCEGRD	141.86
2,238	407211.11	3777942.40	FENCEGRD	141.82
2,239	407206.55	3777940.46	FENCEGRD	141.75
2,240	407201.99	3777938.53	FENCEGRD	141.68
2,241	407197.43	3777936.60	FENCEGRD	141.64
2,242	407192.87	3777934.66	FENCEGRD	141.66
2,243	407188.31	3777932.73	FENCEGRD	141.70
2,244	407183.75	3777930.80	FENCEGRD	141.67
2,245	407179.19	3777928.86	FENCEGRD	141.64
2,246	407174.63	3777926.93	FENCEGRD	141.64
2,247	407170.07	3777925.00	FENCEGRD	141.58
2,248	407165.51	3777923.06	FENCEGRD	141.49
2,249	407160.95	3777921.13	FENCEGRD	141.37
2,250	407156.39	3777919.20	FENCEGRD	141.24
2,251	407151.83	3777917.26	FENCEGRD	141.08
2,252	407147.27	3777915.33	FENCEGRD	140.91
2,253	407142.71	3777913.40	FENCEGRD	140.83
2,254	407138.16	3777911.46	FENCEGRD	140.77
2,255	407133.60	3777909.53	FENCEGRD	140.56
2,256	407129.04	3777907.60	FENCEGRD	140.36
2,257	407124.48	3777905.66	FENCEGRD	140.21
2,258	407119.92	3777903.73	FENCEGRD	140.07
2,259	407115.36	3777901.80	FENCEGRD	139.92
2,260	407110.80	3777899.86	FENCEGRD	139.85
2,261	407106.24	3777897.93	FENCEGRD	139.85
2,262	407101.68	3777896.00	FENCEGRD	139.49
2,263	407097.12	3777894.06	FENCEGRD	138.86
2,264	407092.56	3777892.13	FENCEGRD	138.45
2,265	407088.00	3777890.20	FENCEGRD	138.17
2,266	407083.44	3777888.26	FENCEGRD	138.02
2,267	407078.88	3777886.33	FENCEGRD	137.89
2,268	407074.32	3777884.40	FENCEGRD	138.19
2,269	407069.76	3777882.46	FENCEGRD	138.46
2,270	407065.20	3777880.53	FENCEGRD	138.59
2,271	407060.64	3777878.60	FENCEGRD	138.73
2,272	407056.08	3777876.66	FENCEGRD	138.85

2,273	407051.52	3777874.73	FENCEGRD	138.76
2,274	407046.96	3777872.80	FENCEGRD	138.42
2,275	407042.40	3777870.86	FENCEGRD	138.09
2,276	407037.84	3777868.93	FENCEGRD	137.89
2,277	407033.28	3777867.00	FENCEGRD	137.79
2,278	407028.72	3777865.06	FENCEGRD	137.75
2,279	407022.32	3777858.53	FENCEGRD	137.83
2,280	407020.48	3777853.93	FENCEGRD	137.81
2,281	407018.65	3777849.33	FENCEGRD	137.80
2,282	407016.81	3777844.73	FENCEGRD	137.64
2,283	407014.97	3777840.13	FENCEGRD	137.19
2,284	407013.13	3777835.54	FENCEGRD	136.48
2,285	407011.29	3777830.94	FENCEGRD	136.60
2,286	407009.45	3777826.34	FENCEGRD	137.12
2,287	407007.61	3777821.74	FENCEGRD	137.27
2,288	407005.78	3777817.14	FENCEGRD	137.24
2,289	407003.94	3777812.54	FENCEGRD	137.19
2,290	407002.10	3777807.94	FENCEGRD	137.11
2,291	407000.26	3777803.34	FENCEGRD	137.05
2,292	406998.42	3777798.74	FENCEGRD	137.05
2,293	406996.58	3777794.15	FENCEGRD	136.98
2,294	406994.75	3777789.55	FENCEGRD	136.66
2,295	406992.91	3777784.95	FENCEGRD	136.37
2,296	406991.07	3777780.35	FENCEGRD	136.30
2,297	406989.23	3777775.75	FENCEGRD	136.25
2,298	406987.39	3777771.15	FENCEGRD	136.20
2,299	406985.55	3777766.55	FENCEGRD	136.11
2,300	406983.72	3777761.95	FENCEGRD	136.01
2,301	406981.88	3777757.35	FENCEGRD	135.94
2,302	406980.04	3777752.76	FENCEGRD	135.91
2,303	406978.20	3777748.16	FENCEGRD	136.15
2,304	406976.36	3777743.56	FENCEGRD	136.50
2,305	406974.52	3777738.96	FENCEGRD	138.39
2,306	406972.68	3777734.36	FENCEGRD	140.30
2,307	406970.85	3777729.76	FENCEGRD	140.81
2,308	406969.01	3777725.16	FENCEGRD	140.90
2,309	406967.17	3777720.56	FENCEGRD	140.98
2,310	406965.33	3777715.96	FENCEGRD	141.06

2,311	406963.49	3777711.37	FENCEGRD	141.08
2,312	406961.65	3777706.77	FENCEGRD	141.01
2,313	406959.82	3777702.17	FENCEGRD	140.94
2,314	406957.98	3777697.57	FENCEGRD	140.86
2,315	406956.14	3777692.97	FENCEGRD	140.77
2,316	406954.30	3777688.37	FENCEGRD	139.00
2,317	406952.46	3777683.77	FENCEGRD	136.71
2,318	406950.62	3777679.17	FENCEGRD	135.23
2,319	406948.78	3777674.57	FENCEGRD	134.55
2,320	406946.95	3777669.98	FENCEGRD	134.27
2,321	406945.11	3777665.38	FENCEGRD	134.26
2,322	406943.27	3777660.78	FENCEGRD	134.24
2,323	406941.43	3777656.18	FENCEGRD	134.14
2,324	406939.59	3777651.58	FENCEGRD	134.08
2,325	406937.75	3777646.98	FENCEGRD	134.07
2,326	406935.92	3777642.38	FENCEGRD	134.10
2,327	406934.08	3777637.78	FENCEGRD	134.16
2,328	406932.24	3777633.18	FENCEGRD	134.21
2,329	406930.40	3777628.59	FENCEGRD	134.22
2,330	406928.56	3777623.99	FENCEGRD	134.22
2,331	406926.72	3777619.39	FENCEGRD	134.27
2,332	406924.89	3777614.79	FENCEGRD	134.36
2,333	406923.05	3777610.19	FENCEGRD	134.47
2,334	406921.21	3777605.59	FENCEGRD	134.55
2,335	406919.37	3777600.99	FENCEGRD	134.58
2,336	406917.53	3777596.39	FENCEGRD	134.58
2,337	406915.69	3777591.79	FENCEGRD	134.59
2,338	406913.85	3777587.20	FENCEGRD	134.62
2,339	406912.02	3777582.60	FENCEGRD	134.66
2,340	406910.18	3777578.00	FENCEGRD	134.72
2,341	406908.34	3777573.40	FENCEGRD	134.78
2,342	406906.50	3777568.80	FENCEGRD	134.80
2,343	406904.66	3777564.20	FENCEGRD	134.53
2,344	407325.11	3777990.73	FENCEGRD	143.15
2,345	407330.07	3777990.76	FENCEGRD	143.22
2,346	407335.04	3777990.79	FENCEGRD	143.34
2,347	407340.01	3777990.83	FENCEGRD	143.22
2,348	407344.98	3777990.86	FENCEGRD	143.13

2,349	407349.94	3777990.89	FENCEGRD	143.32
2,350	407354.91	3777990.92	FENCEGRD	143.54
2,351	407359.88	3777990.95	FENCEGRD	143.81
2,352	407364.84	3777990.98	FENCEGRD	144.03
2,353	407369.81	3777991.01	FENCEGRD	144.20
2,354	407374.78	3777991.04	FENCEGRD	144.07
2,355	407379.75	3777991.08	FENCEGRD	143.99
2,356	407384.71	3777991.11	FENCEGRD	144.03
2,357	407389.68	3777991.14	FENCEGRD	144.07
2,358	407394.65	3777991.17	FENCEGRD	144.13
2,359	407399.62	3777991.20	FENCEGRD	144.19
2,360	407404.58	3777991.23	FENCEGRD	144.26
2,361	407409.55	3777991.26	FENCEGRD	144.40
2,362	407414.52	3777991.29	FENCEGRD	144.49
2,363	407419.48	3777991.33	FENCEGRD	144.53
2,364	407424.45	3777991.36	FENCEGRD	144.57
2,365	407429.42	3777991.39	FENCEGRD	144.62
2,366	407434.39	3777991.42	FENCEGRD	144.65
2,367	407439.35	3777991.45	FENCEGRD	144.68
2,368	407444.32	3777991.48	FENCEGRD	144.68
2,369	407449.29	3777991.51	FENCEGRD	144.68
2,370	407454.25	3777991.54	FENCEGRD	144.69
2,371	407459.22	3777991.58	FENCEGRD	144.76
2,372	407464.19	3777991.61	FENCEGRD	144.83
2,373	407469.16	3777991.64	FENCEGRD	144.86
2,374	407474.12	3777991.67	FENCEGRD	144.88
2,375	407479.09	3777991.70	FENCEGRD	144.90
2,376	407484.06	3777991.73	FENCEGRD	145.14
2,377	407489.03	3777991.76	FENCEGRD	145.48
2,378	407493.99	3777991.79	FENCEGRD	145.56
2,379	407498.96	3777991.83	FENCEGRD	145.63
2,380	407503.93	3777991.86	FENCEGRD	145.63
2,381	407508.89	3777991.89	FENCEGRD	145.59
2,382	407513.86	3777991.92	FENCEGRD	145.52
2,383	407518.83	3777991.95	FENCEGRD	145.50
2,384	407523.80	3777991.98	FENCEGRD	145.50
2,385	407332.75	3777565.77	FENCEINT	134.89
2,386	407337.71	3777565.80	FENCEINT	135.09

2,387	407342.68	3777565.83	FENCEINT	135.19
2,388	407347.65	3777565.87	FENCEINT	135.24
2,389	407352.62	3777565.90	FENCEINT	135.28
2,390	407357.58	3777565.93	FENCEINT	135.33
2,391	407362.55	3777565.96	FENCEINT	135.38
2,392	407367.52	3777565.99	FENCEINT	135.42
2,393	407372.49	3777566.02	FENCEINT	135.44
2,394	407377.45	3777566.05	FENCEINT	135.52
2,395	407382.42	3777566.08	FENCEINT	135.63
2,396	407387.39	3777566.12	FENCEINT	135.73
2,397	407392.35	3777566.15	FENCEINT	135.81
2,398	407397.32	3777566.18	FENCEINT	135.86
2,399	407402.29	3777566.21	FENCEINT	135.88
2,400	407407.26	3777566.24	FENCEINT	135.90
2,401	407412.22	3777566.27	FENCEINT	135.99
2,402	407417.19	3777566.30	FENCEINT	136.10
2,403	407422.16	3777566.33	FENCEINT	136.21
2,404	407427.13	3777566.37	FENCEINT	136.31
2,405	407432.09	3777566.40	FENCEINT	136.40
2,406	407437.06	3777566.43	FENCEINT	136.48
2,407	407442.03	3777566.46	FENCEINT	136.56
2,408	407446.99	3777566.49	FENCEINT	136.63
2,409	407451.96	3777566.52	FENCEINT	136.72
2,410	407456.93	3777566.55	FENCEINT	136.87
2,411	407461.90	3777566.58	FENCEINT	136.94
2,412	407466.86	3777566.62	FENCEINT	136.95
2,413	407471.83	3777566.65	FENCEINT	137.01
2,414	407476.80	3777566.68	FENCEINT	137.08
2,415	407481.76	3777566.71	FENCEINT	137.22
2,416	407486.73	3777566.74	FENCEINT	137.33
2,417	407491.70	3777566.77	FENCEINT	137.35
2,418	407496.67	3777566.80	FENCEINT	137.44
2,419	407501.63	3777566.83	FENCEINT	137.56
2,420	407506.60	3777566.87	FENCEINT	137.60
2,421	407511.57	3777566.90	FENCEINT	137.63
2,422	407516.54	3777566.93	FENCEINT	137.66
2,423	407521.50	3777566.96	FENCEINT	137.73
2,424	407526.52	3777562.08	FENCEINT	137.90

2,425	407526.57	3777557.16	FENCEINT	137.84
2,426	407526.61	3777552.25	FENCEINT	137.76
2,427	407526.66	3777547.33	FENCEINT	137.57
2,428	407526.71	3777542.42	FENCEINT	137.39
2,429	407526.76	3777537.50	FENCEINT	137.31
2,430	407526.80	3777532.59	FENCEINT	137.23
2,431	407526.85	3777527.67	FENCEINT	137.06
2,432	407526.90	3777522.76	FENCEINT	136.88
2,433	407526.95	3777517.84	FENCEINT	136.73
2,434	407526.99	3777512.93	FENCEINT	136.60
2,435	407527.04	3777508.01	FENCEINT	136.44
2,436	407522.13	3777503.13	FENCEINT	136.23
2,437	407517.17	3777503.15	FENCEINT	136.19
2,438	407512.21	3777503.18	FENCEINT	136.21
2,439	407507.25	3777503.20	FENCEINT	136.20
2,440	407502.29	3777503.23	FENCEINT	136.18
2,441	407497.33	3777503.25	FENCEINT	136.15
2,442	407492.37	3777503.28	FENCEINT	136.11
2,443	407487.41	3777503.30	FENCEINT	136.07
2,444	407482.45	3777503.33	FENCEINT	136.00
2,445	407477.49	3777503.36	FENCEINT	135.90
2,446	407472.52	3777503.38	FENCEINT	135.83
2,447	407467.56	3777503.41	FENCEINT	135.77
2,448	407462.60	3777503.43	FENCEINT	135.62
2,449	407457.64	3777503.46	FENCEINT	135.50
2,450	407452.68	3777503.48	FENCEINT	135.48
2,451	407447.72	3777503.51	FENCEINT	135.41
2,452	407442.76	3777503.53	FENCEINT	135.31
2,453	407437.80	3777503.56	FENCEINT	135.20
2,454	407432.84	3777503.58	FENCEINT	135.09
2,455	407427.88	3777503.61	FENCEINT	135.01
2,456	407422.92	3777503.64	FENCEINT	134.92
2,457	407417.96	3777503.66	FENCEINT	134.83
2,458	407413.00	3777503.69	FENCEINT	134.74
2,459	407408.04	3777503.71	FENCEINT	134.65
2,460	407403.08	3777503.74	FENCEINT	134.63
2,461	407398.12	3777503.76	FENCEINT	134.60
2,462	407393.16	3777503.79	FENCEINT	134.56

2,463	407388.20	3777503.81	FENCEINT	134.52	
2,464	407383.24	3777503.84	FENCEINT	134.48	
2,465	407378.28	3777503.87	FENCEINT	134.44	
2,466	407373.31	3777503.89	FENCEINT	134.39	
2,467	407368.35	3777503.92	FENCEINT	134.34	
2,468	407363.39	3777503.94	FENCEINT	134.30	
2,469	407358.43	3777503.97	FENCEINT	134.26	
2,470	407353.47	3777503.99	FENCEINT	134.21	
2,471	407348.51	3777504.02	FENCEINT	134.16	
2,472	407343.55	3777504.04	FENCEINT	134.11	
2,473	407338.59	3777504.07	FENCEINT	134.04	
2,474	407333.63	3777504.09	FENCEINT	133.90	
2,475	407328.60	3777508.86	FENCEINT	133.98	
2,476	407328.53	3777513.60	FENCEINT	134.09	
2,477	407328.46	3777518.34	FENCEINT	134.18	
2,478	407328.40	3777523.08	FENCEINT	134.26	
2,479	407328.33	3777527.82	FENCEINT	134.35	
2,480	407328.26	3777532.56	FENCEINT	134.44	
2,481	407328.19	3777537.30	FENCEINT	134.53	
2,482	407328.12	3777542.04	FENCEINT	134.63	
2,483	407328.05	3777546.78	FENCEINT	134.72	
2,484	407327.99	3777551.52	FENCEINT	134.81	
2,485	407327.92	3777556.26	FENCEINT	134.89	
2,486	407327.85	3777561.00	FENCEINT	134.92	
2,487	407327.78	3777565.74	FENCEPRI	134.95	
2,488	407526.47	3777566.99	FENCEPRI	137.83	
2,489	407527.09	3777503.10	FENCEPRI	136.29	
2,490	407328.67	3777504.12	FENCEPRI	133.87	

Plant Boundary Receptors

Cartesian Plant Boundary

Primary

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	407327.78	3777565.74	FENCEPRI	134.95	
2	407328.67	3777504.12	FENCEPRI	133.87	
3	407527.09	3777503.10	FENCEPRI	136.29	
4	407526.47	3777566.99	FENCEPRI	137.83	

Receptor Pathway

Fenceline Grid

Grid Settings

Fenceline Spacing [m]:	5.00
Number of Tired Segments:	1

Segment Number	Distance from Fenceline [m]	Spacing [m]
1	25.00	5.00

Segment Number	Distance from Fenceline [m]	Spacing [m]
2	25.00	5.00

Receptor Groups

Record Number	Group ID	Group Description
1	FENCEPRI	Cartesian plant boundary Primary Receptors
2	FENCEGRD	Receptors generated from Fenceline Grid
3	FENCEINT	Cartesian plant boundary Intermediate Receptors

Meteorology Pathway

Met Input Data

Surface Met Data

Filename: ..\CH-127 Pomona DC R2\AZUS_v9.SFC
Format Type: Default AERMET format

Profile Met Data

Filename: ..\CH-127 Pomona DC R2\AZUS_v9.PFL
Format Type: Default AERMET format

Wind Speed

☐ Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 182.00 [m]

Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface		2012			
Upper Air		2012			
On-Site		2012			

Data Period

Data Period to Process

Start Date: 1/1/2012 Start Hour: 1 End Date: 12/31/2016 End Hour: 24

Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

Results Summary

C:\Lakes\Monrovia_Arroyo_20190226\Monrovia_Arroyo_20190226.isc

PM10 - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		0.10925	ug/m^3	407141.35	3777658.90	139.37	0.00	139.37	

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PLANNING COMMISSION STAFF REPORT

APPLICATION:	**Arroyo at Monrovia Station Specific Plan ZA2019-0005, SP2019-0004, TTM 82517, CUP2019-0016, and GPC2019-0004**	**AGENDA ITEM:**	**PH-4**
PREPARED BY:	**Sheri Bermejo Planning Division Manager**	**MEETING DATE:**	**November 13, 2019**

SUBJECT: Arroyo at Monrovia Station Specific Plan, Zoning Amendment ZA2019-0005/Ordinance No. 2019-11 (Planning Commission Resolution PCR2019-0016), Specific Plan SP2019-0016 (Planning Commission Resolution PCR2019-0017), Vesting Tentative Tract Map 82517; Conditional Use Permit CUP2019-0016; General Plan Conformity GPC2019-0004; Environmental Impact Report; Planning Commission Resolution 2019-0015

202, 206, 210, 212, 216, 220, 224, 228, 234, AND 238 West Evergreen Avenue, and 1551 South Primrose Avenue and 1610 South Magnolia Avenue (Assessor's Parcel Numbers [APN] 8507-002-011, -012, -014, -015, -017, -018, -019, -020, -022, -023, -036, -037)

REQUEST: Develop a 2.90-acre site with a transit-oriented, infill, mixed-use residential/commercial development to include: 302 residential units, including three live/work units and 15 affordable units for very low-income households, 7,080 square feet of ground floor commercial space, a parking structure containing 500 parking spaces, a leasing office, residential amenities including two courtyards and a roof deck, and public open space in the form of four plazas along the street frontage of West Pomona Avenue. This property is located in the PD-12 (Planned Development Area 12 – Station Square Transit Village) zone.

The development application includes an amendment to the City's Official Zoning Map changing the PD (Planned Development) Zone designation to the SP (Specific Plan) Zone and a request to amend the text of the Zoning Ordinance to add Arroyo at Monrovia Station Specific Plan to Section 17.04.035 of Title 17 (Zoning) of the Monrovia Municipal Code for the subject property, the adoption of the Arroyo at Monrovia Station Specific Plan, and the approval of a vesting tentative tract map for consolidation of twelve lots into one, and the approval of a conditional use permit to construct the development (collectively, the "proposed project").

APPLICANT: Evergreen Investment Partners, LLC C/O MW Investments Group, LLC
Matt Waken
27702 Crown Valley Pkwy, D4-197
Ladera Ranch, CA 92694

ATTACHMENT "B"

ENVIRONMENTAL DETERMINATION: Environmental Impact Report (SHC No. 2019050016)

BACKGROUND:

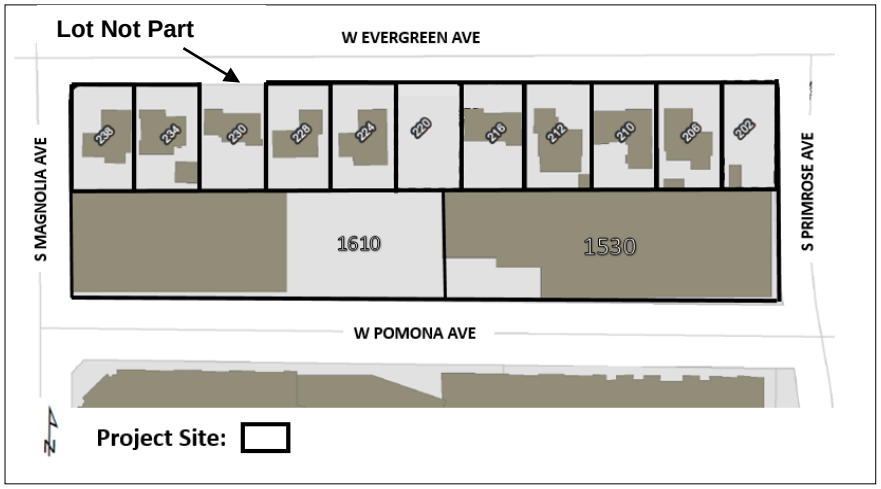
Monrovia's Station Square Transit Village is an 80-acre planning area that was established for the return of mass transit to the City. It envisions the development of a high density residential transit village. The City's key objective in establishing the Station Square Transit Village was to provide flexibility in land use types, location, and intensities that allows development to respond to changes in the marketplace over time. It is evident that this creative approach has facilitated the transition of this area from a light industrial neighborhood to a transit oriented community.

With the completion of the MODA apartments in January of 2019 (a 5-story multifamily transit community just north of the Metro Station containing 261 units), and the City Council's recent approval of Station Square South Specific Plan (a plan for a six-story, 296-unt residential development that incorporates a new southern access point to the Metro station), three new high density residential projects have begun land use entitlement review. One of these projects includes the Arroyo at Monrovia Station Specific Plan development.

MW Investment Group, LLC has initiated the Arroyo at Monrovia Station Specific Plan to develop a 2.90-acre site with a transit-oriented, infill, mixed-use residential/commercial development in the heart of the City's Station Square Transit Village. Its design includes a five-story (six-level) residential building containing 302 apartment units (including 15 units designated for very low income households and three live/work units), 7,080 square feet of ground floor commercial space, a seven-story (eight-level) parking structure containing 500 parking spaces, as well as a leasing office, several residential amenities including pool facilities, gyms, and a rooftop deck, and several public and private open space areas.

The project site is located just south of the I-210 Freeway and is bounded by West Evergreen Avenue to the north, West Pomona to the south, South Magnolia Avenue to the west, and South Primrose to the east. As illustrated in the location map below, it consists of twelve privately owned parcels that make up nearly an entire city block. What makes this project more challenging than the others the City has previously reviewed, is its irregular site configuration. Specifically, the development plan surrounds one single-family residential developed lot located at 230 West Evergreen on three sides.

FIGURE 1 – Location Map



Although the project would be most complete with the incorporation of this remaining residential parcel, the developer does not own it. MW Investment Group, LLC currently has purchase agreements with all of the property owners on the block, except for this owner. The property owner who currently resides at 230 West Evergreen Avenue is fully aware of the development proposal, and has not expressed any opposition to the development plan to date.

Addressing this design anomaly has been an important, key objective of the project. For this reason the specific plan incorporates Good Neighbor Features to both reduce impacts to the remaining property and its occupant(s) and enhance this property's connectivity with the overall development. The Good Neighbor Features are in the form of implemented site and building design strategies, and also contain provisions for the resident to obtain temporary offsite accommodations during demolition and project construction and the opportunity to share the development's private residential amenities.

The Arroyo at Monrovia Station has been in the planning review stage for over a year. Input received during a Public Outreach Meeting on November 28, 2018 was incorporated into the overall project design.

The application requires the approval of the City Council. Both the Planning Commission and the Development Review Committee serve as advisory bodies to the City Council. The actions of the Commission will be in the form of recommendations. The requested entitlements are as follows:

1. **Zoning Text and Map Amendment** to add "Arroyo at Monrovia Station Specific Plan" to Section 17.04.035 of the Monrovia Municipal Code and amend the official Zoning Map by changing the existing PD (Planning Development) zone designation to SP (Specific Plan). (PCR2019-0016/Ordinance No. 2019-11)

2. **Arroyo at Monrovia Station Specific Plan** adoption that establishes development standards, design guidelines and land use. (PCR2019-0016)

3. **General Plan Conformity Finding** that the proposed dedications of public right-of-way and easements conform to the provisions of the City's General Plan. (GPC2019-0004)

4. **Vesting Tentative Tract Map** to consolidate twelve parcels into one 2.90 (gross) acre parcel. (TTM 82517).

5. **Conditional Use Permit** to allow construction of a 5-story (6-level), 302-unit apartment complex and a 7-story, 8-level, 500 space parking structure. (CUP2019-0016)

Prior to making its recommendation on the above, the Commission must first consider and provide its recommendation on **Environmental Impact Report and Mitigation Monitoring and Reporting Program** for the proposed project pursuant to the California Environmental Quality Act (CEQA). (PCR2019-0015)

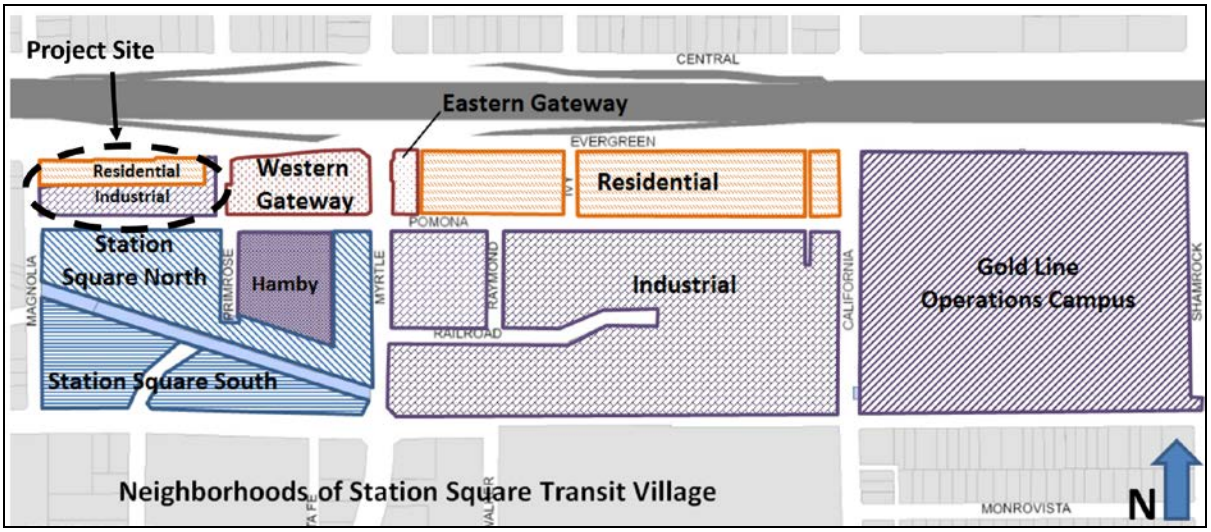
SUBJECT PROPERTY:
The property is currently developed with eight existing single-family homes totaling 7,612 square feet of building area (238, 234, 228, 224, 216, 212, 210, and 206 West Evergreen

Avenue), a vacant lot (220 W Evergreen Avenue), a surface parking lot (202 West Evergreen Avenue), and two industrial buildings (1610 South Magnolia and 1530 South Primrose) that total 39,500 square feet of building area. These existing structures would be demolished and the parcels would be merged for the proposed development.

Site and Surrounding Land Uses

The project site is designated Station Square Transit Village (Planned Development - Area 12) in the General Plan and is zoned PD-12. As shown in FIGURE - 2, the northern half of the development site is located within the Residential Neighborhood of Planned Development - Area 12 and the southern half is located within the Industrial Neighborhood.

FIGURE 2 – Neighborhoods of Station Square Transit Village



The site is surrounded by the following land uses.

North (Across West Evergreen Avenue):

General Plan:	Interstate 210 Freeway
Zoning:	Interstate 210 Freeway
Land Use:	Interstate 210 Freeway

South (Across West Pomona Avenue):

General Plan:	Planned Development - Area 12 (Station Square Transit Village)
Zoning:	The Parks at Station Square Specific Plan
Land Use:	Multifamily Residential Development (261 units)

East (Across South Primrose Avenue):

General Plan:	Planned Development - Area 12 (Station Square Transit Village)
Zoning:	PD-12
Land Use:	Surface Parking Lot and Industrial Buildings ***Location of Proposed 123 Fifield Specific Plan (310 units)

West (Across South Magnolia Avenue):

General Plan:	Manufacturing
Zoning:	M (Manufacturing)
Land Use:	Surface Parking Lot and Industrial Buildings ***Location of Proposed Alexan Foothills Specific Plan (436 units)

DISCUSSION/ANALYSIS:
The Applicant is proposing to develop a 2.90-acre site with a transit-oriented, infill, mixed-use residential/commercial development to include: 302 residential units (including 3 live/work units and 15 affordable units for very low-income households), 7,080 square feet of ground floor commercial space, a parking structure containing 500 parking spaces, a leasing office, residential amenities including two courtyards and a roof deck, and public open space in the form of four plazas along the street frontage of West Pomona Avenue.

Project Overview
The proposed project implements Monrovia's vision that was established several decades ago to attract vibrant transit-oriented development within walking distance of the Metro Gold Line Station. In addition to proposing attractive housing with a variety of amenities near transit, this project aims to provide important public benefits for the surrounding neighborhood. The Arroyo at Monrovia Station's public benefits include 15 affordable housing units which will be designated for very low income households for a minimum period of 55 years, 7,080 square feet of commercial space that is intended to provide neighborhood serving goods and services to the residents, 19 public parking spaces, and bicycle parking.

The project will enhance the surrounding streetscape by upgrading the physical condition of the adjacent public right-of-way, including undergrounding the existing overhead utility lines and installation of new decorative sidewalk and landscaping for the entire City block. The project has been designed with infrastructure improvements for water, sewer, storm drains, and utilities to sustain the development. Lastly, both the design of the buildings and placement of structures onsite were considered carefully to ensure neighborhood compatibility given that the project is located across the street from the MODA apartment community and also surrounds a single-family residential developed lot on three sides. The following sections describe the various components of the project.

Site Plan
As shown in FIGURE 3 - Conceptual Site Plan, all of the residential units are located within a single 5-story building, with the fifth level consisting of loft units that include interior mezzanines. The site plan layout features a courtyard residential design. The residential building wraps the parking garage on three sides, and the appearance of multiple smaller buildings is achieved, rather than a single building, with the integration of private and public open spaces throughout the development site. This design technique also allows for the project to engage with the surrounding neighborhood, as well as provide sizable landscape buffers between the mixed-use building and the adjacent residential land uses.

FIGURE 3 – Conceptual Site Plan

The commercial area wraps the corner of West Pomona and South Primrose Avenues on the first floor. The placement of the commercial component is intended to visually engage pedestrians traveling north on South Primrose Avenue from the Metro Gold Line station. Three live/work units are located adjacent to the commercial space and front South Primrose Avenue.

The project's primary vehicular access is on West Pomona Avenue with a secondary vehicular access on West Evergreen Avenue. Both entrances are accessible to residents, retail patrons, paid parking users, and visitors. Deliveries, move-in areas, refuse collection services and parking are provided within the parking structure.

Approximately 31,000 square feet of open space, including public open space, common residential open space, indoor recreational rooms, and landscaped areas have been carefully integrated into the project site. In summary, 4,654 square feet of public open space is planned in the form of open plazas along the West Pomona Avenue frontage. These plazas range in size between 437 and 1,972 square feet, and will be improved with terraced steps, sculptured seating, pendant lighting, bicycle racks, and decorative landscaping.

An 887 square foot retail patio is proposed in front of the commercial space which will allow for outdoor dining opportunities. Common-use open spaces for the project's residents include two courtyards (Resident Backyard/Courtyard 1 and The Resort – Courtyard 2), a roof deck, and a range of indoor recreational amenities totaling 25,646 square feet. The roof deck is located on the eighth-level of the parking garage, and will be improved with an outdoor kitchen, outdoor tables, a fire pit, a media wall, game tables, and soft seating. Courtyard 2 is located on the interior of the site and will provide direct access to pool facilities, a club room, and a bike room. Other creative amenities for the residents include a dog park, a dog spa, a gym, and virtual golf.

The site plan design incorporates several Good Neighbor Features that are intended to reduce light, noise, and odor impacts on the adjacent single-family residence located on West Evergreen Avenue. The first design strategy focused on incorporating a passive open space courtyard, rather than an active recreation space, adjacent to the single-family home. This courtyard wraps the adjacent residence on three sides, thus creating large setbacks (20' on the east, 22' on the south, and 40' on the west) around the single-family home. These setbacks are intended to create a buffer while allowing sunlight to shine on the adjacent residence and its yard. The open space area provided in this courtyard will be improved with dense landscaping and indirect lighting. Lastly, an 8-foot decorative masonry wall will be constructed at the property line between the adjacent single-family home and the project to further protect the single-family home's privacy from the adjacent open space.

Floor Plans

The residential unit types include studios, one-bedroom apartments, two-bedroom apartments, and live/work floor plans. The following is a breakdown of the number of units provided by unit type:

- **59 studios** ranging from 554 to 823 square feet
  - *Including 3 designated for very low income households.*

- **129 one-bedroom units** ranging from 706 to 894 square feet
  - *Including 7 designated for very low income households.*

- **96 two-bedroom units** ranging from 950 to 1,422 square feet
  - *Including 5 designated for very low income households and 3 live/work units.*

Private balconies are provided for all one bedroom and two bedroom units and some lofts, and range in size between 29 and 275 square feet. The residential units located immediately east of the remaining single-family residence will not have balconies in order to provide reduced privacy impacts.

Residents will access their unit from interior hallways that lead from the parking structure on every level within the residential building. In addition to this direct parking structure access, private pedestrian paths and five resident-only access points are provided throughout the development. The resident-only pedestrian access points are provided on West Evergreen Avenue and West Pomona Avenues.

In addition to the 2,380 square feet of nonresidential "work" space that is planned as part of the live/work units, the Arroyo at Monrovia Station Specific Plan allows for 7,080 square feet of general commercial space. In order to provide flexibility due to future market changes, the specific plan contains parameters that could allow up to 5,080 square feet of the designated commercial space to transition to live/work units upon the approval of the Development Review Committee. The parameters for this potential transition includes, but is not limited to, the submittal of a market study, a summary of the relator/leasing agents' effort to lease the commercial space, and floor plans and elevations for the proposed live/work space. The Development Review Committee will ensure that the ground floor area remains commercial and visually appealing regardless of whether the units are operated as commercial storefronts or smaller "work" spaces associated with live/work units.

Building Elevations

Station Square Transit Village was envisioned to be a high density neighborhood that would follow *urban* design principles rather than a *suburban* model. However, consideration of neighborhood compatibility concepts is still a very important part of project review. This is especially true along the edges of development that interface with other residential properties. For this reason, the Arroyo at Monrovia Station Specific Plan includes several building design strategies, such as building massing that is set back on the top floor and graduated building heights, to achieve compatibility with surrounding improvements.

The building design incorporates many urban design principles that create varied and interesting streetscapes. The building height is approximately 84 feet along South Magnolia Avenue and 75 feet on South Primrose Avenue. As shown in FIGURE 4 - Project Rendering, the ground floor is visually distinct from the residential floors above. Instead of a box design, the elevation provides significant articulation through the use of façade plan changes, materials and colors.

FIGURE 4 – Project Rendering

Building elevations along street frontages are articulated to provide architectural interest and reduce large massing elements. It is also important to note that all building elevations are distinct. The elevations yield a residential feel through the use of natural materials, warm colors, and layered landscaping. Exterior materials include horizontal siding, smooth and coarse plaster finishes with score lines and reveals, brown and dark brick, and mesh metal railing on the balconies.

The streetscape along West Pomona Avenue provides a more urban feel and appearance. The building is proposed closer to the sidewalk. Distinct architectural building elements are incorporated into the building design to create unique focal points and inviting gateway entrances. The corner tower element serves as a predominant visual feature at the corner of West Pomona and South Primrose Avenues. As shown in FIGURE 5 - Promenade Plaza, a large, distinct canopy is used to highlight a public plaza and building entrance. Lastly, the back of the parking structure which is visible along the West Evergreen Avenue frontage showcases articulated openings and several locations for public art opportunities.

FIGURE 5 - Promenade Plaza

Affordable Housing Incentives

This project will provide 15 very-low income affordable units that will be deed restricted for a minimum of 55 years. State Density Bonus Law (California Government Code Section 65915) provides developers with incentives to build affordable housing units in the form of concessions, waivers, and reduced parking requirements for residential uses. A concession or incentive is defined as a reduction in site development standards or a modification of zoning code or architectural design requirements; examples include: a reduction in setback or minimum lot area requirements. The number of required incentives or concessions is based on the percentage of affordable units.

The proposed “Arroyo at Monrovia Station Specific Plan” is based on the development parameters established by the Monrovia Land Use Element, which establishes maximum caps and minimum requirements for various types of development in the Station Square Transit Village Planned Development Area 12 (PD-12) on an area-wide basis. The transit-oriented mixed use complex was planned at a high density, which is encouraged for transit-oriented development. The overall Floor Area Ratio proposed across the entire development site is 2.66:1. Although there is not a Floor Area Ratio limit in the Residential Neighborhood, there is a Floor Area Ratio limit of 2.5 in the Industrial Neighborhood. The project is currently proposing a 3.31:1 Floor Area Ratio within this neighborhood.

This project qualifies for one concession since five percent of the total number of residential units, not including live/work units, will be set aside for very low income households. The 15

units equate to 5% of the total 299 traditional residential units. The applicant is requesting one concession to allow the 2.5 Floor Area Ratio limit to be exceeded up to a maximum 3.31:1 Floor Area Ratio in the Industrial Neighborhood.

The project also utilizes the State's affordable housing incentive for parking requirements. Upon the developer's request, the City may not require more than the following parking ratios for a density bonus project (inclusive of handicapped and guest parking).

- Studio and 1-bedroom units: 1 space
- 2 and 3-bedroom units: 2 spaces

A total of 406 parking spaces are required for the residential uses based on the bedroom count, and the project provides 429 spaces. This total number of residential parking includes 23 spaces for residential guests, which is not required by the State's affordable housing parking requirements.

Vesting Tentative Tract Map* 82517 *and General Plan Conformity GPC2019-0004

The proposal would consolidate twelve parcels of land into one parcel. The Tentative Map review process is used to evaluate the proposed subdivision in terms of compliance with City standards, and the appropriateness of the subdivision's design. The "Vesting" Tentative Tract Map differs from a standard tentative map in that the developer has a vested right to proceed with the project in substantial compliance with the ordinances, policies, and standards that were in effect at the time the application was considered complete by the City. The Applicant must complete certain conditions of approval (Data Sheet 2) before submitting a Final Tract Map for City Council approval.

Prior to considering the entire project the Planning Commission must first make a finding that the dedication of public right-of-way and public access easements across proposed public open space areas conform to the provisions of the City's General Plan pursuant to Section 65402 of the Government Code.

Dedication of public right-of-way is proposed at each of the four corners of the City block that makes up the Arroyo at Monrovia Station project for the purpose of providing improved public ADA access and crossings at the street intersections (West Evergreen and South Primrose Avenues, West Evergreen and South Magnolia Avenues, South Magnolia and West Pomona Avenues, and West Pomona and South Primrose Avenues). The dedication of public access easements across proposed public open space areas will ensure the public's ability to use these areas.

The public right-of-way and easement dedications would conform to the provisions of the City's Circulation Element of the General Plan. These dedications conform to Goal 2 of the Circulation Element of the General Plan which specifies the need to provide a system of streets that meet the needs of future and current residents, local and commuter traffic demands and ensures the safe and efficient of movement of vehicles, people, and goods throughout the City.

Conditional Use Permit 2019-0016

The Conditional Use Permit is required for the construction of new buildings in PD-12. The proposed conditions (Data Sheet 1) address requirements for the submittal of final design details, exterior lighting plans, parking management standards, payment of development impact fees, public safety measures, construction site management, and affordable housing covenants.

Zoning Ordinance Text and Map Amendment
The Monrovia Municipal Code (MMC) must be amended to add "Arroyo at Monrovia Station Specific Plan" to the list of specific plans that have already been adopted. This code section specifies that the provisions adopted in a specific plan shall be considered to be the development standards for the plan. The Zoning Map also requires an amendment to change the existing PD (Planned Development) zone to the SP (Specific Plan) zone. (PCR2019-0016/Ordinance No. 2019-11)

Specific Plan
A specific plan is a planning document that contains a detailed set of development standards that will become the zoning requirements for the subject site. It establishes the land use and development regulations that will be used to implement the development project described above. The regulations contained in the Arroyo at Monrovia Station Specific Plan provide a "transit-supportive" approach by complementing the Gold Line station which is within walking distance. The Specific Plan helps ensure the project will contribute to a thriving transit village as envisioned in the General Plan.

Land use regulations, operational standards, and planning processes are included for the non-residential component of the project (Chapter 3 of the Specific Plan). The Arroyo at Monrovia Station Specific Plan would allow a mixture of commercial activities such as food and beverage, personal services, financial institutions, etc. Uses that have a higher potential to impact surrounding uses may also be allowed provided a Conditional Use Permit is first obtained.

Since the distribution of the hard copy of the Arroyo at Monrovia Station Specific Plan to the Planning Commission, staff has corrected several typographical errors within the document. The content substance did not change. Therefore, a revised draft document has been posted on the City's website and can be found at the following link:
https://www.cityofmonrovia.org/your-government/community-development/planning/development-spotlight

Environmental Impact Report
Based on the information in the land use entitlement applications and accompanying technical reports for the Arroyo at Monrovia Station Specific Plan and associated development, an Environmental Impact Report (EIR) was prepared in accordance with California Environmental Quality Act ("CEQA") and the City's local CEQA Guidelines. An EIR is an informational document which provides detailed information about the effect that a proposed project is likely to have on the environment. It also identifies mitigation measures that will reduce the project's potentially significant effects, as well as identifies potential unavoidable impacts and alternatives to the project.

The EIR prepared for the Arroyo at Monrovia Station Specific Plan identifies mitigation measures (MM) and standard conditions of approval (SC) to reduce and/or avoid impacts to the following environmental factor areas: Aesthetics, Air Quality, Biological Resources, Cultural Resources, Hazards and Hazardous Materials, Noise, Public Services, Tribal Resources, and Utilities and Service Systems.

- MM AES 1-3 would ensure that short-term impacts on visual character is minimized, that lighting is appropriately directed, and that use of materials causing glare is avoided.

- SC 1-3 and MM AIR 1-3 would ensure that the Project's construction and operational emissions would not exceed any South Coast Air Quality Management Department (AQMD) emissions thresholds, or exacerbate health risk associated with diesel particulate matter emissions, including emissions from the I-210.
- MM BIO-1: Requires pre-construction nesting surveys and construction monitoring and buffer zones to avoid impacts to nesting birds.
- MM CULT 1-5: Implements construction-phase procedures to be implemented in the event any important archaeological, paleontological, or Native American Tribal resources are discovered during grading operations.
- MM GEO 1 is designed to protect the population from geologic hazards and MM GEO 2-5 protect against inadvertent disturbance of paleontological resources.
- MM HAZ 1-2 would ensure that the project is in compliance with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the California Health and Safety Code that construction of the project would not increase the risk of exposure to hazardous substances detected onsite. MM HAZ-2 would ensure that any asbestos containing material and/or lead based paint in existing buildings would be abated prior to demolition.
- MM NOI-1-3: MM NOI-1 would ensure that interior and exterior noise standards are met, and acoustical analysis is performed to confirm. MM NOI-2 is recommended to reduce substantial permanent increases in ambient noise levels associated with the proposed project's recreational open space and amenity facilities. MM NOI-3 (i.e., temporary noise barriers) is recommended to reduce the magnitude of potential construction noise impacts associated with buildout of the project. It also includes provisions to relocate the resident at 230 West Evergreen Avenue during construction.
- SC PS 1-2 and MM PS 1 address the payment of fire, parkland, and school impact fees.
- MM UT-1 through MM UT-3 would ensure that can and will serve letters are obtained for water and wastewater service for the project and that the applicant will pay in lieu fees for minor improvements to water infrastructure in the area (new booster pump and 980 feet of pipeline). Standard condition SC UT-1 would ensure that applicants comply with the City of Monrovia's Construction and Demolition Disposal and Recycling Program.

Even with these implemented mitigation measures, the EIR identified one potentially significant and unavoidable environmental effect associated with noise impacts. The noise control requirements during construction, including noise barriers incorporated into the EIR mitigation measures MM NOI-3, would reduce construction noise levels, but not enough to reduce the level of impact to less than significant relative to the occupants at 230 West Evergreen Avenue. Although mitigation measure MM NOI-3 includes a provision to temporarily relocate the occupants of 230 West Evergreen Avenue during the project construction phase, this relocation would be subject to negotiation by and between the applicant and the occupant of 230 West Evergreen Avenue. Therefore, the applicant cannot guarantee the effectiveness or implementation of this mitigation at this time. Thus, this construction noise impact would remain significant and unavoidable even with the implementation of feasible mitigation measures.

Consistent with Section 15093 of the State of California CEQA Guidelines, prior to the approval of the project the City Council will need to consider the adoption of a Statement of Overriding Considerations if it finds that the benefits of adoption and implementation of the Arroyo at Monrovia Station outweigh the unavoidable environmental impact.

Staff and the Development Review Committee believes the proposed project will:

a) Implement Monrovia's General Plan Vision helping the City attain a balanced mix of land use within the City, thereby providing residents with ready access to housing, employment, and commercial services;

b) Contribute to attaining regional jobs/housing balance goals;

c) Encourage private investment and redevelopment of property in the City;

d) Ensure that residents from all income levels have access to decent, affordable housing;

e) Revitalize specific areas of the City which could benefit from public and private redevelopment efforts;

f) Create a City environment which makes Monrovia a pleasant place to live, work, shop, and do business; and

g) Ensure development in Monrovia is sensitive to the City's existing architectural and natural/open space resources.

All noticing requirements specified by CEQA have been met or exceeded. This project required a minimum review period of 45 days for the subject EIR. The following noticing occurred:

- Notice of Preparation (NOP) was distributed to all responsible and trustee agencies and other interested parties for a 30-day public review period commencing on May 22, 2019 and ending on June 21, 2019.
- Notice of Completion (NOC) was distributed to agencies, interested organizations, and interested individuals, as well as filed with the State Clearinghouse and County Clerk, for a 45-day public review period on September 26, 2019 and ending on November 13, 2019 (The comment period ends at the Planning Commission meeting).
- September 26, 2019 – Publication of public notice in Monrovia Weekly and the EIR was posted on City's website.

Traffic Impact Fee

The City conducted an Area Traffic Study and devised a Traffic Impact Fee (TIF) program to address the cumulative traffic effects of proposed development in the vicinity of the Monrovia Gold Line Station. The TIF includes each project's fair share cost of the traffic study and any recommended mitigation measure identified for a project's specific impact. Based on a traffic study prepared for the proposed project, no specific mitigation measures were recommended. However, payment of the TIF will fully satisfy the project's mitigation obligation for the necessary improvements in the future. The City Council adopted the TIF on October 2, 2019 and it becomes on November 16, 2019. The TIF program will apply to the Arroyo at Monrovia Station Development.

Open Space

The City of Monrovia Land Use and Circulation Element EIR identified a potential impact on park resources associated with build-out of the greater Station Square Transit Village area and included a mitigation measure requiring projects with 200 or more residential units to

dedicate three acres of parkland for every 1,000 residents. Given that no land is available for dedication on the project site, the Applicant will be required to pay an in-lieu fee as mitigation as an alternative to the dedication of parkland.

The proposed public open space that is planned within the development, including the four public plazas totaling 4,654 square feet will count towards this requirement. At the time the plans are submitted for plan check, the final open space requirement will be determined as stated in Condition No. 22 (Data Sheet 1).

Alternatively, the Applicant also has the option of taking all actions necessary to assist the City with forming a Community Facilities District and approving a special tax in an amount necessary to fund the public open space. If the Community Facilities District is formed and such special tax is approved, then this parkland dedication or in-lieu fee requirement would be satisfied.

Monrovia Art in Public Places

This residential project is subject to the City's Public Art Ordinance (MMC §15.44.050). One percent of the project cost is required to be applied to public art on the site or it can be placed in the City's Art in Public Places fund. Use of public art funds and proposed art work are approved by the Monrovia Art in Public Places Committee.

Alternatively, the Applicant also has the option of taking all actions necessary to assist the City with forming a Community Facilities District and approving a special tax in an amount necessary to fund the public art. If the Community Facilities District is formed and such special tax is approved, then the requirement of compliance with MMC Chapter 15.44 or payment of the in lieu fee would be satisfied. The public art requirement is addressed in Condition No. 23 (Data Sheet 1).

Public Outreach

In order to solicit early input on the development, the Applicant held a community meeting on December 3, 2018 from 6:00 p.m. to 7:30 p.m. at the Knights of Columbus Hall in Hamby Park. The meeting was well attended and positive input was received that influenced the overall design of the project.

Over the past year, the City has provided ongoing status updates to the community, Commission and City Council on the various development applications to solicit additional input on proposed projects. This includes the City website, the City Manager's weekly update, City Council and Planning Commission meetings, community presentations including the MAP Neighborhood Conference.

Development Review Committee Review

At the DRC meeting held on October 23, 2019, the Committee was given a presentation on the proposed project. Courtesy notices were mailed to property owners to solicit additional feedback. Overall, the Committee was pleased with the project and felt that it addressed the community's vision for Station Square. Specifically, some additional site plan considerations were discussed including the need for a security plan, adequate lighting in public areas, and appropriate fire safety measures for the rooftop deck.

The applicant and one resident who resides at 216 West Evergreen spoke in favor. Although there were additional members of the public in attendance, no further testimony was provided during the public input portion of the meeting.

Conclusion
The proposed project implements the City of Monrovia vision that was established several decades ago to attract vibrant transit-oriented development adjacent to the Metro Gold Line Station. Significant public amenities in the form of affordable housing, public parking, and open space provisions are included to the project premiere. The design of the buildings, placement of structures, and the architecture have been carefully thought through to relate visually to adjacent neighborhoods and structures. Only minor infrastructure improvements are needed to support the development planned.

RECOMMENDATION: The Development Review Committee and Staff recommend approval of the application as presented in the Staff Report. If the Planning Commission concurs with Staff's recommendation then, following the public hearing, the appropriate actions would be to adopt Planning Commission Resolution Nos. PCR2019-0015, PCR2019-0016, PCR2019-0017 and approval of Tentative Tract Map No. 82517, Conditional Use Permit CUP2019-0016, and General Plan Conformity GPC2019-0004:

The Planning Commission of the City of Monrovia hereby finds, determines and resolves as follows:

1. The Planning Commission has independently reviewed and considered the Environmental Impact Report and Mitigation Monitoring and Reporting Program that was prepared pursuant to the California Environmental Quality Act ("CEQA") and the City's local CEQA Guidelines and hereby finds that the benefits of adoption and implementation of the Arroyo at Monrovia Station Specific Plan outweigh the unavoidable environmental impact related to short term construction noise, and further makes a finding of adequacy with the Environmental Impact Report (EIR) and Mitigation Monitoring Program as the environmental clearance for the project (Zoning Amendment ZA2019-0005, Specific Plan SP2019-0004, Vesting TTM 82517, Conditional Use Permit CUP2019-0016, and General Plan Conformity GPC2019-0004), and therefore recommends that the City Council find that the EIR complies with CEQA and that the City Council certify the EIR and adopt the Mitigation Monitoring and Reporting Program, which is included in PCR2019-0015 Exhibit A, to mitigate or avoid significant effects of the Project on the environment to the extent feasible and to ensure compliance during project implementation, and recommend that the City Council adopt a statement of overriding considerations as to the one potential significant environmental impact relating to construction noise that cannot be mitigated to a level of insignificance as set forth in Planning Commission Resolution No. 2019-0015.

2. The Planning Commission finds that the custodian of records for all other materials that constitute the record of proceeding upon which this decision is based is the Planning Division Manager. Those documents are available for public review in the Planning Division located at 415 South Ivy Avenue, Monrovia, California, 91016.

3. The Planning Commission hereby finds that the proposed dedication of public right-of-way and easements as discussed in the Staff Report is in conformity with the City of Monrovia General Plan. This finding shall be reported to the City Council.

4. The Planning Commission in the exercise of its independent judgment hereby makes the findings listed on attached Data Sheet No. 3 for Vesting TTM 82517 and CUP2019-0016, which are incorporated herein by this reference.

5. The Planning Commission hereby recommends approval to the City Council of Zoning Amendment ZA2019-0005, Specific Plan SP2019-0004, General Plan Conformity GPC 2019-0004, Vesting TTM 82517, and CUP2019-0016 subject to the attached Planning Conditions on Data Sheet No. 1, Public Works Conditions on Data Sheet No. 2, and recommendations in the Staff Report, all of which are incorporated herein by this reference.

MOTIONS:

A. Close the public hearing and adopt Planning Commission Resolution No. PCR2019-0015 recommending that the City Council find that the environmental impact report complies with CEQA and that the City Council certify the EIR and adopt the Mitigation Monitoring and Reporting Program, which is included in PCR2019-0015 Exhibit A, to mitigate or avoid significant effects of the Project on the environment to the extent feasible and to ensure compliance during project implementation, and recommend that the City Council adopt a statement of overriding considerations as to the one potential significant environmental impact relating to construction noise that cannot be mitigated to a level of insignificance.

B. Find that the proposed dedications of public right-of-way and public access easements are in conformity with the General Plan as presented in the Staff Report.

B. Adopt Planning Commission Resolution No. PCR2019-0016 recommending approval to the City Council of Zoning Amendment Ordinance No. 2019-11.

C. Adopt Planning Commission Resolution No. PCR2019-0017 recommending approval to City Council of “Arroyo at Monrovia Station Specific Plan.”

D. Recommend to the City Council the approval of Vesting TTM 82517 and CUP2019-0016 as presented in the Staff Report.

PLANNING COMMISSION STAFF REPORT

APPLICATION:	**Arroyo at Monrovia Station Specific Plan ZA2019-0005, SP2019-0004, TTM 82517, CUP2019-0016, and GPC2019-0004**	**AGENDA ITEM:**	**PH-2**
PREPARED BY:	**Sheri Bermejo Planning Division Manager**	**MEETING DATE:**	**January 15, 2020**

SUBJECT: Arroyo at Monrovia Station Specific Plan, Zoning Amendment ZA2019-0005/Ordinance No. 2019-11 (Planning Commission Resolution PCR2019-0016), Specific Plan SP2019-0016 (Planning Commission Resolution PCR2019-0017), Vesting Tentative Tract Map 82517; Conditional Use Permit CUP2019-0016; General Plan Conformity GPC2019-0004; Environmental Impact Report; Planning Commission Resolution PCR2019-0015

202, 206, 210, 212, 216, 220, 224, 228, 234, AND 238 West Evergreen Avenue, and 1551 South Primrose Avenue and 1610 South Magnolia Avenue (Assessor's Parcel Numbers [APN] 8507-002-011, -012, -014, -015, -017, -018, -019, -020, -022, -023, -036, -037)

REQUEST: Develop a 2.90-acre site with a transit-oriented, infill, mixed-use residential/commercial development to include: 302 residential units, including three live/work units and 15 affordable units for very low-income households, 7,080 square feet of ground floor commercial space, a parking structure containing 500 parking spaces, a leasing office, residential amenities including two courtyards and a roof deck, and public open space in the form of four plazas along the street frontage of West Pomona Avenue. This property is located in the PD-12 (Planned Development Area 12 – Station Square Transit Village) zone.

The development application includes an amendment to the City's Official Zoning Map changing the PD (Planned Development) Zone designation to the SP (Specific Plan) Zone and a request to amend the text of the Zoning Ordinance to add Arroyo at Monrovia Station Specific Plan to Section 17.04.035 of Title 17 (Zoning) of the Monrovia Municipal Code for the subject property, the adoption of the Arroyo at Monrovia Station Specific Plan, and the approval of a vesting tentative tract map for the consolidation of twelve lots into one, and the approval of a conditional use permit to construct the development (collectively, the "proposed project").

APPLICANT: Evergreen Investment Partners, LLC C/O MW Investments Group, LLC
Matt Waken
27702 Crown Valley Pkwy, D4-197
Ladera Ranch, CA 92694

ENVIRONMENTAL DETERMINATION: Environmental Impact Report
State Clearinghouse (SHC) No. 2019050016

BACKGROUND: On November 13, 2019, the Planning Commission reviewed the land use entitlement applications for the adoption of the Arroyo at Monrovia Station Specific Plan and associated mixed-use development. The Arroyo at Monrovia Station Specific Plan proposes to develop a 2.90-acre site with a transit-oriented, infill, mixed-use residential/commercial development in the heart of the City's Station Square Transit Village. Its design includes a five-story (six-level) residential building containing 302 apartment units (including 15 units designated for very low income households and three live/work units), 7,080 square feet of ground floor commercial space, a seven-story (eight-level) parking structure containing 500 parking spaces, as well as a leasing office, several residential amenities including pool facilities, gyms, and a rooftop deck, and several public and private open space areas.

The Arroyo at Monrovia Station Specific Plan and development project began its formal public review process on September 26, 2019 with the opening of the 45-day public review and comment period for the project's required environmental clearance document, a Draft Environmental Impact Report (DEIR). The DEIR was prepared in accordance with the California Environmental Quality Act (CEQA) and was based on the information contained in the land use entitlement applications and accompanying technical reports. The project DEIR contains detailed information about the effect that the Arroyo at Monrovia Station Specific Plan and associated development is likely to have on the environment. It also identifies mitigation measures and standard conditions of approval to reduce and/or avoid impacts to the following environmental factor areas: Aesthetics, Air Quality, Biological Resources, Cultural Resources, Hazards and Hazardous Materials, Noise, Public Services, Tribal Resources, and Utilities and Service Systems, as well as identifies one potential unavoidable impact relating to short term construction noise impacts relative to the proximity of a single-family residential property at 230 West Evergreen Avenue. Lastly, the DEIR identifies alternatives to the project.

In addition to receiving a presentation on the project and DEIR during the meeting on November 13th, the Planning Commission also heard and received comments on the DEIR and formally closed the 45-day public review period. The following four individuals provided public input during the public hearing:

1. Brian Flynn, a representative on behalf of the Supporters Alliance for Environmental Responsibility (SAFER), spoke with concerns about the DEIR and requested that the item be continued.

2. Matt Waken, applicant, thanked staff and spoke in regards to responding accordingly to correspondence from SAFER.

3. Juan Banuellos, resident, spoke in favor of the project.

4. Brad Ratliff, father of a resident, spoke in favor of the project.

In total, the Commission received five comment letters during the public review and comment period. Four of the letters were from government agencies, specifically the State of California Department of Transportation (Caltrans), County of Los Angeles Fire Department, Los Angeles County Metropolitan Transportation Authority (Metro), and Sanitation Districts of Los Angeles

County (LACSD). A fifth letter was from Supporters Alliance for Environmental Responsibility (SAFER). In order to provide ample time for staff and the project applicant's team to review and prepare responses to comments, the Planning Commission voted unanimously to continue the public hearing on the project to its regular meeting on December 11, 2019. At the meeting of December 11, 2019, the Commission voted unanimously to continue the hearing again to make sure the comments were adequately addressed.

Under CEQA Guidelines Section 15088, the City as the Lead Agency is required to respond in writing to substantive environmental points that were raised during the public comment period. Section 15089 of the CEQA Guidelines also requires that the City prepare and certify a Final Environmental Impact Report (FEIR) before approving the project. The FEIR contains the DEIR, any revisions to the DEIR, comments and recommendations received during the public comment period, a list of persons, organizations, and public agencies who commented on the DEIR, and the written responses to significant environmental points raised during the public review period.

In coordination with the applicant's CEQA and land use consultant (MIG, Inc.), the City's third party CEQA consultant (Collette L. Morse of Morse Planning Group), City staff and the City Attorney, a FEIR has been prepared for the Arroyo at Monrovia Station Specific Plan and associated development. This FEIR (Attachment "A,") is in draft format for the Planning Commission's consideration. The staff report from the November 13th meeting is attached as Attachment "B" for the Commission's reference. Copies of the entitlement documents (Architectural Plans, Civil Drawings, and Specific Plan) can be found online on the City's website at the following link: https://www.cityofmonrovia.org/your-government/community-development/planning/zoning/specific-plans/arroyo-at-monrovia-station-specific-plan.

DISCUSSION/ANALYSIS: The entitlement applications for the Arroyo at Monrovia Station Specific Plan and mixed-use development require the approval of the City Council. Both the Planning Commission and the Development Review Committee serve as advisory bodies to the City Council. The actions of the Commission will be in the form of recommendations. As the Commission recalls, the requested entitlements for the project are as follows:

1. **Zoning Text and Map Amendment** to add "Arroyo at Monrovia Station Specific Plan" to Section 17.04.035 of the Monrovia Municipal Code and amend the official Zoning Map by changing the existing PD (Planning Development) zone designation to SP (Specific Plan). (PCR2019-0016/Ordinance No. 2019-11)

2. **Arroyo at Monrovia Station Specific Plan** to establish development standards, design guidelines and land use restrictions for the 2.9 acre project site. (PCR2019-0016)

3. **General Plan Conformity Finding** that the proposed dedications of public right-of-way and easements conform to the provisions of the City's General Plan. (GPC2019-0004)

4. **Vesting Tentative Tract Map** to consolidate twelve parcels into one 2.90 (gross) acre parcel. (Vesting TTM 82517).

5. **Conditional Use Permit** to allow construction of a 5-story (6-level), 302-unit apartment complex and a 7-story, 8-level, 500 space parking structure. (CUP2019-0016)

Prior to making its recommendation on the entitlement requests listed above, the Commission must first consider and provide its recommendation on the **Environmental Impact Report and Mitigation Monitoring and Reporting Program** for the proposed project pursuant to the California Environmental Quality Act (CEQA). (PCR2019-0015)

Ultimately, the City Council will need to review and certify the Final Environmental Impact Report (FEIR), affirming that the EIR has been completed in compliance with CEQA; that the Council reviewed and considered the information contained in the Final EIR prior to approving the project; and that it reflects the City Council's independent judgment and analysis. Lastly, because the DEIR identified one unavoidable environmental impact related to short term construction noise, the City Council will also need to consider the adoption of a Statement of Overriding Consideration, as further discussed on page 7 of this report.

Response to Comments and Revisions to the DEIR included in FEIR

The FEIR document includes a list of all commenters on the DEIR, copies of all written comment letters that were submitted on the DEIR during the public comment period, responses to all comments received on the DEIR, and any required revisions to the DEIR in response to the comments received. This information is broken down into three sections; Section 1.0 "Introduction", Section 2.0 "Responses to Comments", and Section 3.0 "Draft EIR Revisions."

To facilitate the review of the comments and responses contained in Section 2.0, each of the five comment letters received during the public review and comment period was assigned a code (L1 - Caltrans, L2 - County of Los Angeles Fire Department, L3 - Metro, L4 – LACSD, and L5 - SAFER). Each comment within each letter was also assigned a corresponding code for tracking individual responses to comments (e.g., L1.1, L1.2, L2.1, L2.2).

As a result of some the comments received, minor revisions to the DEIR were required. These edits may be found in Section 3.0. New text is underlined; deleted text is stricken through. With respect to these edits, it is important to note that none of the revisions to the DEIR presented in the FEIR represent a substantial increase in the severity of an identified significant impact or the identification of a new significant impact, mitigation measure, or alternative different from those already considered in preparing the DEIR.

Lastly, it is important to note that the FEIR is being presented in draft format to the Planning Commission for its review, consideration, and recommendation to the City Council. Upon the Commission's recommendation that the City Council certify the FEIR, the document will be provided to each of the commenters at least 10 days prior to the City Council's review and consideration of the project.

The following is a brief summary of the comments received and the responses that have been prepared.

Comment Letter L1 - State of California Department of Transportation (Caltrans)

Caltrans does not expect a direct adverse impact to State transportation facilities; the nearest facilities are the Interstate I-210 and Interstate I-605. The comment letter recommends strategies to help reduce Vehicles Miles Traveled (VMT) and Greenhouse Gas (GHG) emissions, such as increasing the use of alternate modes of transportation around the project site and reducing onsite parking. The Caltrans' letter also supports ensuring that all types of

users have access to the transportation system and requested the City ensure that the improvements are American with Disabilities Act (ADA) compliant. Lastly the letter provides notice to the City and project applicant that permits are needed for over-sized vehicles on State highways and advises that storm water run-off is a sensitive issue for Los Angeles County.

The responses to Caltran's comments are provided in pages 2-5 – 2-6 of the FEIR. In summary, the responses note that the Arroyo at Monrovia Station Specific Plan project represents an infill development within an existing urbanized area that would concentrate new residential and commercial uses within 400 feet from METRO's Monrovia Gold Line Station, within 0.25 miles of three METRO bus stops, and within one mile of an existing bikeway system. Therefore, the project provides convenient access to public transit and opportunities for walking and biking, which would facilitate a reduction in regional VMT and related vehicular GHG emissions. Dedication of public right-of-way is proposed at each of the four corners of the project site for the purpose of providing improved public ADA access and crossings at the street intersections (West Evergreen and South Primrose Avenues, West Evergreen and South Magnolia Avenues, South Magnolia and West Pomona Avenues, and West Pomona and South Primrose Avenues). The project complies with applicable parking requirements; the City's and State Density Bonus Law parking regulations. The City acknowledges all the comments submitted by Caltrans, as well as the permit requirements, and finds that they do not necessitate revisions to the DEIR.

Comment Letter L2 - County of Los Angeles Fire Department

This comment letter notes that the project does not appear to have any impact on the emergency responsibilities of the County of Los Angeles Fire Department, as the project is located entirely in the City of Monrovia, and therefore, is under the jurisdiction of the City of Monrovia Fire Department. The comment letter further advises the City and the project applicant of the statutory responsibilities of the County Forestry Division, including erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones, archaeological and cultural resources, and oak tree preservation. Lastly, the letter recommends that Cal-EPA Department of Toxic Substance Control provide the lead environmental oversight for the project site.

The responses to County of Los Angeles Fire Department comments are provided in pages 2-11 – 2-12 of the FEIR. In summary, the City acknowledges the comments and notes that the proposed Specific Plan is not located within, or adjacent to, an area of state of federal responsibility. Therefore, it would not exacerbate wild fire risks to residents or employees in the area. The responses to comments notes that there are no known Oak Trees on the project site, and the City has its own Oak Tree Preservation Ordinance. There are also no known archaeological or other cultural resources or rare or endangered species in the Specific Plan area. Impacts on biological resources and cultural resources are discussed in Chapters 8 and 9 of the DEIR, respectively. The comments provided by the County of Los Angeles Fire Department do not necessitate revisions to the DEIR.

Comment Letter L3 - Los Angeles County Metropolitan Transportation Authority (Metro)

The letter prepared by Metro outlines recommendations concerning issues that are germane to their agency's statutory responsibility in relation to the Metro Gold Line facilities and services. The letter recommends the creation of potential synergies associated with transit-oriented development, promoting walkability and bicycle use, achieving first-last mile connections to transit, incorporating the use of wayfinding signage. Metro also encourages the reduction of parking to reduce automobile orientation in design and travel demand. Lastly, Metro provided

the applicant with the Metro Adjacent Development Handbook, which provides an overview of common concerns for development adjacent to Metro-owned right-of-way (ROW).

The responses to Metro's comments are provided in pages 2-17 – 2-18 of the FEIR. In summary, the City acknowledges Metro's comments and notes that the project has been designed to take advantage of, and to facilitate access to, the Monrovia Station and its transit options. The project complies with applicable parking requirements. The recommended design features contained in the Metro Adjacent Development Handbook have already been incorporated into the project design. The City also finds that Metro's comments do not necessitate revisions to the DEIR.

Comment Letter L4 - Sanitation Districts of Los Angeles County (LACSD)

The letter prepared by LACSD indicates that prior to the issuance of building permits or the approval of a final map, the applicant shall pay a connection fee to the District to ensure that sufficient capital fees exist to construct an incremental expansion of the Sewerage System to accommodate the proposed project. The letter notes that Monrovia's 24-inch Outfall Trunk Sewer was noted to have a peak flow of 3.2 mgd (million gallons per day) in 2013, instead of 3.3 mgd value that was used in the DEIR analysis. Lastly, the letter provides reference to the District's waste water generation factors for the purpose of estimating wastewater generated by the project.

The responses to LACSD's comments are provided on pages 2-23 of the FEIR. In summary, the City acknowledges LACSD's comments and notes that a value of 3.3 mgd was used based on a comment letter submitted by LACSD for another project adjacent to the site (the Alexan Foothills Specific Plan). This slightly higher value is more conservative than the 3.2 mgd for the purpose of evaluating whether the project would exceed existing capacity of the trunk sewer. The response to comments also note that LACSD waste water generation factors were used in the DEIR analysis, and the City also factored in wastewater that could be generated from the proposed swimming pool to ensure an accurate assessment. The City finds that LACSD's comments do not necessitate revisions to the DEIR.

Comment Letter L5 - Supporters Alliance for Environmental Responsibility (SAFER)

The letter prepared and submitted by Lozeau Drury, LLP on behalf of SAFER requests that the City prepare a Revised Draft Environmental Impact Report (REIR) to analyze and mitigate impacts that have not been adequately addressed in the DEIR. The letter outlines several environmental points of concern, including but not limited to, the public review of the CEQA document, potential risks related to soil contamination and the absence of mitigation that outlines a corrective action plan, and air quality and greenhouse gas impacts.

The responses to SAFER's comments are provided in pages 2-41 through 2-68 of the FEIR. In summary, the City confirms that the public was provided the 45-day review and public comment period on the DEIR, as required by CEQA, and assures that City decision makers will have ample time to consider the complete FEIR, including all responses to comments, prior to its consideration of the project entitlement applications. With respect to SAFER's concerns regarding potential risks related to soil contamination and improper mitigation, the responses to comments uphold the analysis that was completed to date and highlights that the DEIR recommended a soil vapor barrier as remedial action. Controlling case law provides that a lead agency may defer formulation of the details of a mitigation measure pending further study if the lead agency commits itself to mitigation, describes specific performance criteria that the lead agency will apply to conclude that an impact will be adequately mitigated, and describes the

types of potential actions that can be taken to achieve the performance standards. Even though the proposed mitigation met this standard, mitigation measures HAZ-1 and HAZ-2 have been revised to further clarify applicable regulatory requirements. Lastly, Section 3 of the FEIR includes revisions to the air quality and greenhouse gas analyses, as well as edits to DEIR Chapters 7 “Air Quality”, Chapter 11 “Global Climate Change, Greenhouse Gas, and Energy” and Chapter 19 “Transportation” based on the comments received. The updated and revised emission estimates continue to demonstrate that the project’s emissions will remain below the air quality and greenhouse gas thresholds established by SCAQMD (South Coast Air Quality Management District). In summary, all of the revisions to the DEIR correct minor errors, clarify information, and confirm the findings in the DEIR. Therefore, none of the revisions to the DEIR presented in the FEIR represent a substantial increase in the severity of an identified significant impact or the identification of a new significant impact, mitigation measure, or alternative different from those already considered in preparing the DEIR.

Statement of Overriding Consideration

As the Commission recalls, the DEIR identified one potential unavoidable impact relating to short term construction noise impacts relative to the proximity of a single-family residential property at 230 West Evergreen Avenue. Although the noise control requirements during construction, including noise barriers incorporated into the EIR mitigation measures MM NOI-3, would reduce construction noise levels, the measures do not reduce the level of impact to less than significant relative to the occupants at 230 West Evergreen Avenue. Although mitigation measure MM NOI-3 includes a provision to temporarily relocate the occupants of 230 West Evergreen Avenue during the project construction phase, this relocation would be subject to negotiation by and between the applicant and the occupants of 230 West Evergreen Avenue. Therefore, the applicant cannot guarantee the effectiveness or implementation of this mitigation at this time. Thus, this construction noise impact would remain significant and unavoidable even with the implementation of feasible mitigation measures.

If the Planning Commission is inclined to recommend approval of this project, it will need to consider recommending that the City Council adopt a Statement of Overriding Considerations consistent with CEQA Guidelines, Section 15093. The Statement of Overriding Considerations identifies the benefits of the Arroyo at Monrovia Station Specific Plan and development project, despite the significant and unavoidable noise impact.

The benefits and overriding considerations are contained in PCR2019-015 and are summarized below. Staff and the Development Review Committee believes that the proposed project will:

a) Help the City attain a balanced mix of land use within the City, thereby providing residents with ready access to housing, employment, and commercial services that will be close to public transit;

b) Contribute to attaining regional jobs/housing balance goals;

c) Encourage private investment and redevelopment of property in the City;

d) Ensure that residents from all income levels, including very low income households, will have access to decent, affordable housing;

e) Revitalize and improve this area of the City;

f) Create a City environment which makes Monrovia a pleasant place to live, work, shop, and do business;

g) Encourage pedestrian activity, provide public open space and enhancing landscaping;

h) Provide public automobile parking and bicycle parking for the public and for residents; and

i) Comply with mandates from the State of California to increase the supply of housing adjacent to public transit because the project is a transit-oriented mixed-use residential and commercial development that implements the use of public transportation, including light rail transit, to provide mobility to all City residents and encourages the use of public transportation as an alternative to automobile travel. The project provides 31 short term bicycle storage spaces and 151 long term bicycle storage spaces dispersed throughout the site. The project will provide continuous sidewalks around the development, including wheelchair ramps. The parking structure provides 500 vehicle parking spaces, some of which will be available for public parking.

Conclusion

The proposed project implements the City of Monrovia vision that was established several decades ago to attract vibrant transit-oriented development adjacent to the Metro Gold Line Station. Significant public amenities in the form of affordable housing, public parking, and open space provisions are included to make the project premiere. The design of the buildings, placement of structures, and the architecture have been carefully thought through to relate visually to adjacent neighborhoods and structures. Only minor infrastructure improvements are needed to support the proposed development.

RECOMMENDATION: Staff recommends approval of the application as presented in the Staff Reports, dated November 13, 2019 and January 15, 2020. If the Planning Commission concurs with Staff's recommendation then, following the public hearing, the appropriate actions would be to adopt Planning Commission Resolution Nos. PCR2019-0015, PCR2019-0016, PCR2019-0017 and approval of Tentative Tract Map No. 82517, Conditional Use Permit CUP2019-0016, and General Plan Conformity GPC2019-0004:

The Planning Commission of the City of Monrovia hereby finds, determines and resolves as follows:

1. The Planning Commission has independently reviewed and considered the Draft and Final Environmental Impact Report and Mitigation Monitoring and Reporting Program that were prepared pursuant to the California Environmental Quality Act ("CEQA") and the City's local CEQA Guidelines and hereby finds that the benefits of adoption and implementation of the Arroyo at Monrovia Station Specific Plan outweigh the unavoidable environmental impact related to short term construction noise, and further makes a finding of adequacy with the Environmental Impact Report (EIR) and Mitigation Monitoring Program as the environmental clearance for the project (Zoning Amendment ZA2019-0005, Specific Plan SP2019-0004, Vesting TTM 82517, Conditional Use Permit CUP2019-0016, and General Plan Conformity GPC2019-0004), and therefore recommends that the City Council find that the EIR complies with CEQA

and that the City Council certify the EIR and adopt the Mitigation Monitoring and Reporting Program, which is included in PCR2019-0015 Exhibit A, to mitigate or avoid significant effects of the Project on the environment to the extent feasible and to ensure compliance during project implementation, and recommend that the City Council adopt a statement of overriding considerations as to the one potential significant environmental impact relating to construction noise that cannot be mitigated to a level of insignificance as set forth in Planning Commission Resolution No. 2019-0015.

2. The Planning Commission finds that the custodian of records for all other materials that constitute the record of proceeding upon which this decision is based is the Planning Division Manager. Those documents are available for public review in the Planning Division located at 415 South Ivy Avenue, Monrovia, California, 91016.

3. The Planning Commission hereby finds that the proposed dedication of public right-of-way and easements as discussed in the Staff Report is in conformity with the City of Monrovia General Plan. This finding shall be reported to the City Council.

4. The Planning Commission in the exercise of its independent judgment hereby makes the findings listed on attached Data Sheet No. 3 for Vesting TTM 82517 and CUP2019-0016, which are incorporated herein by this reference.

5. The Planning Commission hereby recommends approval to the City Council of Zoning Amendment ZA2019-0005, Specific Plan SP2019-0004, General Plan Conformity GPC 2019-0004, Vesting TTM 82517, and CUP2019-0016 subject to the attached Planning Conditions on Data Sheet No. 1, Public Works Conditions on Data Sheet No. 2, and recommendations in the Staff Report, all of which are incorporated herein by this reference.

MOTIONS:

A. Close the public hearing and adopt Planning Commission Resolution No. PCR2019-0015 (Attachment C) recommending that the City Council find that the environmental impact report complies with CEQA and that the City Council certify the EIR and adopt the Mitigation Monitoring and Reporting Program, which are included in PCR2019-0015 Exhibits “A” – “C”, to mitigate or avoid significant effects of the Project on the environment to the extent feasible and to ensure compliance during project implementation, and recommend that the City Council adopt a statement of overriding considerations as to the one potential significant environmental impact relating to construction noise that cannot be mitigated to a level of insignificance.

B. Find that the proposed dedications of public right-of-way and public access easements are in conformity with the General Plan as presented in the Staff Report.

C. Adopt Planning Commission Resolution No. PCR2019-0016 (Attachment D) recommending approval to the City Council of Zoning Amendment Ordinance No. 2019-11.

D. Adopt Planning Commission Resolution No. PCR2019-0017 (Attachment E) recommending approval to City Council of “Arroyo at Monrovia Station Specific Plan.”

E. Recommend to the City Council the approval of Vesting TTM 82517 and CUP2019-0016 as presented in the Staff Report and Data Sheet 3.

DATA SHEET 1 Planning Conditions

Vesting Tentative Tract Map 82517 and Conditional Use Permit CUP2019-0016

202 W. Evergreen Avenue
206 W. Evergreen Avenue
210 W. Evergreen Avenue
212 W. Evergreen Avenue
216 W. Evergreen Avenue
220 W. Evergreen Avenue
224 W. Evergreen Avenue
228 W. Evergreen Avenue
234 W. Evergreen Avenue
238 W. Evergreen Avenue
1551 South Primrose Avenue
1610 South Magnolia Avenue

Development of the subject property and operations on the site must remain in substantial conformance at all times with the request and application forms and plans for Vesting Tentative Tract Map TTM 82517 and Conditional Use Permit CUP2019-0016 for a new six-story (seven level) mixed-use residential/commercial development to include 302 apartment units (including 3 live/work units and 15 units designated affordable to very low income households), 7,080 square feet of ground-floor commercial space, and a seven-story (eight level) 500-space parking garage submitted by the Applicant, as approved by the City Council and placed on file in the office of the Planning Division, except as modified by the conditions imposed by the City Council and by subsequent modifications determined by the Director of Community Development to be in substantial compliance with the conditions of approval. The term "Applicant" as used herein shall include the applicant, the property developer, the property owner, and all successors in interest to this Subdivision Map and Conditional Use Permit.

DEVELOPMENT STANDARDS

1. The development shall comply at all times with all standards, regulations, requirements, guidelines and conditions set forth in "Arroyo at Monrovia Station Specific Plan."

2. All final building/architectural materials shall be submitted to the Planning Division Manager for review and approval prior to building permit issuance. The review of final materials shall include, but not be limited to, decorative concrete masonry unit (CMU) walls, metal panels, concrete textures, wood tile cladding, brick siding, metal mesh railing, metal canopies, window systems, color schemes, and exterior light fixtures.

3. The final decorative artwork element proposed on the north exterior wall of the parking structure shall be submitted to the Development Review Committee for review and approval. If this exterior wall feature is proposed as a public art piece, the final design details shall be submitted to the Art and Public Places Committee for review and approval. The Community Development Director shall determine the appropriate body to review and approve the design.

4. Placement and design of mailboxes shall be reviewed and approved by both the U.S. Postal Service and the Planning Division prior to installation and shall not be placed in the public right-of-way.

5. All roof mounted mechanical equipment shall be completely screened from street view adjacent to the site by perimeter parapet walls, subject to review and approval by the Community Development Director.

6. Ground level mechanical equipment shall be screened through the use of landscaping or enclosures. Final screening method is subject to review and approval by the Community Development Director.

7. All roof and balcony drainage shall be directed to an internal collection system.

8. Electrical power lines, telephone lines, and any other transmission lines (including, without limitation, cable television lines, data transmission lines, communication lines, other utility lines, etc.) to and from the development, and within the development, shall be placed underground and provided to each unit.

9. All utilities and structures such as gas meters, electrical meters, and telephone pedestal-mounted terminal boxes, surface mounted electrical transformers, or other potential obstructions shall be noted on the plans in locations that will not impair public access and in compliance with the Americans With Disabilities Act with provisions for appropriate screening to the satisfaction of the Community Development Director. These structures shall be incorporated into the building design whenever possible so as not to be visible from the public right-of-way. Any equipment in the landscaped areas shall be noted on the landscape/hardscape plan with provisions for appropriate screening. Electrical transformers shall not be located in front of or within the public plazas. If transformers are proposed within these areas they shall be vaulted and placed underground.

10. No exterior lighting shall be installed without the approval of the Planning Division Manager. All exterior lighting shall be designed, arranged, and installed so as to confine direct rays onto the premises and to direct light away from adjacent structures.

11. Prior to issuance of a building Certificate of Occupancy, Deed restrictions and an Affordable Housing Agreement and Covenant in a form approved by the City Attorney must be recorded against the fifteen (15) affordable apartment units for 55 years that meet all of the requirements for affordability for very-low income families and meet all other criteria outlined in Government Code Section 65915.

LANDSCAPING

12. A Landscape and Irrigation Plan prepared by a licensed Landscape Architect shall be submitted to the Planning Division for plan check showing the size, type, and location of all planting areas and shall incorporate the following conditions of approval:

a. Landscaping shall be a combination of 24" and 36" box trees, shrubs, groundcover, and turf except on the rooftop decks where 15 gallon trees can be planted.

b. All landscaping, including the landscaping located within the public open space and amenity areas, shall be maintained by the applicant and shall include a permanent automatic irrigation sprinkler system.

c. Any unimproved City right-of-way contiguous with the property shall be landscaped and maintained by the Applicant and shall be incorporated into the required landscape plan.

d. Hardscape improvements shall be provided in all common areas. The common areas shall incorporate amenities for residents of the development to the satisfaction of the Community Development Director. The improvements shall be indicated on the final landscape/hardscape plan.

e. A landscape documentation package that complies with the requirements of the Model Water Efficient Landscape Ordinance and shall be submitted to the Planning Division for review and approval prior to landscape construction. A Landscape Certificate of Completion shall be submitted to the Planning Division at the completion of the installation, prior to request for a final inspection and Certificate of Occupancy.

13. Public Open Space Easement. Easements for the following public areas located on West Pomona Avenue shall be dedicated to the City for public access, to the satisfaction of the Community Development Director, City Engineer and City Attorney: the promenade plaza totaling 1,439 square feet, the refuge plaza totaling 437 square feet, the community plaza totaling 1,972 square feet, and the entry court plaza totaling 806 square feet. These public areas shall be constructed and maintained by the Applicant or its successors in interest.

14. A Public Open Space and Amenity Plan shall be prepared in coordination with the Landscape and Irrigation Plan showing the amenities proposed within the public open space and amenity areas to the satisfaction of the Community Development Director. The amenity improvements shall include, at a minimum, decorative permanent seating, trash receptacles, and decorative hardscape.

PARKING

15. The parking structure driveway entrance shall be surfaced with Portland cement concrete (3 1/2" minimum), interlocking pavers, or other suitable materials, which shall be submitted to the Planning Division Manager and Public Works Department prior to installation for review and approval.

16. A minimum of 19 public parking spaces shall be provided. The public parking spaces shall be clearly marked and shall be open and accessible to the public from 6:00 AM to 12:00 AM. Before any change is made in these hours, approval shall be obtained

from the Development Review Committee. No resident parking shall be permitted in the designated public parking spaces in front of the gate. Signage shall be provided to advise residents of this restriction.

17. Driveway ramps shall be a maximum 15% grade.

18. Storage for a minimum of 31 short-term bicycle parking spaces and 151 long-term bicycle parking spaces shall be provided onsite in a location that is satisfactory to the Director of Community Development.

19. A final parking management plan shall be submitted to the Planning Division for the review and approval of the Planning Division Manager. In addition to identifying how the private residential parking area and the paid public parking area will be managed separately and securely from each other, the parking management plan shall also identify the location of the residential, residential guest, commercial, public paid parking, Electrical Vehicle charging station, United States Postal Service (USPS), and Americans with Disabilities Act (ADA) parking stalls within the parking structure, as well as identify the location of the bicycle storage areas for the 182 bicycles on the development site.

20. To prevent potential spillover parking impacts from the project into surrounding residential neighborhoods, the Applicant shall prepare and submit a "Parking and Circulation Management Plan" to the Director of Community Development (the "Parking Plan") for review and approval prior to issuance of a certificate of occupancy. The Parking Plan shall identify various strategies and commitments by the Applicant to prevent spillover parking impacts to nearby residential neighborhoods caused by future project tenants, employees and patrons. At minimum, the Parking Plan shall require the following:

    a. A provision in the Rules and Regulations of all residential and commercial leases prohibiting tenants and employees from parking on surrounding residential streets.

    b. A prohibition on tenants applying for neighborhood permit parking passes should they become available.

    c. A requirement to conduct a parking utilization study one year from issuance of the project's certificate of occupancy. The utilization study must demonstrate that on-site parking is adequate to meet project demand. If the study shows project parking demand exceeds the supply of off-street parking within the project, the Applicant shall propose measures to reduce spillover parking impacts, subject to review and approval by the Director of Community Development. Such parking reduction strategies may include, but are not limited to, (i) valet parking for commercial tenants, (ii) provision of transit passes and/or ride-share subsidies for tenants who contractually commit not to own or

lease a single occupancy vehicle and (iii) demonstration of best efforts by the applicant to lease off-site parking spaces for project tenants and commercial employees within the vicinity of the project site.

21. To address potential spillover parking impacts from the project into the surrounding residential neighborhoods, Applicant shall also prepare and submit a "Parking Violation Eviction Program" to the Community Development Director for review and approval prior to issuance of a certificate of occupancy. The Parking Violation Eviction Program shall layout a review and determination process that will result in the identification and eviction of any of the Applicant's residential and / or commercial tenants for violation of the parking regulations contained in the Applicant's lease Rules and Regulations, as outlined above. Furthermore, the Parking Violation Eviction Program shall contain provisions which allow the City to initiate a review, and to participate in the adjudication process.

DEVELOPMENT IMPACT FEES

22. Open Space. The Applicant shall enter into an agreement with the City, which must meet with the approval of the City Manager or his/her designee, and be acceptable in form and substance to the City Attorney, to provide Open Space pursuant to the requirements of the Land Use Element of the General Plan. The agreement shall require the Applicant to provide land dedicated for Open Space or an in-lieu fee to cover either the purchase of land for Open Space or the maintenance of the Open Space. The Open Space land dedication and/or in-lieu fee is determined based upon 3.0 acres of land per 1,000 residents (130.68 square feet per resident) potentially generated by the development. Required open space shall be 59,198 square feet of land, which was calculated by multiplying 130.68 square feet per resident by 453 residents. The number of residents was calculated based on a projected occupancy of 1.5 persons per bedroom. The in lieu fee shall be calculated by multiplying the required open space by the Fair Market Value of the land as determined by an appraisal. Alternatively, the Applicant also has the option of taking all actions necessary to assist the City with forming a Community Facilities District and approving a special tax in an amount necessary to fund the public open space. If the Community Facilities District is formed and such special tax is approved, then this parkland dedication or in-lieu fee requirement would be satisfied.

23. Public Art. In compliance with MMC Chapter 15.44 (Art in Public Places), the Applicant shall either pay the in-lieu fee for arts or provide public art on the site. Alternatively, the Applicant also has the option of taking all actions necessary to assist the City with forming a Community Facilities District and approving a special tax in an amount necessary to fund the public art. If the Community Facilities District is formed and such special tax is approved, then the requirement of compliance with MMC Chapter 15.44 or payment of the in lieu fee would be satisfied.

CONSTRUCTION SITE REQUIREMENTS

24. A Construction Impact Mitigation Plan shall be submitted to the Planning Division for review and approval and must be approved prior to the start of any demolition or construction. The Construction Impact Mitigation Plan shall include the following measures:
    a. No construction parking shall be permitted on Pomona Avenue (between Magnolia Avenue and Primrose Avenue); and
    b. The delivery and hauling route shall minimize the use of Pomona Avenue (between Magnolia Avenue and Primrose Avenue) during the demolition and construction phase of the project.

25. The Applicant shall provide temporary perimeter fencing with view obscuring material during construction. If graffiti is painted or marked in any way upon the premises or on an adjacent area under the control of the Applicant (including without limitation, any temporary perimeter construction fencing or the permanent wall), the graffiti shall be removed or painted over by Applicant within twenty-four hours, unless any law in effect imposes a shorter time period. Fencing may be removed prior to landscape installation with Planning Division approval.

26. One waterproof sign (36" x 48") in both English and Spanish noting construction hours and a phone number for contact shall be posted on each street frontage prior to grading or construction.

GENERAL REQUIREMENTS

27. In addition to Planning (Data Sheet No. 1) and Public Works (Data Sheet No. 2) conditions of approval the Applicant shall also comply with all requirements of the Monrovia Municipal Code, Building Division and the Fire Department that are directly applicable to the project.

28. The mitigation measures and standard conditions identified in the Environmental Impact Report (SCH No. 2019050016) and set forth in the Mitigation Monitoring and Reporting Program, and the construction mitigation plan, shall be incorporated herein as conditions of approval of the project.

29. Any violation of these conditions of approval or the Monrovia Municipal Code may be subject to the Administrative Fine Ordinance, other available remedies and/or revocation or modification of this permit at the discretion of the City Attorney and City Prosecutor.

30. The Applicant shall submit the required filing fee for submittal of the Notice of Determination to the Los Angeles County Clerk and for submittal of the Mitigated Negative Declaration to the State Department of Fish and Wildlife one day after final approval of the project. The applicant may request that the City file a fee exemption request with the State Department of Fish and Wildlife, provided, however, the Applicant deposits with the City the required filing fee one day after final approval of

the project. In the event the State Department of Fish and Wildlife grants the exemption, the unused portion of the filing fee shall be refunded to the Applicant.

31. The Applicant shall, within 30 days after approval by the City Council, submit to the Community Development Department his/her written consent to all of the conditions of approval contained in Data Sheet Numbers 1 and 2. Vesting Tentative Tract Map No. 82517 and Conditional Use Permit CUP2019-0016 shall be void and of no force or effect unless such written consents are submitted to the City within the 30 day period.

32. The Final Tract Map for the proposed lot consolidation shown on this Vesting Tentative Tract Map No. 82517 must satisfy the requirements of Chapter 16 of the Monrovia Municipal Code and be filed with and deemed a complete filing by the City Engineer. The development to which the Conditional Use Permit applies must begin, within twenty-four months after the Vesting Tentative Tract Map was conditionally approved, or Vesting TTM 82517 and CUP2019-00016 will expire without further action by the City. The map expiration date may be extended as allowed by the Monrovia Municipal Code.

33. All of the above conditions shall be complied with prior to issuance of the Certificate of Occupancy, unless an earlier compliance period is specified as part of a condition.

34. Indemnification. As a condition of approval, the Applicant agrees to defend, indemnify, protect and hold harmless City, its officers, officials, employees, agents and volunteers from and against any and all claims, actions, or proceedings against the City, its officers, officials, employees, agents and/or volunteers to attack, set aside, void or annul, an approval of the City, Planning Commission or City Council concerning this permit and the project and from any claim or lawsuit against the City that includes an allegation of inverse condemnation relating to or arising from the approval of Vesting Tentative Tract Map No. 82517 and CUP2019-0016 or development of this Project. Such indemnification shall include damages, judgments, settlements, penalties, fines, defensive costs or expenses (including, but not limited to, interest, attorneys' fees and expert witness fees), or liability of any kind related to or arising from such claim, action, or proceeding. The City shall promptly notify the Applicant of any claim, action, or proceeding. Nothing contained herein shall prohibit City from participating in a defense of any claim, action or proceeding in accordance with the Subdivision Map Act and from choosing counsel to defend the City.

PUBLIC SAFETY CONDITIONS

35. The final parking garage design, and related pedestrian walkways that connect to the main plaza areas, shall be reviewed and approved by the Chief of Police prior to the issuance of building permits. The final design shall incorporate safety measures and design details to deter loitering within the parking garage stairwells.

36. Security Management Plan. Prior to the issuance of a certificate of occupancy, the Applicant shall submit a Site Security Management Plan for approval by the Chief of

Police, which shall incorporate features such as lighting, gating and recorded video surveillance within all public open space areas, including the parking garage.

FIRE DEPARTMENT CONDITIONS

37. Fire hydrants shall be provided along all public roads. Hydrants shall be within 120 feet of the structure and spaced at no more than 200 feet. The minimum fire flow shall be 2,000 gpm at 20 psi. Call out locations of all hydrants on Fire Access Plan.

38. A Class I standpipe system shall be provided in all stairwells on all levels including the roof as set forth by Building Code and Fire Code 905.

39. An automatic fire sprinkler system and fire alarm as set forth by Fire Code 903 and 907.

40. Dwelling units and common areas shall be provided with visible alarm notification appliances.

41. Smoke alarms shall be provided in each room for sleeping purposes and at a point centrally located in the corridor or area giving access to each separate sleeping area.

42. Carbon monoxide alarms shall be provided either within all sleeping units or else the dwelling units shall be provided with a carbon monoxide alarm system that protects all common areas per Fire Code 915.

43. A minimum of one rated stairwell shall extend to the roof for each building. Provide stairways to roof for west and east buildings.

44. For each building, at least one rated exit stairwell shall be accessible from the exterior on the ground level. Knox boxes shall be provided adjacent to all exit stairwell exterior doors at approved locations. A Knox box shall also be provided adjacent to the main entrance of all buildings at an approved location.

45. All buildings shall have a minimum of one elevator capable of accommodating general stretcher dimensions.

46. An approved number or address shall be provided on all new buildings in such a position as to be plainly visible and legible from the street or road fronting the property. Numbers shall be a minimum of 6-inch high by ½-inch stroke and be a contrasting background.

47. Portable fire extinguishers shall be installed per the CFC.

48. An Emergency Responder Radio coverage system shall be provided for all buildings.

49. A minimum of one standpipe system for use during construction shall be provided. Such standpipe shall be installed when the progress of construction is not more than 40 feet in height above the lowest level of fire department access.

Data Sheet 2 Public Works Conditions

Vesting Tentative Tract Map 82517 and Conditional Use Permit CUP2019-0016

Arroyo at Monrovia Station, Southeast Corner of S. Magnolia and W. Evergreen Ave., 238-202 W. Evergreen Ave.

Development shall be subject to the conditions of approval listed below, and if so indicated, the condition(s) shall be satisfied before the Final Map is filed in the Department of Public Services (Public Works Division) for review and approval. The term "Applicant" shall include, without limitation, the applicant, the property developer, the property owner, and all subsequent owners of each parcel.

Engineering Conditions

1) Prior to any development, the Applicant shall provide the following:

   a) Final Tract Map for the merger of existing parcels

      i) The Applicant shall submit a Final Tract Map as required by the City's Municipal Code, Chapter 16 – Subdivisions

      ii) Prior to filing the Final Map with the Department of Public Services (Division of Public Works), the Applicant shall provide a current title report (Tract Map Guarantee) for the project site located in the City of Monrovia. The title report and guarantee is required and such documents shall show all fee interest holders; all interest holders whose interest could ripen into a fee; all trust deeds, together with the name of the trustee; and all easement holders and supporting documents accompanying the title report.

      iii) All easements and dedications shown on the approved tentative parcel map and those not shown but to be recorded, such as: Covenants, Conditions & Restrictions (CC&Rs) must be recorded and accounted for at the time of the Final Map approval.

      iv) Applicant shall dedicate additional rights of way if determined in the review of the improvement plans they are needed.

      v) A Final Map prepared by or under the direction of a Licensed Land Surveyor or Licensed Civil Engineer legally authorized to practice land surveying in the State of California must be filed in the Department of Public Services (Public Works Division) for review and approval and processed through the City Engineer prior to being filed with the Los Angeles County Recorder.

      vi) Prior to filing the Final Map with the Department of Public Services (Public Works Division) for review and approval, the Applicant's surveyor or engineer shall set durable monuments to the satisfaction of the City Engineer in conformance with Section 66495 of Subdivision Map Act.

      vii) Improvement plans and an engineer's estimate of the improvements, using the departments approved unit rates, along with the necessary letters of credit, cash and/or bonds to secure the construction of all public improvements shall be submitted and approved by the City Engineer prior to the recordation of the Final Map. No security or bond will be released in partial amounts. When the project has been completed in full, the final punch list is complete, and the notice of completion filed

with the appeal time frames expired, then and only then, will the bonds will be release with a formal request to the City Engineer, and processed though the City Clerk Office.

viii) Prior to filing the Final Map for recordation the developer shall execute a subdivision agreement with the City of Monrovia and shall adhere to the requirements of this subdivision agreement including a 10% warranty bond for a period of 3 years from the date of completion and acceptance.

ix) Prior to filing the Final Map with the Department of Public Services (Public Works Division) for review and approval, the Applicant shall execute and record a covenant and agreement that shall bind the applicant and/or any subsequent property owner to provide street improvements adjacent to the proposed land division to the satisfaction of the City Engineer. The street improvements are to be constructed prior to Certificate of Occupancy (or any Temporary Certificate of Occupancy) and shall include, but are not limited to, driveway modifications, new driveways, removal of abandoned driveways, sidewalk improvements, ADA improvements, replacement of damaged curb and gutter, and street resurfacing and/or slurry seal of street pavement within the boundary of the existing Right-of-Way along the frontage of this project property, or any damage due to construction of this project property as directed by the Engineer.

b) Site Plan showing: survey monuments, boundaries, easements and right-of-ways

i) Submit existing site plan, topographic map of the project site, grading, drainage and utility plan to Public Works Division for review and approval. The plans shall indicate existing and proposed structures, miscellaneous facilities if applicable and all utilities applicable within the project site. The plans shall be prepared on a 24" x 36" sheets with City standard title block stamped and signed by a Registered Professional Civil Engineer in the State of California. The submittal of the plans shall include: a hydrology report, a geotechnical report, required design calculations, a cost estimate, a plan check fee, and an inspection fee. The final submittal for final approval shall include a mylar of the approved grading, drainage and utility plans. The applicant shall use the assigned drawing number obtained from Public Works for this project. Partial or incomplete submittals will not be accepted.

ii) All site plans, grading plans, drainage plans and street improvement plans shall be coordinated for consistency prior to the issuance of any permits.

c) Water Improvements

i) The Applicant shall install multiple water services to Monrovia's water system to serve the entire development for domestic and fire usage within the City of Monrovia to the specifications of the City Engineer. Applicant shall provide the needed water demand information for the proposed development for the City Water Consultant to complete a feasibility study for this development and then prepare plans for the mitigation measures as recommended by the feasibility study; or pay fair share "fee-in-lieu-of" the needed improvements.

ii) The applicant will be responsible for all costs to connect to the City water system and installation of all new fire hydrants off the City system. The developer shall prepare engineered plans, approved by the City Engineer, and pay for all construction, equipment, for the abandonment of existing water services at the main lines, and for the construction, testing and inspection for the connections, hydrants and services.

iii) The project water usage and standby charges will be per the newly adopted rate schedule: Monrovia ordinance 2018-01 (See attached).

d) Waste Water Improvements

i) The Applicant shall install sanitary sewers to Monrovia's sewer system to serve the entire development within the City of Monrovia to the specifications of the City Engineer. Applicant shall provide the needed waste water flow information for the proposed development for the City Waste Water Consultant to complete a feasibility study for this development and then prepare plans for the mitigation measures as recommended by the feasibility study.

ii) The applicant shall provide evidence of payment and approval for connection of units to LA County Waste Water System.

iii) All sewer/waste water laterals extending to the mainline in the public right of way to be the maintenance responsibility of the project. The prevention of root intrusion at connection shall be the projects responsibility.

iv) The applicant will be responsible for all costs to connect to the City waste water system. The developer shall prepare engineered plans, approved by the City Engineer, and pay for all construction, equipment, for the abandonment of existing sewer laterals at main lines, and for the construction, testing and inspection for the connections.

v) The sewer is to be constructed through new or existing lateral(s) (sized per the feasibility study and engineered calculations, minimum 6 inches) with clean-out(s) at property line per City standard drawing S-215 and S-225. Cap off all abandoned laterals at the connection point from the main line to the satisfaction of the City Engineer.

vi) A CCTV video of the existing/proposed sewer lateral connecting to the City mainline is required for the project; a copy of the video shall be submitted to Public Works. Prior to CCTV please notify the Department of Public Services (Public Works Division) requesting to have the Public Works Inspector on-site to witness the inspection

e) Geotechnical Investigation and Report

i) Prior to issuance of a grading permit or encroachment permit, Applicant shall provide geotechnical report that addresses earthwork and foundation recommendations, including but not limited to, earthwork, retaining walls and foundation construction adjacent to the existing structures located on the property, pavement structural sections and recommendations. The geotechnical report shall include data regarding the nature, distribution and strengths of existing soils, conclusions and recommendations for grading procedures, design criteria for and identified corrective measures, and opinions and recommendations regarding existing conditions and proposed grading. The report shall also include subsurface geology of the site, degree of seismic hazard if any, conclusions and recommendations regarding the effect of geologic conditions on the proposed development, opinions and recommended design criteria to mitigate any identified geologic hazards including locations of surface and subsurface fault lines in the area as applicable. Provide off-site and on-site pavement structural section to be address with recommendation

based on Traffic indexes and R values, per Caltrans methods. Provide percolation/infiltration testing for Low Impact Design (LID) standards

f) Hydrology Report and Hydraulic Calculations

Applicant shall provide hydrology study and hydraulic calculations per L.A. County standards, for mitigation of off-site and on-site flows tributary to these structures and conveyances. Applicant shall obtain permits from the county for all connections or modifications to their system as needed. The outfall of this project after meeting LID standards shall either have direct connection to the County System or discharge to City streets or alleys satisfactory to the City Engineer. All connections to the County System shall be permitted by the county and evidence of this work permit shall be provided to the City of Monrovia.

g) Grading Plan

i) Grading plan shall conform to MMC Chapter 15.28 and be prepared on a 24" x 36" sheets with City title block. Required improvements may be shown on the grading plan along with site drainage.

ii) Applicant shall provide an analysis and construct required infiltration and/or treatment of storm water from impervious surfaces prior to reaching direct connections leading to the main storm drainage system.

iii) All required mitigation measures identified in the soils engineer's and geologist's reports shall be incorporated into the grading/drainage plans and are made a part thereof.

iv) The lot shall mitigate its own drainage per LA County standards and thereby not impacting off-site drainage structures.

v) Grading plan to provide a scaled detail section at each property line where the project is in cut or fill greater than 0.5 feet. Provide in relation to the adjacent property existing conditions: set back dimensions, retaining wall dimensions and encroachments, ground and finish surface elevations, cut and fill slopes including code setbacks, and direction of flow indicators.

h) Utility Coordination Plan

i) Applicant shall submit a utility plan showing all proposed utility cuts for services such as Water, Sewer, Fire Department Stand Pipe, Gas, Edison, Telephone, Cable TV, etc. The Utility plan shall be submitted and approved prior to issuance of grading permits. Private utility plans including sewer, water, gas, including all abandoned, or to be removed facilities, etc. for the proposed development shall be submitted for review and approval by the City Engineer. Pay all applicable fees for Engineering Division services for issuance of Public Works permits.

ii) Applicant shall underground all overhead utilities fronting this project site. Specifically on the east side of Magnolia Ave., the south side of Evergreen Ave., and the north side of Pomona Ave, all along the property frontages. And cooperate with adjacent developments doing the same.

iii) A separate Composite Utility Plan for ***water*** and ***sewer*** connections and abandonments shall be prepared using the city's template notes and details. Obtain

template file from Public Works. This plan shall be approved by Public Works for encroachment permit issuance for water and sewer installations and abandonments to be done by the developer with approved contractors.

i) Off-site Street Improvement Plans

i) The project development shall remove and replace any curb, gutter, sidewalk, driveway approach, or street pavement found by the City Engineer to be broken, uplifted, damaged or not meeting current ADA standards. Construct improvements as required, per City standard drawings to match existing improvements on adjacent properties. All ADA requirements shall be satisfied by the Applicant including the construction of ADA on street parking stalls as shown on the tentative map. All planters installed within the frontage shall maintain a clear distance of 48 inches behind the proposed planters and within the current city right of way. These conditions apply on public right-of-way along property frontage.

ii) All work such as but not limited to demolition, construction and improvements within the public right-of-way shall be subject to review and approval of the Public Works Division, and will require construction and encroachment permit from the City's Public Works Division, prior to start of any construction. All work within the public right-of-way shall be in accordance with applicable standards of the City of Monrovia, Standard Specifications for Public Works Construction ("Green Book", latest edition) and the Manual on Uniform Traffic Control Devices (MUTCD, latest edition), and further that construction equipment ingress and egress be controlled by a plan approved by the City Engineer.

iii) Applicant shall obtain applicable permits for all work to be done within the public right-of-way from the Public Works Division and shall pay all applicable fees for Engineering Division services such as plan check fee and construction inspection fee as applicable.

iv) The City requires the restoration of the existing pavement after utility installation. Restoration is required from the outer limits of the area covering and encompassing all the utility cuts as shown on the plans, but actual limits shall be determined out in the field by City Engineer. Restoration of asphalt pavement may be up to 2-inch pavement grind and 2-inch asphalt overlay over the entire frontage roads. Restoration of all street striping to be per City Engineers approval.

v) Pomona Ave., Magnolia Ave., and Primrose Ave. are under the City of Monrovia's no-cut moratorium and repairs to these streets will be per the moratorium policies.

j) Off-site landscaping improvements to be maintained by the Applicant.

i) All off-site landscaping improvements along the frontage of this project are to be the responsibility of the project for maintenance and upkeep. The watering of this landscaping in the right of way is to be supplied by the projects water service for irrigation.

k) Traffic Engineering Conditions

i) Prepare a Traffic Impact Analysis (TIA) for the proposed development. Scope of TIA as approved by the City Consulting Traffic Engineer.

ii) Project development to participate in the Station Square/Transit Village area traffic

study, being performed by City Consulting Traffic Engineer. Project to participate in their fair share of the cost of the study, and the recommended specific impact improvement as identified for this project for the mitigation of the impacts. If an overall development fee is adopted for this area this project agrees to participate in these fees as it relates to this development.

iii) City is currently studying and considering turning Evergreen Avenue into a two-way street from Magnolia Avenue to Primrose Avenue, with or without the installation of a traffic signal at Magnolia and Evergreen. If the city pursues this installation/modification, the project agrees to cooperate with the city and not protest this installation/modification.

iv) Prepare and submit for approval: traffic control plans and staging plans for all off-site improvements and utility connections. Applicant to maintain all traffic control devices for the entire time while working within the City right of way.

l) Environmental Conditions

i) Based upon the requirements of the City's Storm Water Management Ordinance, MMC 12.36 and the Los Angeles County Municipal Storm Water National Pollutant Discharge Elimination System (MS4 NPDES) Permit issued by California Regional Water Quality Control Board, Los Angeles Region, the following shall be incorporated into the project application:

The applicant shall be responsible for the following when applicable in the code:

ii) Minimize impacts from storm water runoff on the biological integrity of natural drainage systems and water bodies in accordance with requirements under the California Environmental Quality Act (California Public Resources Code Section 21100), Section 13369 of the California Water Code, Sections 319, 402(p), and 404 of the Clean Water Act, Section 6217(g) of the Coastal Zone Act Reauthorization Amendments, Section 7 of the Environmental Protection Act, and local governmental ordinances.

m) Demolition of Existing Structures

i) The project demolition activities shall comply with the City's Construction and Demolition Recycling Program (C&D Recycling Program) by filing an application and submitting a deposit to Public Works Environmental Services prior to issuance of permits. Building, demolition, and grading permits will not be issued until the applicant provides the City with the required forms and the waste management plan has been reviewed and approved by the Environmental Services. If the Applicant chooses not to participate in the C&D Recycling Program, then the hauler must be identified on the demolition, building and grading plans.

ii) Building, demolition, and grading permits will not be issued until the applicant provides copy of Air Quality Management District (AQMD) permit.

n) As-built Plans

i) Applicant shall provide to the City of Monrovia revised plans of the original size, on mylar, showing all as-built conditions for the off-site and on-site improvements prior to the release of bonds held for the completion of the map.

CITY COUNCIL AGENDA REPORT

DEPARTMENT: Administrative Services

MEETING DATE: January 16, 2018

PREPARED BY: Oliver Chi, City Manager /
Buffy Bullis, Administrative Services Director

AGENDA LOCATION: PH-2

TITLE: Proposed Adjustments for Water Fees, Introduction and First Reading of Ordinance No. 2018-01, and Adoption of Resolution No. 2018-06

OBJECTIVE: To conduct a public hearing regarding the proposed water fee adjustments, and to consider proceeding with the adoption of the proposed water fees and water fee discounts in the absence of a protest by a majority of parcels of property subject to the fee adjustments

BACKGROUND: On June 6, 2017, the City Council adopted the Fiscal Year 2017/19 Budget, appropriating funds needed to manage operating costs and capital improvement projects outlined in the City's strategic goals. As part of the budgetary review process, staff reviewed the annual operating costs in the Water Fund with City Council and discussed the need to address new water supply costs that are being passed down to the City by the Main San Gabriel Basin (MSGB) Watermaster (the Watermaster) and the Upper San Gabriel Valley Municipal Water District (USGVMWD).

At the time, the City Council provided direction to staff to further analyze these new costs and their impact on the fiscal sustainability of the Water Fund, and to return to the City Council with the results of the analysis. Staff has performed the analysis and is proposing adjustments to existing water rates over the next five-year period.

By way of background, the MSGB Watermaster is an adjudicated agency tasked with managing groundwater resources and administering adjudicated water rights within the watershed and groundwater basin known as the Main San Gabriel Groundwater Basin in Los Angeles County, California. The USGVMWD works closely with the Watermaster and is charged with purchasing and reselling water to local agencies within the MSGB.

There are five adjudicated groundwater basins within Los Angeles County that were established by court order, with each basin having different hydrological characteristics. The City is located within the MSGB, which covers approximately 167 square miles and serves as home to 1.275 million people. In addition to the City, there are approximately 30 retail water producers that rely on local water supplies in the MSGB. The City pumps its water from the MSGB and provides water to approximately 9,500 customers on a daily basis.

The MSGB is currently experiencing unprecedented drought conditions. For a nearly six year period between 2011 – 2016/17, the MSGB sustained the worst ever drought conditions on record. Even though California received record rainfall last year, and although Governor Brown declared the State of California drought free on April 4, 2017, the situation in the MSGB is still dire, as the condition of the aquifer means that our region is still in a serious drought condition.

Historically, the MSGB's water management plan relied on rain to recharge our underground aquifer, however, this past year, in response to extended drought conditions, the Watermaster developed a Drought Management Plan (the Plan), which now includes a directive to purchase imported water to help replenish the MSGB. A copy of the Plan is on file with the City Clerk and available on the City's website.

In addition to developing the Drought Management Plan, the Watermaster also took formal action on May 3, 2017, to implement new directives that create two significant new costs for water production, as follows:

- *Implement a Water Production Development Assessment (RDA).* This assessment is intended to raise funds to purchase and import water into the MSGB. This is a direct assessment on every acre-foot of water production. The money raised by the Water RDA will be used by the Watermaster to purchase imported water. Fees are as follows:

    - FY 2017-18: $115 / acre-foot
    - FY 2018-19: $150 / acre-foot
    - FY 2019-20: $185 / acre foot
    - FY 2020-21: $220 / acre-foot
    - FY 2021-22: $220 / acre-foot

- *Establish a reduction in the MSGB Operating Safe Yield (OSY).* The OSY dictates how much water each agency can produce, annually, without having to pay an additional replacement water cost. The City is allowed to produce an amount of water equal to 3.095% of the annual OSY without having to pay any overproduction charges. If the City pumps more than it is allowed by right, the City has to pay an overproduction replacement cost for every acre foot that exceeds the base allocation. Fees are as follows:

    - FY 2017-18: $798 / acre-foot
    - FY 2018-19: $841 / acre-foot
    - FY 2019-20: $886 / acre foot
    - FY 2020-21: $938 / acre-foot
    - FY 2021-22: $979 / acre-foot

Both of these additional assessments are intended to pay for the cost of replacement water imported into the MSGB. Because these pass-through assessments are not currently incorporated into the City's existing water rates, it is necessary to implement fee adjustments to incorporate these costs to ensure the fiscal sustainability of the Water Fund. The table below includes the estimated increase in costs by fiscal year:

Fiscal Year	Watermaster/ Upper District Costs	Year-Over-Year Percent Increase
FY 2017-18	$1.73M	---
FY 2018-19	$2.39M	38.2%
FY 2019-20	$2.85M	19.2%
FY 2020-21	$3.34M	17.2%
FY 2021-22	$3.59M	7.5%

Prior to implementing any property-related fee adjustments, the City is required to follow Proposition 218 majority protest proceedings. By way of background, in November 1996, California voters approved Proposition 218, which requires specific procedures to be followed with regard to "property-related" fee increases. Through Proposition 218, the California Constitution requires local governments to give mailed notice of any property-related proposed fee changes at least 45 days before holding a public hearing where the City Council will adopt or reject the changes. Furthermore, in July 2006, the

California Supreme Court's *Bighorn-Desert View Water Agency v. Verjil* decision clarified that water, wastewater (sewer), and solid waste rate increases fall under property-related fees, subject to the requirements of Article XIIID, Section 6 of the California Constitution, including Proposition 218 proceeding requirements.

On November 7, 2017, the City Council authorized staff to initiate the Proposition 218 process by issuing a public notice for a Public Hearing to be held on January 16, 2018, to consider water rate adjustments.

ANALYSIS: Following City Council's authorization to proceed with the Proposition 218 process, notices were mailed to all parcels in the City of Monrovia, via bulk mailing, in addition to being mailed to specific property owners with mailing addresses outside of Monrovia. These notices contained information explaining why residents and owners were receiving the notice, as well as the reason for the proposed rate adjustment. In addition, the notices also included additional background information on the City's water system operations and the new costs associated with importing water into the City's system. Each notice contained a Protest Mailer, with instructions on how customers could sign, return, and file their protest to the proposed rate adjustments. The notices also included instructions on how customers could obtain additional information, including the date, time, and location of five community outreach meetings.

In accordance with Proposition 218 proceeding requirements, the notices were delivered to the Post Office on November 21, 2017, and reached customers the following week. Following the issuance of the Proposition 218 notices, the City coordinated five separate community outreach meetings to review and discuss the proposed water rate adjustments with customers. Meetings were held in November, December, and January. In addition, an informational insert (in Spanish and English) was included in the December 2017 utility bills.

Below is a timeline of the steps included as part of the Proposition 218 process:

Step	Scheduled Date
Adoption of a Resolution to Schedule the Public Hearing	November 7, 2017
Notice of Public Hearing issued a minimum of 45 days in advance of the hearing date	Deadline: No later than Friday, December 1, 2017 (Notices were mailed on November 21, 2017)
Community Outreach Meetings	November 30, 2017 December 13, 2017 December 16, 2017 December 18, 2017 January 10, 2018
Rate increase flyers included in December 2017 utility bills	December-January 2018
Public Hearing to Adopt/Reject Proposed Rate Adjustment	January 16, 2018
Possible Adoption/Confirmation by the City Council	February 6, 2018

Rate Development

To develop the necessary rate adjustments, the City utilized the services of a rate consultant, NBS, to assist in analyzing and developing the rates. Covering the cost of the new pass-through import assessments imposed by the Watermaster, while also maintaining the fiscal health of the Water Fund, was the primary goal in developing the proposed rate adjustments.

New Development

In addition to the above considerations, as part of the rate review, staff identified water issues related to new development. This review was centered on the fact that there are approximately 1,700 proposed multi-family units in the development pipeline. To address the impact that this increase in population will have on the City's overall water usage, staff spent significant time analyzing two important factors, which include:

1. The actual water use impact the new development will have on Monrovia

2. The cost structure of water for new development in the City

Based on the assessment, it is expected that each new multi-family unit will add approximately 1.5 people to Monrovia. Given that the City is projecting around 1,700 new units, if every proposed project is constructed, the City's population would be expected to increase by around 2,550 people.

Based on water usage rates in the City, on a per-capita basis, multi-family residents use approximately 65 gallons of water per day. Given that factor, 2,550 new people living in multi-family environments will add approximately 60.5 million gallons of water use in Monrovia each year. When compared with our actual water usage in Fiscal Year 2016/17 (approximately 2.16 billion gallons of water), 60.5 million gallons equates to only a 2.8% total increase in water use. Given that factor, a 2.8% increase in water use in the City, when compared against the water being used throughout the MSGB aquifer, is a statistically insignificant increase in overall water consumption.

Additionally, for comparative purposes, during the past decade, the City had its highest water use year in Fiscal Year 2006/07, when usage was around 2.8 billion gallons of water. The lowest water use year during the past decade was in Fiscal Year 2015/16, when 2.0 billion gallons of water was used. This represents a 28% variance in water usage levels (or around 800 million gallons), in an environment where our population was relatively static. This particular data set further illustrates the relative scale to which a 2.8% increase (or 60.5 million gallons of water) would have on Monrovia. A chart outlining water usage levels during the past decade has been included below for additional consideration.

City of Monrovia
2006-17 Historical Water Production Levels

Fiscal Year	Total Water Production (Acre Feet)	Total Water Production (Gallons)	Percent Increase / Decrease	Population	Per Capita Usage (Annual)	Per Capita Usage (Daily)
2006-07	8,469.42	2,759,768,976	7.40%	37,286	74,016.23	202.78
2007-08	7,978.15	2,599,688,156	-5.80%	37,060	70,148.09	192.19
2008-09	7,698.66	2,508,616,060	-3.50%	37,337	67,188.47	184.08
2009-10	6,981.93	2,275,068,872	-9.30%	37,523	60,631.32	166.11
2010-11	6,854.85	2,233,659,727	-1.80%	36,603	61,023.95	167.19
2011-12	7,436.75	2,423,272,424	8.50%	36,785	65,876.65	180.48
2012-13	7,727.60	2,518,046,188	3.90%	36,922	68,199.07	186.85
2013-14	7,973.01	2,598,013,282	3.20%	37,073	70,078.31	192.00
2014-15	6,874.82	2,240,166,972	-13.80%	37,161	60,282.74	165.16
2015-16	6,100.85	1,987,968,073	-11.30%	37,411	53,138.60	145.59
2016-17	6,500.00	2,118,031,500	6.50%	38,514	54,993.81	150.67

An additional consideration that staff assessed as part of the overall water rate analysis was the availability of imported water. Currently, given the rain and snow that the State received during the past

year, water is available for importation into our region to serve our current and any future residents / businesses in the City.

However, given that the cost of importing water is more expensive than producing the water locally from groundwater sources, staff has developed an updated water cost structure for new development in Monrovia. To that end, our proposed water rate adjustments seek to institute a cost structure whereby any project which adds five or more units to the City will be assessed a tiered water rate which reflects the actual cost of importing water into Monrovia. This will ensure that existing residents / businesses are not forced to bear the added cost of importing additional water into the City to serve a new population base.

Rate Increases

A listing of new rates being proposed is presented in the attached Ordinance. By adjusting rates to the amounts proposed in Ordinance No. 2018-01, the City will ensure that the Water Fund remains in a strong fiscal position.

Provided in the table below is a water rate review summary for a typical single-family residence with a 5/8 inch or 3/4 inch size meter. Please note that nearly half of the City's customer base is comprised of single-family residential customers. Based on the proposed rate increase, the typical single-family residential water customer (who uses 15 units of water per month) will see a monthly increase in their water bill of $16.87 in Calendar Year 2018 (effective March 8, 2018).

It is important to note that the water rate structure takes into account usage related costs. To that end, the proposed rate will result in lower costs for those that use less water.

Water Rate Review
Single-Family Residential Example
Monthly Water Cost Comparison
New Rates Would Be Effective March 8, 2018

CURRENT WATER COST ASSESSMENT

	10 Units (7,480 Gallons)	15 Units (11,220 Gallons)	20 Units (14,960 Gallons)
Meter Charge	$ 15.34	$ 15.34	$ 15.34
Cost Per Unit ($1.70 / Unit)	$ 17.00	$ 25.50	$ 34.00
TOTAL ESTIMATED COST	**$ 32.34**	**$ 40.84**	**$ 49.34**

PROPOSED WATER COST ASSESSMENT

	10 Units (7,480 Gallons)	15 Units (11,220 Gallons)	20 Units (14,960 Gallons)
Meter Charge	$ 30.56	$ 30.56	$ 30.56
Cost Per Unit ($1.81 / Unit)	$ 18.10	$ 27.15	$ 36.20
TOTAL ESTIMATED COST	**$ 48.66**	**$ 57.71**	**$ 66.76**

Also, as staff evaluated the water rate adjustment, surveys of neighboring communities were performed to compare the City's overall monthly water costs to other agencies. A total of nineteen other agencies were surveyed, with key findings noted below:

- Currently, Monrovia has the third lowest fee for water in the region, with an average residential cost of $40.84 / month.

- If the proposed water rate adjustment were to be approved, Monrovia would have the fifth lowest fee for water in the region, with an average residential customer's bill being approximately $57.71 / month.

Please note that this comparison involves the inclusion of the new Watermaster costs for the City, while comparison agencies have not incorporated these cost increases yet. Also, please note that Arcadia, which currently has the lowest cost for water based on surveyed agencies, as detailed in the table below, instituted a major water rate increase last year, with several large adjustments planned during the next four years.

Municipal Water Rate Comparison for Neighboring Communities
Single-Family Residential Water Rate Comparison
15 Units of Water Use / Month

	Agency	Monthly Cost
1	Los Angeles DWP	$ 101.70
2	Pasadena	$ 98.99
3	South Pasadena	$ 86.86
4	Duarte (Cal American)	$ 83.74
5	Sierra Madre	$ 80.13
6	Glendora	$ 74.14
7	Covina	$ 73.89
8	Golden State (Rosemead, Temple City & El Monte)	$ 73.17
9	La Verne	$ 71.45
10	San Gabriel Valley Water Co.	$ 71.02
11	Glendale	$ 68.43
12	Walnut Valley Water Company	$ 65.24
13	Monterey Park	$ 58.54
14	Burbank	$ 58.50
15	Monrovia (Proposed)	$ 57.71
16	Azusa	$ 47.74
17	Downey	$ 43.56
18	Monrovia (Current)	$ 40.84
19	Pomona	$ 39.13
20	Arcadia	$ 33.27

Senior / Economic Hardship Discount
It is also important to note that a senior discount and economic hardship discount will continue to be offered to residents who meet the eligibility criteria and for whom the proposed fee adjustments would present an undue burden. Through the discount program, a 25% discount is available to economically disadvantaged and veteran account holders and a 5% discount is available to seniors who are not economically disadvantaged.

In summary, Ordinance No. 2018-01 and Resolution No. 2018-06 are attached to this agenda report. Ordinance No. 2018-01 presents the schedule of water service charges that is being introduced at this public hearing and would be formally adopted on February 6, 2018. Resolution No. 2018-06 calls for the adoption of a discounted rate schedule for the newly adjusted water service charges.

ENVIRONMENTAL IMPACT: There is no environmental impact associated with approving resolutions that call for a Proposition 218 public hearing to consider water rate adjustments.

FISCAL IMPACT: If the Proposition 218 majority protest process is concluded without a majority protest and the water fee adjustments are adopted, as presented, the new water rate structure will help to ensure the fiscal sustainability of the Water Fund. During Fiscal Year 2017-18, it is expected that the increase will generate revenues totaling approximately $1.5 million. If approved, the Water Fund revenues and expenditures will be adjusted accordingly.

OPTIONS: Staff has developed the following three options for City Council consideration:

1. If a protest is not made by the majority of parcels of property subject to the fee adjustments, proceed with the introduction of Ordinance No. 2018-01, waive further reading, and adopt the Ordinance on February 6, 2018 (with the new water fees taking effect on March 8, 2018), and approve Resolution No. 2018-06, adopting a discounted rate schedule for the newly adjusted rates.

2. If a protest is not made by the majority of parcels of property subject to the fee adjustments, reject the proposed water fee adjustments, and provide Staff with additional direction.

3. If a protest is made by the majority of parcels of property subject to the fee adjustments, the City should stop further proceedings of the proposed water fee adjustments, in compliance with Proposition 218, and direct staff to seek alternative means of funding the additional costs associated with importing water into the City's water supply.

RECOMMENDATION: In the absence of a majority protest, staff recommends that the City Council select Option 1 to proceed with the introduction of Ordinance No. 2018-01 and adopt Resolution No. 2018-06.

COUNCIL ACTION REQUIRED: If the City Council concurs, the appropriate action would be a motion to introduce, waive further reading, and read by title only Ordinance No. 2018-01, and adopt Resolution No. 2018-06.

ORDINANCE NO. 2018-01

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MONROVIA, CALIFORNIA, ADOPTING A SCHEDULE OF WATER SERVICE CHARGES

WHEREAS, the City Council is authorized pursuant to the California Health and Safety Code Section 5471 to prescribe, revise and collect rates and charges for services and facilities furnished by the City in connection with the City's water service system.

WHEREAS, the City of Monrovia has conducted an analysis of its services, the costs reasonably borne of provided those services, the beneficiaries of those services, and the revenues produced by those paying fees and charges for special services; and

WHEREAS, the City has previously developed and instituted Water Service Charges to finance the water utilities furnished by the City, including the costs of water acquisition, water system operations, capital projects, and maintenance; and

WHEREAS, the City has identified additional costs associated with operating the City's water system, as detailed in Resolution No. 2017-36 adopted on November 7, 2017, incorporated herein by reference; and

WHEREAS, Chapter 3.46 (Fee and Service Charge Revenue/Cost Comparison System) of the Monrovia Municipal Code establishes a policy of recovering the full costs reasonably borne of providing special services of a voluntary and limited nature, such that general taxes are not diverted from general services of a broad nature and thereby utilized to subsidize unfairly and inequitably such special services; and

WHEREAS, the City Council adopted Ordinance No. 2000-09 on the 25th day of April, 2000, establishing its policy as to the recovery of costs and more particularly the percentage of costs reasonably borne to be recovered from users of City services and directing staff as to the methodology for implementing said Ordinance; and

WHEREAS, a properly noticed public hearing to receive public comments and protests and to consider the proposed Schedule of Water Service Charges was held on January 16, 2018.

THE CITY COUNCIL OF THE CITY OF MONROVIA, CALIFORNIA DOES ORDAIN AS FOLLOWS:

SECTION 1. The City Council hereby adopts the water service charges set forth in the schedules below.

Schedule of Water Service Charges

FIXED RATES [STANDBY CHARGE]						
Single-Family Residential/Multi-Family Residential						
Meter Size	**Current Rate**	**Effective 3/8/2018**	**Effective 01/01/2019**	**Effective 01/01/2020**	**Effective 01/01/2021**	**Effective 01/01/2022**
5/8 inch	$15.34	$30.56	$34.53	$37.12	$39.91	$41.10
3/4 inch	$15.34	$30.56	$34.53	$37.12	$39.91	$41.10
1 inch	$19.43	$38.72	$43.75	$47.04	$50.56	$52.08
1.5 inch	$30.65	$61.06	$69.00	$74.17	$79.74	$82.13
2 inch	$38.78	$77.28	$87.33	$93.88	$100.92	$103.94
3 inch	$59.26	$118.04	$133.39	$143.39	$154.14	$158.77
4 inch	$77.58	$154.54	$174.63	$187.73	$201.81	$207.86
6 inch	$129.54	$258.04	$291.59	$313.45	$336.96	$347.07
8 inch	$220.56	$439.36	$496.48	$533.71	$573.74	$590.95
Fire Meter						
5/8 inch	$15.34	$30.56	$34.53	$37.12	$39.91	$41.10
3/4 inch	$15.34	$30.56	$34.53	$37.12	$39.91	$41.10
1 inch	$19.43	$38.72	$43.75	$47.04	$50.56	$52.08
1.5 inch	$30.65	$61.06	$69.00	$74.17	$79.74	$82.13
2 inch	$29.80	$77.28	$87.33	$93.88	$100.92	$103.94
3 inch	$44.70	$118.04	$133.39	$143.39	$154.14	$158.77
4 inch	$59.60	$154.54	$174.63	$187.73	$201.81	$207.86
6 inch	$89.40	$258.04	$291.59	$313.45	$336.96	$347.07
8 inch	$119.19	$439.36	$496.48	$533.71	$573.74	$590.95
12 inch	$178.79	$745.49	$842.41	$905.59	$973.51	$1,002.71
New Construction Developments of Five (5) or More Units						
5/8 inch	$15.34	$41.06	$46.40	$49.88	$53.62	$55.23
3/4 inch	$15.34	$41.06	$46.40	$49.88	$53.62	$55.23
1 inch	$19.43	$52.03	$58.79	$63.20	$67.94	$69.98
1.5 inch	$30.65	$82.04	$92.71	$99.66	$107.13	$110.35
2 inch	$38.78	$103.84	$117.34	$126.14	$135.60	$139.67
3 inch	$59.26	$158.60	$179.22	$192.66	$207.11	$213.32
4 inch	$77.58	$207.65	$234.64	$252.24	$271.16	$279.30
6 inch	$129.54	$346.71	$391.78	$421.17	$452.75	$466.34
8 inch	$220.56	$590.34	$667.08	$717.12	$770.90	$794.03
Commercial / Industrial / Landscape						
5/8 inch	$15.34	$30.56	$34.53	$37.12	$39.91	$41.10
3/4 inch	$15.34	$30.56	$34.53	$37.12	$39.91	$41.10
1 inch	$19.43	$38.72	$43.75	$47.04	$50.56	$52.08
1.5 inch	$30.65	$61.06	$69.00	$74.17	$79.74	$82.13
2 inch	$38.78	$77.28	$87.33	$93.88	$100.92	$103.94
3 inch	$59.26	$303.50	$342.96	$368.68	$396.33	$408.22
4 inch	$77.58	$459.27	$518.98	$557.90	$599.74	$617.73
6 inch	$129.54	$893.02	$1,009.11	$1,084.80	$1,166.16	$1,201.14
8 inch	$220.56	$2,358.88	$2,665.53	$2,865.45	$3,080.36	$3,172.77
Hotel						
5/8 inch	$15.34	$30.56	$34.53	$37.12	$39.91	$41.10
3/4 inch	$15.34	$38.20	$43.17	$46.40	$49.88	$51.38
1 inch	$19.43	$57.56	$65.04	$69.92	$75.17	$77.42
1.5 inch	$30.65	$106.93	$120.83	$129.89	$139.64	$143.82
2 inch	$38.78	$160.88	$181.79	$195.43	$210.09	$216.39
3 inch	$59.26	$303.50	$342.96	$368.68	$396.33	$408.22
4 inch	$77.58	$459.27	$518.98	$557.90	$599.74	$617.73
6 inch	$129.54	$893.02	$1,009.11	$1,084.80	$1,166.16	$1,201.14
8 inch	$220.56	$2,358.88	$2,665.53	$2,865.45	$3,080.36	$3,172.77

CONSUMPTION RATES [PER UNIT CHARGE]						
Consumption charges for all classes						
Applicable to	**Current Rate**	**Effective 3/8/2018**	**Effective 01/01/2019**	**Effective 01/01/2020**	**Effective 01/01/2021**	**Effective 01/01/2022**
All Classes & Meter Sizes	$1.70	$1.81	$2.05	$2.20	$2.37	$2.44
New Const. Dev.of 5+ Units	$1.70	$2.43	$2.75	$2.95	$3.17	$3.27
ADDITIONAL UNIT CHARGE [HOTEL & MULTI-FAMILY ONLY]						
Each Multi-Family Residential & Hotel is Currently Charged a Fixed + an Additional Unit Charge for Each Additional MFR or Hotel Dwelling Unit						
Applicable to	**Current Rate**	**Effective 3/8/2018**	**Effective 01/01/2019**	**Effective 01/01/2020**	**Effective 01/01/2021**	**Effective 01/01/2022**
Hotel & all MFR	$8.60	$17.14	$19.37	$20.82	$22.38	$23.05

As of the effective date of this Ordinance, the above Water Service Charges shall be charged as set forth in the above schedules and shall remain in effect until amended or replaced by the City Council. The above Water Service Charges shall become effective on March 8, 2018, and shall continue to increase at the beginning of each year through January 1, 2022, as set forth in the above schedules.

SECTION 2. Discounts for the water service charges may be provided for senior, low income, and veteran account holders that meet the eligibility requirements established by the City and administered by the Public Services Department or the Finance Department Utility Billing. The discount rates shall be set by resolution.

SECTION 3. If any section, subsection, subdivision, sentence, clause, phrase, or portion of this ordinance or the application thereof to any person or place, is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remainder of this ordinance. The City Council hereby declares that it would have adopted this ordinance, and each and every section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, sentences, clauses, phrases, or portions thereof be declared invalid or unconstitutional.

SECTION 4. The City Clerk shall certify to the adoption of this ordinance and cause the same to be published in the manner required by law within fifteen (15) days after its passage, and this ordinance shall become effective thirty (30) days after its passage.

INTRODUCED this 16th day of January, 2018

PASSED, APPROVED, AND ADOPTED this 6th day of February, 2018.

Tom Adams, Mayor
City of Monrovia

ATTEST:

APPROVED AS TO FORM:

Alice D. Atkins, CMC, City Clerk
City of Monrovia

Craig A. Steele, City Attorney
City of Monrovia

ORDINANCE NO. 2018-01

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MONROVIA, CALIFORNIA, ADOPTING A SCHEDULE OF WATER SERVICE CHARGES

WHEREAS, the City Council is authorized pursuant to the California Health and Safety Code Section 5471 to prescribe, revise and collect rates and charges for services and facilities furnished by the City in connection with the City's water service system.

WHEREAS, the City of Monrovia has conducted an analysis of its services, the costs reasonably borne of provided those services, the beneficiaries of those services, and the revenues produced by those paying fees and charges for special services; and

WHEREAS, the City has previously developed and instituted Water Service Charges to finance the water utilities furnished by the City, including the costs of water acquisition, water system operations, capital projects, and maintenance; and

WHEREAS, the City has identified additional costs associated with operating the City's water system, as detailed in Resolution No. 2017-36 adopted on November 7, 2017, incorporated herein by reference; and

WHEREAS, Chapter 3.46 (Fee and Service Charge Revenue/Cost Comparison System) of the Monrovia Municipal Code establishes a policy of recovering the full costs reasonably borne of providing special services of a voluntary and limited nature, such that general taxes are not diverted from general services of a broad nature and thereby utilized to subsidize unfairly and inequitably such special services; and

WHEREAS, the City Council adopted Ordinance No. 2000-09 on the 25th day of April, 2000, establishing its policy as to the recovery of costs and more particularly the percentage of costs reasonably borne to be recovered from users of City services and directing staff as to the methodology for implementing said Ordinance; and

WHEREAS, a properly noticed public hearing to receive public comments and protests and to consider the proposed Schedule of Water Service Charges was held on January 16, 2018.

THE CITY COUNCIL OF THE CITY OF MONROVIA, CALIFORNIA DOES ORDAIN AS FOLLOWS:

SECTION 1. The City Council hereby adopts the water service charges set forth in the schedules below.

Schedule of Water Service Charges

FIXED RATES [STANDBY CHARGE]						
Single-Family Residential/Multi-Family Residential						
Meter Size	**Current Rate**	**Effective 3/8/2018**	**Effective 01/01/2019**	**Effective 01/01/2020**	**Effective 01/01/2021**	**Effective 01/01/2022**
5/8 inch	$15.34	$30.56	$34.53	$37.12	$39.91	$41.10
3/4 inch	$15.34	$30.56	$34.53	$37.12	$39.91	$41.10
1 inch	$19.43	$38.72	$43.75	$47.04	$50.56	$52.08
1.5 inch	$30.65	$61.06	$69.00	$74.17	$79.74	$82.13
2 inch	$38.78	$77.28	$87.33	$93.88	$100.92	$103.94
3 inch	$59.26	$118.04	$133.39	$143.39	$154.14	$158.77
4 inch	$77.58	$154.54	$174.63	$187.73	$201.81	$207.86
6 inch	$129.54	$258.04	$291.59	$313.45	$336.96	$347.07
8 inch	$220.56	$439.36	$496.48	$533.71	$573.74	$590.95
Fire Meter						
5/8 inch	$15.34	$30.56	$34.53	$37.12	$39.91	$41.10
3/4 inch	$15.34	$30.56	$34.53	$37.12	$39.91	$41.10
1 inch	$19.43	$38.72	$43.75	$47.04	$50.56	$52.08
1.5 inch	$30.65	$61.06	$69.00	$74.17	$79.74	$82.13
2 inch	$29.80	$77.28	$87.33	$93.88	$100.92	$103.94
3 inch	$44.70	$118.04	$133.39	$143.39	$154.14	$158.77
4 inch	$59.60	$154.54	$174.63	$187.73	$201.81	$207.86
6 inch	$89.40	$258.04	$291.59	$313.45	$336.96	$347.07
8 inch	$119.19	$439.36	$496.48	$533.71	$573.74	$590.95
12 inch	$178.79	$745.49	$842.41	$905.59	$973.51	$1,002.71
New Construction Developments of Five (5) or More Units						
5/8 inch	$15.34	$41.06	$46.40	$49.88	$53.62	$55.23
3/4 inch	$15.34	$41.06	$46.40	$49.88	$53.62	$55.23
1 inch	$19.43	$52.03	$58.79	$63.20	$67.94	$69.98
1.5 inch	$30.65	$82.04	$92.71	$99.66	$107.13	$110.35
2 inch	$38.78	$103.84	$117.34	$126.14	$135.60	$139.67
3 inch	$59.26	$158.60	$179.22	$192.66	$207.11	$213.32
4 inch	$77.58	$207.65	$234.64	$252.24	$271.16	$279.30
6 inch	$129.54	$346.71	$391.78	$421.17	$452.75	$466.34
8 inch	$220.56	$590.34	$667.08	$717.12	$770.90	$794.03
Commercial / Industrial / Landscape						
5/8 inch	$15.34	$30.56	$34.53	$37.12	$39.91	$41.10
3/4 inch	$15.34	$30.56	$34.53	$37.12	$39.91	$41.10
1 inch	$19.43	$38.72	$43.75	$47.04	$50.56	$52.08
1.5 inch	$30.65	$61.06	$69.00	$74.17	$79.74	$82.13
2 inch	$38.78	$77.28	$87.33	$93.88	$100.92	$103.94
3 inch	$59.26	$303.50	$342.96	$368.68	$396.33	$408.22
4 inch	$77.58	$459.27	$518.98	$557.90	$599.74	$617.73
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8 inch	$220.56	$2,358.88	$2,665.53	$2,865.45	$3,080.36	$3,172.77
Hotel						
5/8 inch	$15.34	$30.56	$34.53	$37.12	$39.91	$41.10
3/4 inch	$15.34	$38.20	$43.17	$46.40	$49.88	$51.38
1 inch	$19.43	$57.56	$65.04	$69.92	$75.17	$77.42
1.5 inch	$30.65	$106.93	$120.83	$129.89	$139.64	$143.82
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CONSUMPTION RATES [PER UNIT CHARGE]						
Consumption charges for all classes						
Applicable to	**Current Rate**	**Effective 3/8/2018**	**Effective 01/01/2019**	**Effective 01/01/2020**	**Effective 01/01/2021**	**Effective 01/01/2022**
All Classes & Meter Sizes	$1.70	$1.81	$2.05	$2.20	$2.37	$2.44
New Const. Dev.of 5+ Units	$1.70	$2.43	$2.75	$2.95	$3.17	$3.27
ADDITIONAL UNIT CHARGE [HOTEL & MULTI-FAMILY ONLY]						
Each Multi-Family Residential & Hotel is Currently Charged a Fixed + an Additional Unit Charge for Each Additional MFR or Hotel Dwelling Unit						
Applicable to	**Current Rate**	**Effective 3/8/2018**	**Effective 01/01/2019**	**Effective 01/01/2020**	**Effective 01/01/2021**	**Effective 01/01/2022**
Hotel & all MFR	$8.60	$17.14	$19.37	$20.82	$22.38	$23.05

As of the effective date of this Ordinance, the above Water Service Charges shall be charged as set forth in the above schedules and shall remain in effect until amended or replaced by the City Council. The above Water Service Charges shall become effective on March 8, 2018, and shall continue to increase at the beginning of each year through January 1, 2022, as set forth in the above schedules.

SECTION 2. Discounts for the water service charges may be provided for senior, low income, and veteran account holders that meet the eligibility requirements established by the City and administered by the Public Services Department or the Finance Department Utility Billing. The discount rates shall be set by resolution.

SECTION 3. If any section, subsection, subdivision, sentence, clause, phrase, or portion of this ordinance or the application thereof to any person or place, is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remainder of this ordinance. The City Council hereby declares that it would have adopted this ordinance, and each and every section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, sentences, clauses, phrases, or portions thereof be declared invalid or unconstitutional.

SECTION 4. The City Clerk shall certify to the adoption of this ordinance and cause the same to be published in the manner required by law within fifteen (15) days after its passage, and this ordinance shall become effective thirty (30) days after its passage.

INTRODUCED this 16th day of January, 2018

PASSED, APPROVED, AND ADOPTED this 6th day of February, 2018.

Tom Adams, Mayor
City of Monrovia

ATTEST:

Alice D. Atkins, CMC, City Clerk
City of Monrovia

APPROVED AS TO FORM:

Craig A. Steele, City Attorney
City of Monrovia

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) §
CITY OF MONROVIA)

I, ALICE D. ATKINS, CMC, City Clerk of the City of Monrovia, California, do hereby certify that the foregoing is a full, true and correct copy of Ordinance No. 2018-01; It has been published pursuant to law; was duly adopted and passed at a regular meeting of the Monrovia City Council on the 6th day of February, 2018, by the following vote:

AYES: Councilmembers Shevlin, Spicer, Mayor Pro Tem Crudgington, Mayor Adams
NOES:
ABSTAIN:
ABSENT: Councilmember Blackburn

ATTEST:

Alice D. Atkins, CMC, City Clerk
City of Monrovia

CITY COUNCIL AGENDA REPORT

DEPARTMENT: Public Services **MEETING DATE:** January 17, 2017

PREPARED BY: Sean Sullivan, Public Works Division Manager **AGENDA LOCATION:** AR-3

TITLE: Amendment to Chapter 12.08 of the Monrovia Municipal Code Related to Prohibiting Excavations in Streets, Sidewalks, and Public Places that Have Been Recently Reconstructed, Introduction and First Reading of Ordinance No. 2017-01

OBJECTIVE: To amend the Monrovia Municipal Code to create standards for street excavations in streets that have been recently reconstructed or rehabilitated

BACKGROUND: The City of Monrovia is currently engaged in Monrovia Renewal, which is the largest capital improvement undertaking in the City's history. The overall initiative contemplates $51.7 million in priority repairs and upgrades to the City's water, sewer, and street infrastructure.

The street improvements associated with the Monrovia Renewal project represents an investment of over $30 million. Furthermore, in coordination with the development of the Monrovia Renewal project, staff is also preparing an ongoing Pavement Management System (PMS) which involves the establishment of ongoing maintenance programs and policies to protect and preserve our street infrastructure.

Given this significant investment of resources into upgrading our infrastructure, staff believes that it will be important to establish new regulations to any future underground work that will result in cutting / excavating our street surfaces. To that end, during the early stages of the design and implementation of the Monrovia Renewal project, staff initiated efforts to coordinate the City's construction activities with those of the other utility providers in the City. Since December 2015, the City has coordinated monthly meetings with utility company representatives to discuss and coordinate all construction activities with a goal of completing any necessary underground work prior to street construction taking place. The completion of any underground work prior to street construction will assist in the preservation of the pavement by minimizing future cuts and excavations to the streets. For instance, the City has made extensive repairs to our sewer infrastructure, water pipelines, and water service lines in advance of the street construction work to minimize future impacts to the street surfaces.

To further protect our investment in new streets, staff has developed an ordinance that prohibits the excavations of streets, sidewalks, or other area that have recently been rehabilitated or reconstructed. The ordinance also establishes criteria for any excavations and the corresponding required repairs with the aim of protecting our street infrastructure investment.

ANALYSIS: The proposed ordinance that has been developed for City Council consideration (Attachment A) seeks to protect the City's street infrastructure by limiting cuts to street surfaces and ensuring that any cuts are repaired to the satisfaction of the City. If approved, the ordinance would establish the following regulations:

- For streets that have been paved or reconstructed, no cuts will be permitted for a period of five (5) years.

- For streets that have been sealed or coated, no cuts will be allowed for a period of three (3) years.

- The ordinance does allow for some exceptions, as it is understood that there are situations where the ability to access underground utilities will be both necessary and critical. To account for those instances, the ordinance includes the following exceptions
    - Necessary to protect life or property
    - Necessary to prevent the interruption of essential utility service
    - Necessary to provide utility service to buildings or properties where no other means exist
    - Necessary to complete work that is mandated by law or regulation
    - Deemed, by the City Council, to be in the best interest of the general public

- Should an exception be granted, the utility / entity that cuts into the City's streets will be required to abide by updated road repair standards to ensure that the street is restored in a manner that best preserves the condition and useful lifespan of the street.

- The updated street repair standard includes the following provisions:
    - Utilizing the same material / treatment that was most recently applied to the section of roadway that was cut into.
    - The size of the repair cannot be limited to the size of the street excavation, but instead, will have to include a larger area of the street to minimize disruption and degradation of the street surface.

The proposed ordinance and incorporated standards were developed after conducting a thorough review of best practices, a review of pavement moratorium ordinances in other local municipalities, and discussions with utility purveyors. Staff believes that the proposed ordinance allows for the preservation and protection of the capital investment being made by the City while still allowing for the work of the utility purveyors to take place.

ENVIRONMENTAL IMPACT: None.

FISCAL IMPACT: None.

OPTIONS: The following options are provided for the City Council's consideration:

1. Adopt the proposed street excavation ordinance and amend Chapter 12.08 of the Monrovia Municipal Code.

2. Do not adopt the proposed ordinance and provide direction to staff.

RECOMMENDATION: Staff recommends Option 1, thereby amend the Monrovia Municipal Code to create standards for street excavations in streets that have been recently reconstructed or rehabilitated.

COUNCIL ACTION REQUIRED: If Council concurs, the appropriate actions would be a motion to introduce, waive further reading, and read by title only Ordinance No. 2017-01.

ORDINANCE NO. 2017-01

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MONROVIA, CALIFORNIA, AMENDING CHAPTER 12.08 OF THE MONROVIA MUNICIPAL CODE TO PROHIBIT EXCAVATIONS IN STREETS, SIDEWALKS AND PUBLIC PLACES THAT HAVE BEEN RECENTLY RECONSTRUCTED, OVERLAID OR SEALED

RECITALS

WHEREAS, Chapter 12.08 of the Monrovia Municipal Code establishes standards and practices for the excavation of streets, sidewalks, and public places for the purpose of provision of underground utility services, and

WHEREAS, the City of Monrovia is responsible for the maintenance of the infrastructure of these streets, sidewalks, and public places in a functional and safe manner through capital investment and maintenance activities, and

WHEREAS, the excavation of these facilities impacts the functional and safe conditions of these facilities, and diminishes the useful life and capital value of the facilities, and

WHEREAS, the City of Monrovia desires to preserve streets, sidewalks, and public places to the extent possible while still allowing for the necessary provision of utility and other underground services, the City has developed standards as it pertains to the excavation of streets, sidewalks, and public places, particularly those that have been constructed or enhanced through maintenance within the past five (5) and three (3) years respectively.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MONROVIA DOES HEREBY ORDAIN AS FOLLOWS:

Section 1. Monrovia Municipal Code Chapter 12.08 is hereby amended by adding Section 12.08.025 to read as follows:

"12.08.025 Excavation of Streets that Have Recently Been Reconstructed, Overlaid, or Sealed

A. No excavation permits shall be issued for streets, sidewalks, or public places that have been paved or reconstructed within the previous five (5) calendar years, or sealed or coated within the previous three (3) calendar years. For the purpose of this Section, the time shall be measured from the date the Notice of Completion for the applicable project was recorded.

B. Exceptions to the prohibition set forth in subsection (A) of this Section shall be as follows:
    1. Emergency excavations that are immediately necessary to protect life or property;
    2. Repairs or modifications that are necessary to prevent the interruption of essential utility service;
    3. Excavations necessary to provide utility service for buildings or properties where no other means of providing service exists;
    4. Work that is mandated by City, State, or Federal law or regulation, and
    5. Excavations deemed by the City Council to be in the best interest of the general public.

C. Work deemed by the utility provider to be necessary to resolve a situation that endangers life or property may be completed without prior approval or permit from the City. In these instances, a permit application must be submitted to the City Engineer by the end of business on the first business day following the work.

D. For any excavation permitted pursuant to subsections (B) and (C), all excavations and repairs shall be completed in accordance with the City of Monrovia trench repair standards, which are approved by the Director of Public Services. The standards set forth in the trench repair standards include provisions for (without limitation):
    1. The 2" grind and overlay of disturbed asphalt within the impacted area and any area adjacent to the disturbed area as determined by the City Engineer.
    2. The application of roadway seal or coating comparable to that removed or excavated to the impacted area and to any adjacent area adjacent to the disturbed area as determined by the City Engineer.
    3. The replacement of all concrete within the disturbed area and any area adjacent to the disturbed area, to the nearest control joints, as determined by the City Engineer.

Section 2. If any section, subdivision, paragraph, sentence, clause or phrase of this Ordinance or any part thereof is for any reason held to be invalid, such invalidity shall not affect the validity of the remaining portions of this Ordinance or any part hereof. The City Council of the City of Monrovia hereby declares that it would have passed each section, subsection, subdivision, paragraphs, sentences, clauses or phrases be declared invalid.

Section 3. This ordinance shall go into effect and be in full force and effect thirty (30) days following its final adoption.

Section 4. The City Clerk shall certify to the passage and adoption of this Ordinance and shall cause the same or a summary thereof to be published and posted in the manner required by law.

INTRODUCED this 17th day of January 2017

PASSED, APPROVED, AND ADOPTED this 7th day of February 2017.

Tom Adams, Mayor
City of Monrovia

ATTEST:

Alice D. Atkins, CMC, City Clerk
City of Monrovia

APPROVED AS TO FORM:

Craig A. Steele, City Attorney
City of Monrovia

DATA SHEET 3 Findings

Vesting Tentative Tract Map No. 82517 and Conditional Use Permit CUP2019-0016 for the Arroyo at Monrovia Station Specific Plan and Development Project

202 W. Evergreen Avenue
206 W. Evergreen Avenue
210 W. Evergreen Avenue
212 W. Evergreen Avenue
216 W. Evergreen Avenue
220 W. Evergreen Avenue
224 W. Evergreen Avenue
228 W. Evergreen Avenue
234 W. Evergreen Avenue
238 W. Evergreen Avenue
1551 South Primrose Avenue
1610 South Magnolia Avenue

VESTING TENTATIVE TRACT MAP

As required by Sections 66473.5 & 66474 of the California Government Code, the decision for recommending approval of Vesting Tentative Tract Map No. 82517 for a new five-story (6 level) mixed-use residential/commercial development to include 302 apartment units (15 units are designated affordable and 3 units are designated live/work), 7,080 square feet of ground-floor commercial space, and a seven-story (8-levels above ground and one level semi-subterranean) 500-space parking garage is based on the following findings:

A. That the vesting tentative tract map consolidating the existing twelve parcels into one 2.90-acre parcel for the development of a transit-oriented mixed use complex consisting of 302 apartment units (15 units are designated affordable and 3 units are designated live/work), 7,080 square feet of ground-floor commercial space, a seven-story (8-levels above ground and one level semi-subterranean) 500-space parking garage, and public open spaces, together with the provisions for the subdivision's design and improvement, are consistent with the Monrovia General Plan, and satisfy the requirements of the Map Act and of the Municipal Code. This project will be consistent with the General Plan in that it meets the requirements of the General Plan land use designation of the Planned Development - Area 12 (PD-12) Station Square Transit Village in that lot consolidation and mixed use projects are encouraged in the Industrial and Residential Neighborhoods on development sites that total a minimum of two acres in size. The lot consolidation will facilitate a project that will meet the goals of the Land Use and Housing Elements in providing additional housing opportunities in Monrovia including housing that is affordable to very low income households. Thus, it is compatible with the objectives, policies, general land uses, and programs specified in the General Plan. This project will conform to the "Arroyo at Monrovia Station Specific Plan" providing a transit-oriented development with an attached parking structure and public open space.

B. That the site is physically suitable for this type of development, in that it is relatively flat in topography and has adequate access to public streets and is developed at a density permitted on a 2.90-acre site. The setbacks and height of the development

are consistent with the requirements set forth in the PD-Area 12 Station Square Transit Village development guidelines. No variances are requested for the proposed improvements.

C. That the site is physically suitable for the proposed density of development, specifically the 2.90-acre site. The proposed "Arroyo at Monrovia Station Specific Plan" is based on the development parameters established by the Monrovia Land Use Element, which establish maximum caps and minimum requirements for various types of development in the Station Square Transit Village PD-12 on an area-wide basis. The transit-oriented mixed use complex was planned at a high density, which is encouraged for transit-oriented development. The overall Floor Area Ratio proposed across the entire development site is 2.66:1. Although there is not a Floor Area Ratio limit in the Residential Neighborhood, there is a Floor Area Ratio limit of 2.5 in the Industrial Neighborhood. Since this limit would prevent development of the project, a concession is used through the State's Density Bonus Law to exceed that amount up to a maximum 3.31:1 Floor Area Ratio. Although portions of the site's boundaries encroach into the City's public rights-of-way, those areas will be dedicated to the City for upgraded sidewalks that will be improved to meet Public Works street standards. In accordance to MMC §17.04.035 the proposed development will meet all of the development standards as outlined in the "Arroyo at Monrovia Station Specific Plan" and no variances are requested for the proposed improvements.

D. That the design of the subdivision and the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

Pursuant to the California Environmental Quality Act (CEQA), environmental issues were fully analyzed in the Draft Environmental Impact Report (DEIR), which is a document that provides the public and decision makers with specific information regarding the environmental effects associated with the proposed project. The DEIR documents that the project site is almost entirely developed and provides very little biological resource value. Therefore, there would be very little impact on sensitive vegetation communities or sensitive species. However, the limited amount of native and non-native vegetation may provide habitat for nesting bird species. With the implementation of mitigation, the project would not significantly impact any sensitive plants, plant communities, fish or wildlife habitat or any sensitive species.

E. The design of the subdivision and the type of improvements are not likely to cause serious public health problems, as it will comply with all City design and safety standards, including fire suppression.

Pursuant to the California Environmental Quality Act (CEQA), environmental issues were fully analyzed in the Draft Environmental Impact Report (DEIR), which is a document that provides the public and decision makers with specific information regarding the environmental effects associated with the proposed project. With the implementation of mitigation measures, and payment of development impact fees by the Project applicant, or the establishment of a Communities Facilities District and

the approval of a special tax, impacts on public services would remain less than significant or reduced to less than significant.

The Monrovia Police Department, located at 140 East Lime Avenue, provides law enforcement and police protection services within the City. The Monrovia Police Department provides a full range of programs, including Community Activist Policing, Neighborhood Partnerships, Drug Abuse Resistance Education (DARE), Parenting Workshops, and Safe City, Safe Campus. Data Sheet 1 (Condition of Approval No. 36) requires the submittal of a security plan for the entire development for the review and approval of the Chief of Police prior to the issuance of a Certificate of Occupancy. Data Sheet 1 (Condition of Approval No. 35) requires that the final parking structure design be submitted for the review and approval of the Chief of Police.

The City of Monrovia's Fire and Rescue provides full-service fire protection and emergency medical services to all properties in the City. The Fire Department is responsible for 13.7 square miles of residential, commercial, and industrial uses, as well as open space brush area. Two fire stations (Fire Stations 101 and 102) each house an engine company and paramedics services, with one station housing the ladder truck and division chief (shift chief). These facilities are equipped to serve a resident population of over 40,000. For the Specific Plan project site, emergency first response is expected to come from Fire Station 102 (2055 South Myrtle Avenue) located less than one-quarter mile from the project site.

F. The design of the subdivision and the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of, property within the proposed subdivision, as the design will not interfere with public sidewalks, which will continue to provide access to the public along those rights-of-way, and the City is unaware of any other such easements that exist on the property.

   The City of Monrovia Land Use and Circulation Element EIR identified a potential impact on park resources associated with build-out of the greater Station Square Transit Village area and included a mitigation measure requiring projects with 200 or more residential units to dedicate three acres of parkland for every 1,000 residents. To satisfy this mitigation measure the project proposes four passive open space areas along the West Pomona Avenue project frontage, totaling 4,654 square feet in area. Public access easements will be recorded against these areas.

   Given the limited availability of land on the project site to satisfy the entire parkland dedication requirement, the Applicant proposes to pay an in-lieu fee or form a community facilities district as mitigation to fulfill the total parkland dedication requirement.

G. The City has considered the effect of the subdivision on the housing needs of the region in which the City is situated, and balanced those needs against the public service needs of its residents and available fiscal and environmental resources. The proposed development will not significantly increase the demands on available fiscal and environmental resources. The housing needs will be improved in the region by

the addition of the 302 apartment units, including three live/work units and fifteen units that are restricted to very low income households.

H. The discharge of waste from the proposed subdivision into an existing community sewer system will not result in violation of existing requirements of the Regional Water Quality Control Board. The City of Monrovia Public Services Department owns, operates, and maintains a sanitary sewer collection system including approximately 92 miles of City sewer lines with pipe sizes ranging in diameter from 6 to 24 inches. The City's two existing sewer main lines located near the Project (PSOMAS 2017, David Evans and Associates 2018) include: a 10-foot deep 24-inch Vitrified Clay Pipe (VCP) approximately six feet east of the center line of Mayflower Avenue, which drains south along Mayflower Avenue until a turn eastward on Duarte Road, a turn southward at Peck Road, and then connection to the 24-inch trunk sewer line, and an 8 to 10-foot deep 10-inch VCP sewer main approximately 10 feet west of the center line of Magnolia Avenue, which drains south along Magnolia Avenue until it connects to the 24-inch trunk sewer line.

   The Project's anticipated population increase would cause an increase in the amount of wastewater delivered to the San Jose Creek Water Reclamation Plant. This wastewater amount represents less than one percent of the remaining capacity at the San Jose Creek Water Reclamation Plant and would not require the construction of new facilities. Therefore, the Project would have a less than significant impact on the San Jose Creek Water Reclamation Plant and would not exceed wastewater treatment requirements of the Regional Water Quality Control Board. The Project would not result in a determination by the wastewater treatment provider serving the Project area that it does not have adequate capacity to serve the Project's projected demand in addition to its existing commitments.

   In addition, the City of Monrovia's Department of Public Works commissioned a wastewater capacity study to evaluate the cumulative impacts of proposed new developments in the Project area on the size capacity of the City's sewer lines adjacent to the Project (David Evans and Associates 2018). The study concluded that one small segment of the City's sewer line along Magnolia Avenue, and two small segments of the City's sewer line along Duarte Road, would slightly exceed the Los Angeles County Sanitation District's (LACSD) threshold for determining whether the capacity of a pipeline is full (i.e., the depth of flow over the pipe diameter), however, the remaining pipeline segments are projected to remain at capacity. Therefore, the City's wastewater capacity study does not recommend any additional wastewater infrastructure to serve the Project or other proposed projects in the area (David Evans and Associates 2019). Therefore, impacts of the Project on the capacity of the City's sewer lines would be less than significant.

   However, a final determination by the City of Monrovia's Department of Public Works that it can provide wastewater service to the Project in compliance with LACSD requirements will be required prior to issuance of building permits or recordation of final maps for Arroyo at Monrovia Specific Plan as a mitigation measure. Therefore, with implementation of this mitigation measure, potentially significant impacts would be reduced to less than significant levels.

The Project will connect to the City's existing stormwater system and will comply with the City's Stormwater Management Regulations (Chapter 12.36 of the Municipal Code) and implement Low Impact Development (LID) standards.

CONDITIONAL USE PERMIT

As required by Section 17.52.290 of the Monrovia Municipal Code, the decision recommending approval of Conditional Use Permit No. CUP2019-0016 for the construction for a new five-story (6-level) mixed-use residential/commercial development to include 302 apartment units (15 units are designated affordable and 3 units are designated live/work), 7,080 square feet of ground-floor commercial space, and a seven-story (8-levels above ground and one level semi-subterranean) 500-space parking garage is based on the following findings:

A. The project site is adequate in size, shape and topography for a new five-story (6-level) mixed-use residential/commercial development to include 302 apartment units (15 units are designated affordable and 3 units are designated live/work), 7,080 square feet of ground-floor commercial space, and a seven-story (8-levels above ground and one level semi-subterranean) 500-space parking garage and meets the size and dimension requirements in the Zoning Ordinance and the Arroyo at Monrovia Station Specific Plan. The requirements of the "Arroyo at Monrovia Station Specific Plan" are based on the development parameters permitted through the State's Density Bonus Law and Monrovia's General Plan Land Use Element. The project complies with the established maximum caps and minimum requirements for various types of development within the parameters of the "Arroyo at Monrovia Station Specific Plan". Since the current Floor Area Ratio limit in the Industrial Neighborhood of 2.5 would be exceeded to accommodate the affordable housing component, a concession is used through the State's Density Bonus Law to exceed that amount up to a maximum 3.31:1 Floor Area Ratio. The property is also relatively flat in topography and will accommodate the proposed development without variances from the Monrovia Municipal Code.

B. The project site has sufficient access to streets and highways, adequate in width and pavement type to carry the quantity and quality of traffic generated by the proposed mixed use project consisting of a new five-story (6-level) mixed-use residential/commercial development to include 302 apartment units (15 units are designated affordable and 3 units are designated live/work), 7,080 square feet of ground-floor commercial space, and a seven-story (8-levels above ground and one level semi-subterranean) 500-space parking garage on a 2.9-acre site. The site is bounded by four streets including: West Pomona Avenue, South Primrose Avenue, South Magnolia Avenue and West Evergreen Avenue which are all designated as collector streets in the Circulation Element with planned bikeway facilities. The primary street frontages are along West Pomona, South Magnolia, and South Primrose Avenues. West Pomona, South Magnolia, and South Primrose Avenue each have a 60-foot right-of-way width, and West Evergreen Avenue has a 50-foot right-of-way width. Vehicular access to the site for residents, commercial patrons, public parking, mail service, and trash hauling is through the parking garage entrance on West Pomona Avenue. A second vehicle access for residents, residential guests, public parking, and commercial patrons is also provided West

Evergreen Avenue. The project includes the dedication of public-right-of way to ensure that the sidewalks remain sufficient in width for pedestrians. The project improvements include expanded sidewalks, a parking garage, and bicycle parking and storage. The project is consistent with the General Plan's goals and policies that support the use of public transportation, including light rail transit, and the use of public transportation as an alternative to automobile travel.

C. The proposed use is compatible with the General Plan and the Arroyo at Monrovia Station Specific Plan. The proposed project involves the development of a five-story (six-level) mixed use building on a 2.9 acre site within the Station Square Transit Village. The project is consistent with the General Plan's land use, urban design, and planning objectives. The building would complement the transit village setting and enhance the character of the area with "signature architecture". Its height and unique architectural elements will create a highly recognizable land mark and orienting device that will help define the neighborhood. The site's design features public open spaces with adequate amenities for comfortable social interaction and promotes an increased level of pedestrian activity. The project will also increase the variety and availability of housing within the City, including the provision of 15 units that will be affordable for very low income households. The residents' close proximity to the Monrovia Gold Line Station and the opportunities for services within the ground floor commercial space of the project will help promote walkability. Overall, the project will enhance the Station Square Transit Village by providing infill development that is architecturally compatible with existing and future development and will strengthen the character of this neighborhood. The mixed use project will not adversely impact the objectives General Plan and the Arroyo at Monrovia Station Specific Plan.

D. The project will comply with the applicable provisions of the zoning ordinance, specifically MMC §17.04.035. The development will comply with the development standards set forth in the "Arroyo at Monrovia Station Specific Plan." Since the Floor Area Ratio limit of 2.5 in the Industrial Neighborhood would be exceeded due to the provision of affordable housing, a concession is used through the State's Density Bonus Law to exceed that amount up to a maximum 3.31:1 Floor Area Ratio. No variances are requested for the proposed improvements.

E. With the exception of potentially significant and unavoidable noise impacts to the property located at 230 West Evergreen Avenue resulting from the construction phase of the project, the proposed location of the use and the conditions under which it will be operated or maintained will not be detrimental to the public health, safety, or welfare, or materially injurious to properties or improvements in the vicinity. The Arroyo at Monrovia Station Specific Plan contains many good neighbor features that are intended to reduce light, noise, and odor impacts on the adjacent single-family residence located at 230 West Evergreen Avenue. These good neighbor features include sizeable setbacks adjacent to the single-family home, building massing that is stepped back on the top floors, and the use of dense landscaping, sound walls, and shielded light sources. The plan also provides the potential for the residents of the single-family home to use the project's private open space and recreational amenities. Furthermore, the specific plan will require new walkable street frontages with aesthetically pleasing streetscapes along the entire project

perimeter that will provide access to public plazas along West Pomona Avenue. The improved street frontages will enhance the visual quality of the neighborhood, including the view shed of the adjacent multifamily residences.

The approval of this mixed use project is subject to the conditions imposed by the City's Planning, Fire, and Public Works Departments. Furthermore, long-term operational impacts would be less than significant with the implementation of mitigation measures outlined in the Environmental Impact Report (EIR) that was prepared pursuant to CEQA guidelines. Compliance with the conditions of approval and the mitigation measures are necessary to protect the public's health, safety, and welfare. Therefore, the long-term operational impacts of the mixed use project and improvements will not be detrimental to the public health, safety, or welfare, or materially injurious to properties or improvements in the vicinity.

The noise control requirements during construction, including noise barriers incorporated into the EIR mitigation measures MM NOI-3, would reduce construction noise levels at sensitive receptor locations to the maximum extent feasible; however, given the proximity of the occupants at 230 West Evergreen Avenue, project construction could increase hourly ambient noise levels by 10 dB or more for two or more hours per day, seven days a week, for a period of 12 months or more at this location. Although mitigation measure MM NOI-3 includes a provision to temporarily relocate the occupants of 230 West Evergreen Avenue, this relocation would be subject to negotiation by and between the applicant and the occupant of 230 West Evergreen Avenue.

PLANNING COMMISSION RESOLUTION NO. 2019-0015

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MONROVIA, CALIFORNIA, RECOMMENDING THAT THE CITY COUNCIL CERTIFY THE ENNVIRONMENTAL IMPACT REPORT AND MAKE CERTAIN FINDINGS AS REQUIRED BY THE CALIFORNIA ENVIRONMENTAL QUALITY ACT ("CEQA"), IN CONNECTION WITH THE APPROVAL OF ZONING AMENDMENT (ZA2019-0005) FOR THE NEW SPECIFIC PLAN DESIGNATION, THE ARROYO AT MONROVIA STATION SPECIFIC PLAN (SP2019-0004), VESTING TENTATIVE PARCEL MAP NO. 82517 (TPM2019-0005), A CONDITIONAL USE PERMIT (CUP2019-0016), AND GENERAL PLAN CONFORMITY FINDINGS FOR THE DEVELOPMENT OF A NEW FIVE-STORY (6-LEVEL) MIXED-USE RESIDENTIAL/COMMERCIAL DEVELOPMENT TO INCLUDE 302 APARTMENT UNITS (15 UNITS ARE DESIGNATED AFFORDABLE AND 3 UNITS ARE DESIGNATED LIVE/WORK), 7,080 SQUARE FEET OF GROUND-FLOOR COMMERCIAL SPACE, AND A SEVEN-STORY (8-LEVELS ABOVE GROUND AND ONE LEVEL SEMI-SUBTERRANEAN) 500-SPACE PARKING GARAGE ON A 2.9-ACRE SITE LOCATED AT 202, 206, 210, 212, 216, 220, 224, 228, 234, AND 238 W. EVERGREEN AVENUE; 1551 SOUTH PRIMROSE AVENUE; AND 1610 SOUTH MAGNOLIA AVENUE (ASSESSOR'S PARCEL NUMBERS [APN] 8507-002-011, -012, -014, -015, -017, -018, -019, -020, -022, -023, -036, -037)

RECITALS

(i) MW Investment Group, LLC has initiated an application to develop a 2.90-acre site with a transit-oriented, infill, mixed-use residential/commercial development to include: 302 residential units, including three live/work units and 15 affordable units for very low-income households, 7,080 square feet of ground floor commercial space, a parking structure containing 500 parking spaces, a leasing office, residential amenities including two courtyards and a roof deck, and public open space in the form of four plazas along the street frontage of West Pomona Avenue. The project is located at 202, 206, 210, 212, 216, 220, 224, 228, 234, and 238 W. Evergreen Avenue, and 1551 South Primrose Avenue and 1610 South Magnolia Avenue (Assessor's Parcel Numbers [APN] 8507-002-011, -012, -014, -015, -017, -018, -019, -020, -022, -023, -036, and -037). The development application includes an amendment to the City's Official Zoning Map changing the PD (Planned Development) Zone designation to the SP (Specific Plan) Zone and a request to amend the text of the Zoning Ordinance to add Arroyo at Monrovia Station Specific Plan to Section 17.04.035 of Title 17 (Zoning) of the Monrovia Municipal Code for the subject property (Ordinance No. 2019-11), adopt the Arroyo at Monrovia Station Specific Plan (SP2019-0004), approve a vesting tentative tract map for consolidation of twelve lots into one

(TTM82517), and approve a conditional use permit to construct the development (CUP2019-0016).

(ii) In compliance with California Environmental Quality Act (CEQA), the City of Monrovia as the lead agency, filed a Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) with the State Clearinghouse, which assigned State Clearinghouse Number 2019050016. The NOP was distributed to all responsible and trustee agencies and other interested parties for a 30-day public review period commencing on May 22, 2019 and ending on June 21, 2019. On September 26, 2019 a Notice of Completion (NOC) of the DEIR was filed with the State Clearinghouse and the DEIR was distributed to agencies, interested organizations, and interested individuals by the City. A 45-day public review period for the DEIR was established pursuant to state law, which commenced on September 26, 2019 and ended on November 13, 2019. During the review period, the Planning Commission conducted a public hearing to allow the public an opportunity to comment on the adequacy of the DEIR.

(iii) The Planning Commission has reviewed and considered the DEIR prepared for the project and the comments received thereon from public agencies and interested members of the public during the public review period and at the public hearing of November 13, 2019, December 11, 2019, January 15, 2020, and February 12, 2020 as well as the City's and consultants' proposed responses to those comments.

(iv) On November 13, 2019, December 11, 2019, January 15, 2020, and February 12, 2020 the Planning Commission of the City of Monrovia conducted a duly noticed public hearing on the application, pursuant to Section 17.52.090 of the Monrovia Municipal Code and the applicable provisions of State law. The Planning Commission received and considered the staff report and all the information, evidence, and testimony, both written and oral, presented in connection with the project. The Planning Commission is an advisory body for this application and for the purposes of the CEQA process. At the November 13, 2019 meeting, the Planning Commission continued the public hearing to the regular meeting of December 11, 2019 to allow time for the City and the Applicant to prepare responses to comments received on the project's DEIR. Since additional time was needed to prepare the responses to comments the Planning Commission continued the meeting on December 11, 2019 to the regular meeting on January 15, 2020. On January 15, 2020 a draft FEIR containing the responses to comments and revisions to the DEIR was submitted to the Planning Commission. During the public hearing, it was brought to the Commission's attention that a second letter of comment from the Supporters Alliance for Environmental Responsibility (SAFER), dated November 12, 2019 was inadvertently omitted from the FEIR. For this reason the Planning Commission continued the public hearing to the regular meeting of February 12, 2020 to allow time for the City and the Applicant to prepare responses to comments contained in this second letter from SAFER. The responses to those comments have been provided and have been incorporated into the FEIR.

(v) The custodian of records for all materials that constitute the record of proceedings upon which this decision is based is the Planning Division Manager. Those documents are available for public review in the Planning Division located at 415 South Ivy

Avenue, Monrovia, California 91016.

(vi) All legal prerequisites to the adoption of this Resolution have occurred.

RESOLUTION

NOW, THEREFORE, the Planning Commission of the City of Monrovia hereby finds, determines, and resolves as follows:

1. The Planning Commission finds that all of the facts set forth in the Recitals of this Resolution are true and correct.

2. The Planning Commission finds that the public has been afforded ample notice and opportunity to comment on the DEIR, in accordance with the requirements of CEQA.

3. **Draft Environmental Impact Report (DEIR):** The DEIR identified several potentially significant environmental effects associated with the adoption of the Arroyo at Monrovia Specific Plan and related mixed-use development project. Such effects and corresponding mitigation measures are identified in the DEIR and incorporated herein by reference as Exhibit "A." The final project mitigation measures and mitigation monitoring program are listed in Exhibit "B" and other mitigation measures may be identified as the project is implemented which will further reduce the impacts identified. Except as determined below, all significant environmental effects have been reduced to an insignificant level in that all such effects that can feasibly be avoided have been avoided or reduced to a level of insignificance by the imposition of mitigation measures. The DEIR identified the following significant impact on the environment that cannot be avoided or mitigated to a level of insignificance:

    a) *Noise*. The noise control requirements during construction, including noise barriers incorporated into the DFEIR mitigation measures MM NOI-3, would reduce construction noise levels at sensitive receptor locations to the maximum extent feasible. However, given the proximity of the occupants at 230 West Evergreen Avenue, project construction could increase hourly ambient noise levels by 10 dB or more for two or more hours per day, seven days a week, for a period of 12 months or more at this location. Although mitigation measure MM NOI-3 includes a provision to temporarily relocate the occupants of 230 West Evergreen Avenue during the project construction phase, this relocation would be subject to negotiation by and between the applicant and the occupant of 230 West Evergreen Avenue. Therefore, the applicant cannot guarantee the effectiveness or implementation of this mitigation at this time. Thus, this construction noise impact would remain significant and unavoidable even with the implementation of feasible mitigation measures, if the occupants at

230 West Evergreen Avenue do not wish to be relocated during construction.

4. The DEIR found that the proposed project would result in significant and unavoidable adverse impacts in the area of noise. Consistent with Section 15093 of the State of California CEQA Guidelines, the Planning Commission recommends to the City Council that the Council adopt a Statement of Overriding Considerations and find that the benefits of approval and implementation of the Arroyo at Monrovia Station project outweigh the unavoidable environmental impact because the Planning Commission believes the proposed project will:

    a) Help the City attain a balanced mix of land use within the City, thereby providing residents with ready access to housing, employment, and commercial services that will be close to public transit;

    b) Contribute to attaining regional jobs/housing balance goals;

    c) Encourage private investment and redevelopment of property in the City;

    d) Ensure that residents from all income levels, including very low income households, will have access to decent, affordable housing;

    e) Revitalize and improve this area of the City;

    f) Create a City environment which makes Monrovia a pleasant place to live, work, shop, and do business;

    g) Encourage pedestrian activity, provide public open space and enhancing landscaping;

    h) Provide public automobile parking and bicycle parking for the public and for residents; and

    i) Comply with mandates from the State of California to increase the supply of housing adjacent to public transit because the project is a transit-oriented mixed-use residential and commercial development that implements the use of public transportation, including light rail transit, to provide mobility to all City residents and encourages the use of public transportation as an alternative to automobile travel. The project provides 31 short term bicycle storage spaces and 151 long term bicycle storage spaces dispersed throughout the site. The project will provide continuous sidewalks around the development, including wheelchair ramps. The parking structure provides 500 vehicle parking spaces, some of which will be available for public parking.

5. The Planning Commission has considered a reasonable range of alternatives to the Project, or to its location, which could feasibly obtain the basic objectives of the Project, and the Planning Commission has evaluated the comparative merits of the alternatives and determines the following:

    - Alternative 1 (No Project Alternative) would result in the least environmental impacts. However, that Alternative would not provide any of the benefits of the Project, including Project Objective 2 (*Enhance the Station Square Transit Village by encouraging pedestrian activity, providing public open space and parking, and enhancing landscaping*, Project Objective 5 (*Provide attractive housing that offers a suite of residential amenities and increases Monrovia's housing options, including affordable housing for very low-income households*), and Project Objective 7 (*Provide public automobile parking and bicycle parking for the public and for residents)*.

    - Alternative 2 (No Commercial Alternative) would result in equal impacts on most issue areas as the Project, with the exception of slightly less impacts on air quality, greenhouse gas emissions, noise, traffic, and utilities. However, Objective 6 (*Increase retail and commercial space in the Station Square Transit Village*) would not be met under Alternative 2.

    - Alternative 3 (Reduced Specific Plan Alternative) would reduce construction noise impacts on the resident at 230 West Evergreen Avenue and would have a slightly lower impact on public services, transportation, and utilities. Alternative 3 would be the Environmentally Superior Alternative; however, Alternative 3 would be less effective at meeting Project Objective 2 (*Enhance the Station Square Transit Village by encouraging pedestrian activity, providing public open space and parking, and enhancing landscaping*, Project Objective 5 (*Provide attractive housing that offers a suite of residential amenities and increases Monrovia's housing options, including affordable housing for very low-income households*), and Project Objective 7 (*Provide public automobile parking and bicycle parking for the public and for residents)*.

    - The Planning Commission also determines that none of the Alternatives would fully achieve the City's objectives, including the housing goals outlined in the General Plan Housing Element and the land use objectives outlined in the Station Square Transit Village land use plan. Alternatives 1 and 3 would have a greater impact on land use and planning and population and housing than the Project. Alternative 1 would not provide a diverse mix of housing in terms of affordability, tenure, density range and architectural styles that

responds to changing market demands over time and that meets the needs of all income groups. Alternative 3 would not involve the addition of as many affordable housing units or public parking for the Monrovia Gold Line Station. Alternative 2 would not achieve commercial uses to meet the needs of local residents within Station Square Transit Village.

6. The Planning Commission finds that the additional information provided in the staff report accompanying the Project description, the revisions contained in the Draft Final Environmental Impact Report (Draft FEIR) incorporated herein by reference as Exhibit "C," including the additional comments and responses thereto that were submitted by SAFER, and the evidence presented in written and oral testimony received at the above-referenced public hearings do not represent significant new information so as to require re-circulation of any portion of the EIR pursuant to CEQA Guidelines 15088.5 because no new significant environmental impacts due to the project or due to a new mitigation measure have been identified; no substantial increase in the severity of an environmental impact has been identified, and no additional feasible project alternative or mitigation measure considerably different from others analyzed in the DEIR has been identified that would clearly lessen the significant environmental impacts of the project.

7. Consistent with Public Resources Code Section 21081.6, the Planning Commission recommends that the City Council adopt the Mitigation Monitoring and Reporting Program, which is included in Exhibit "B", to mitigate or avoid significant effects of the Project on the environment and to ensure compliance during project implementation.

8. Based upon the findings and conclusions set forth above, the Planning Commission hereby recommends that the City Council Certify the Environmental Impact Report for Zoning Amendment 2019-0005 (Ordinance No. 2019-11), Arroyo at Monrovia Station Specific Plan SP2019-0004, Vesting Tentative Tract Map TTM82517, and Conditional Use Permit CUP2019-0016 and adopt the statement of overriding considerations set forth herein.

9. The Secretary of the Planning Commission shall certify to the adoption of this Resolution.

Signatures to Follow on Next Page

PASSED, APPROVED, AND ADOPTED this 12th day of February, 2020.

BY:

Gary Schaeffler, Chair
Monrovia Planning Commission

ATTEST:

Craig Jimenez, AICP, Secretary
Monrovia Planning Commission

APPROVED AS TO FORM:

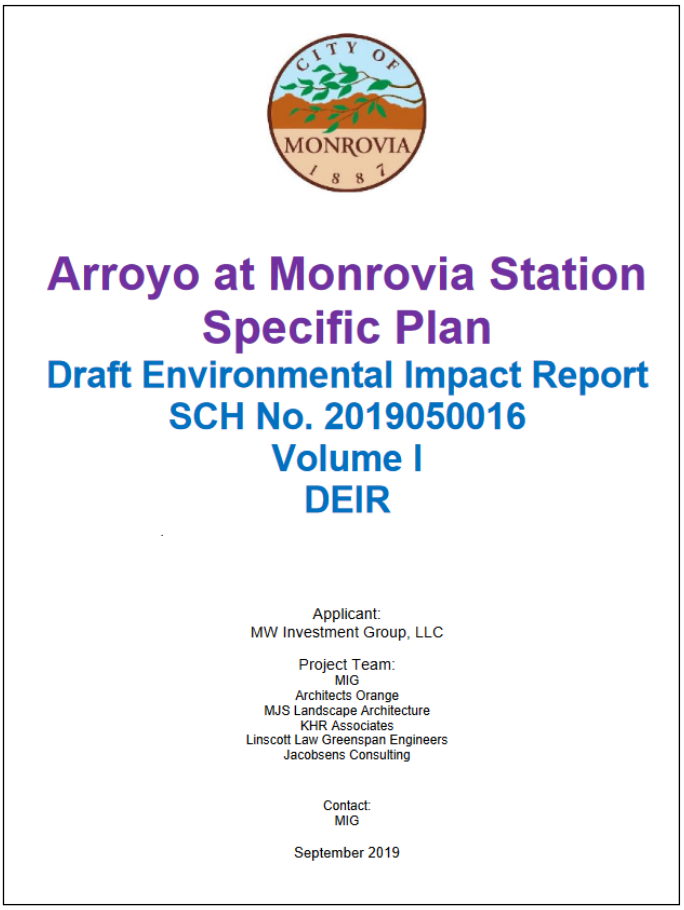
Craig Steele, City Attorney
City of Monrovia

PLANNING COMMISSION RESOLUTION NO. 2019-0015

EXHIBIT A

Draft Environmental Impact Report

A copy of the Draft Environmental Impact Report is on file in the Office of the Planning Division. An electronic copy is also located on the City of Monrovia's website at the following link: https://www.cityofmonrovia.org/your-government/community-development/planning/development-spotlight



Arroyo at Monrovia Station Specific Plan

Draft Environmental Impact Report
SCH No. 2019050016
Volume I
DEIR

Applicant:
MW Investment Group, LLC

Project Team:
MIG
Architects Orange
MJS Landscape Architecture
KHR Associates
Linscott Law Greenspan Engineers
Jacobsens Consulting

Contact:
MIG

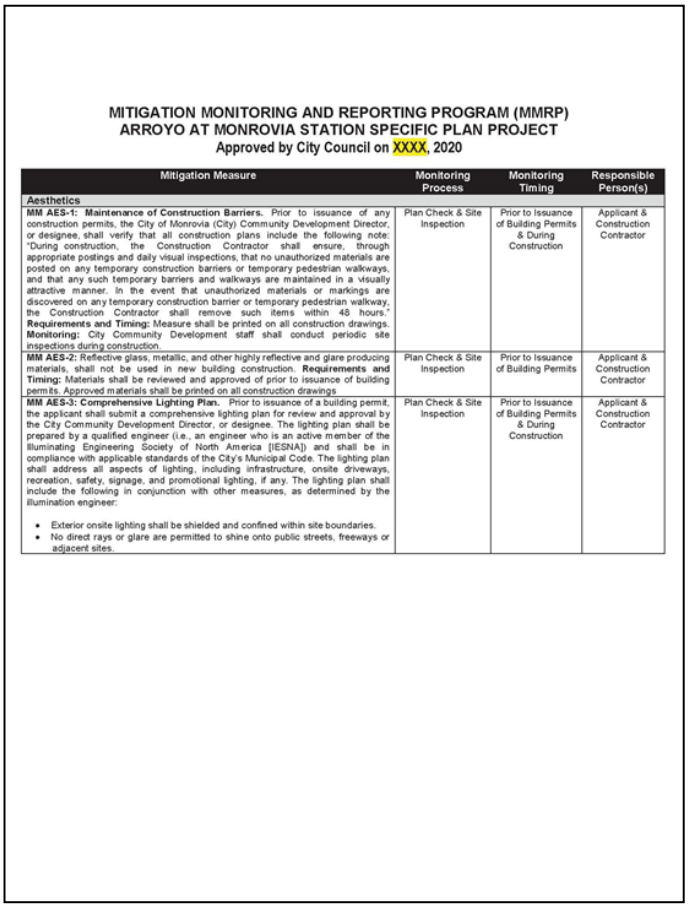
September 2019

PLANNING COMMISSION RESOLUTION NO. 2019-0015

EXHIBIT B

Mitigation Monitoring and Reporting Program

A copy of the Mitigation Monitoring and Reporting Program is on file in the Office of the Planning Division. An electronic copy is also located on the City of Monrovia's website at the following link: https://www.cityofmonrovia.org/your-government/community-development/planning/development-spotlight



MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)
ARROYO AT MONROVIA STATION SPECIFIC PLAN PROJECT
Approved by City Council on XXXX, 2020

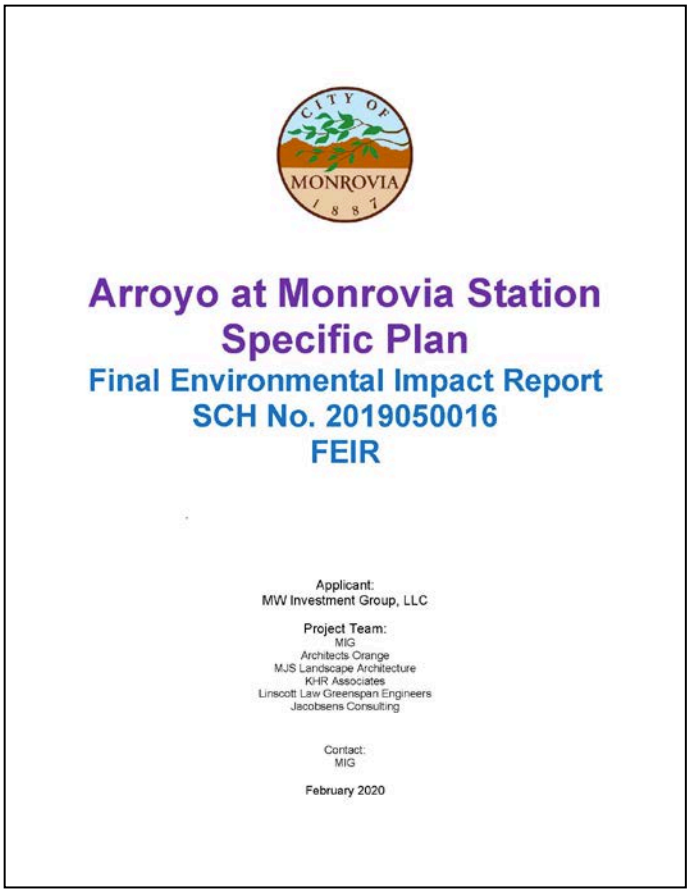
Mitigation Measure	Monitoring Process	Monitoring Timing	Responsible Person(s)
Aesthetics			
MM AES-1: Maintenance of Construction Barriers. Prior to issuance of any construction permits, the City of Monrovia (City) Community Development Director, or designee, shall verify that all construction plans include the following note: "During construction, the Construction Contractor shall ensure, through appropriate postings and daily visual inspections, that no unauthorized materials are posted on any temporary construction barriers or temporary pedestrian walkways, and that any such temporary barriers and walkways are maintained in a visually attractive manner. In the event that unauthorized materials or markings are discovered on any temporary construction barrier or temporary pedestrian walkway, the Construction Contractor shall remove such items within 48 hours." **Requirements and Timing:** Measure shall be printed on all construction drawings. **Monitoring:** City Community Development staff shall conduct periodic site inspections during construction.	Plan Check & Site Inspection	Prior to Issuance of Building Permits & During Construction	Applicant & Construction Contractor
MM AES-2: Reflective glass, metallic, and other highly reflective and glare producing materials, shall not be used in new building construction. **Requirements and Timing:** Materials shall be reviewed and approved of prior to issuance of building permits. Approved materials shall be printed on all construction drawings.	Plan Check & Site Inspection	Prior to Issuance of Building Permits	Applicant & Construction Contractor
MM AES-3: Comprehensive Lighting Plan. Prior to issuance of a building permit, the applicant shall submit a comprehensive lighting plan for review and approval by the City Community Development Director, or designee. The lighting plan shall be prepared by a qualified engineer (i.e., an engineer who is an active member of the Illuminating Engineering Society of North America [IESNA]) and shall be in compliance with applicable standards of the City's Municipal Code. The lighting plan shall address all aspects of lighting, including infrastructure, onsite driveways, recreation, safety, signage, and promotional lighting, if any. The lighting plan shall include the following in conjunction with other measures, as determined by the illumination engineer: • Exterior onsite lighting shall be shielded and confined within site boundaries. • No direct rays or glare are permitted to shine onto public streets, freeways or adjacent sites.	Plan Check & Site Inspection	Prior to Issuance of Building Permits & During Construction	Applicant & Construction Contractor

PLANNING COMMISSION RESOLUTION NO. 2019-0015

EXHIBIT C

Draft Final Environmental Impact Report

A copy of the Draft Final Environmental Impact Report is on in the Office of the Planning Division. An electronic copy is also located on the City of Monrovia's website at the following link: https://www.cityofmonrovia.org/your-government/community-development/planning/development-spotlight



Arroyo at Monrovia Station
Specific Plan
Final Environmental Impact Report
SCH No. 2019050016
FEIR

Applicant:
MW Investment Group, LLC

Project Team:
MIG
Architects Orange
MJS Landscape Architecture
KHR Associates
Linscott Law Greenspan Engineers
Jacobsens Consulting

Contact:
MIG

February 2020

PLANNING COMMISSION RESOLUTION NO. 2019-0016

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MONROVIA, CALIFORNIA, RECOMMENDING TO CITY COUNCIL APPROVAL OF ORDINANCE 2019-11, WHICH INCLUDES ZONING ORDINANCE AND MAP AMENDMENT ZA2019-0005 AMENDING THE OFFICIAL ZONING MAP SET FORTH IN SECTION 17.04.040 TO CHANGE PD (PLANNED DEVELOPMENT) TO THE SP (SPECIFIC PLAN) ZONE DESIGNATION AND AMENDING THE ZONING ORDINANCE TO ADD THE ARROYO AT MONROVIA STATION SPECIFIC PLAN TO SECTION 17.04.035 OF TITLE 17 (ZONING) OF THE MONROVIA MUNICIPAL CODE FOR PROPERTY LOCATED AT 202, 206, 210, 212, 216, 220, 224, 228, 234, AND 238 WEST EVERGREEN AVENUE, AND 1551 SOUTH PRIMROSE AVENUE AND 1610 SOUTH MAGNOLIA AVENUE (ASSESSOR'S PARCEL NUMBERS [APN] 8507-002-011, -012, -014, -015, -017, -018, -019, -020, -022, -023, -036, -037)

RECITALS

(i) MW Investment Group, LLC has initiated an application to develop a 2.90-acre site with a transit-oriented, infill, mixed-use residential/commercial development to include: 302 residential units, including three live/work units and 15 affordable units for very low-income households, 7,080 square feet of ground floor commercial space, a parking structure containing 500 parking spaces, a leasing office, residential amenities including two courtyards and a roof deck, and public open space in the form of four plazas along the street frontage of West Pomona Avenue. The project is located at 202, 206, 210, 212, 216, 220, 224, 228, 234, and 238 W. Evergreen Avenue, and 1551 South Primrose Avenue and 1610 South Magnolia Avenue (Assessor's Parcel Numbers [APN] 8507-002-011, -012, -014, -015, -017, -018, -019, -020, -022, -023, -036, and -037). The development application includes a request to amend the City's Official Zoning Map changing the PD (Planned Development) Zone designation to the SP (Specific Plan) Zone and amend the text of the Zoning Ordinance to add the Arroyo at Monrovia Station Specific Plan to Section 17.04.035 of Title 17 (Zoning) of the Monrovia Municipal Code for the subject property (ZA2019-0005/Ordinance 2019-11).

(ii) On November 13, 2019, December 11, 2019, January 15, 2020, and February 12, 2020 the Planning Commission of the City of Monrovia conducted a duly noticed public hearing on the project, including Ordinance No. 2019-11, which incorporates the amendment to the Official Zoning Map and Zoning Ordinance described above. At the hearing, all interested persons were given an opportunity to be heard. The Planning Commission received and considered the staff report and all the information, evidence, and testimony presented in connection with this project.

(iii) Environmental Review

(a) Based on the information in the application and accompanying technical reports, an Environmental Impact Report (EIR) was prepared in accordance with the California Environmental Quality Act ("CEQA") and the City's local CEQA Guidelines. The EIR identified several potentially significant environmental effects associated with the adoption of the Arroyo at Monrovia Specific Plan and associated mixed-use development project, as well as implementing Ordinance No. 2019-11. Such effects and corresponding mitigation measures are identified in the EIR. Except for the area of noise, all significant environmental effects have been reduced to an insignificant level in that all such effects that can feasibly be avoided have been avoided or reduced to a level of insignificance by the imposition of mitigation measures.

(b) The DEIR found that the proposed project would result in significant and unavoidable adverse impacts in the area of noise. Consistent with Section 15093 of the State of California CEQA Guidelines, the Planning Commission recommends to the City Council that the Council adopt a Statement of Overriding Considerations and find that the benefits of approval and implementation of the Arroyo at Monrovia Station project outweigh the unavoidable environmental impact because the Planning Commission believes the proposed project will:

(i) Help the City attain a balanced mix of land use within the City, thereby providing residents with ready access to housing, employment, and commercial services that will be close to public transit;

(ii) Contribute to attaining regional jobs/housing balance goals;

(iii) Encourage private investment and redevelopment of property in the City;

(iv) Ensure that residents from all income levels, including very low income households, will have access to decent, affordable housing;

(v) Revitalize and improve this area of the City;

(vi) Create a City environment which makes Monrovia a pleasant place to live, work, shop, and do business;

(vii) Encourage pedestrian activity, provide public open space and enhancing landscaping;

(viii) Provide public automobile parking and bicycle parking for the public and for residents; and

(ix) Comply with mandates from the State of California to increase the supply of housing adjacent to public transit because the project is a transit-oriented mixed-use residential and commercial development that implements the use of public transportation, including light rail transit, to provide mobility to all City residents and encourages the use of public transportation as an alternative to automobile travel. The project provides 31 short term bicycle storage spaces and 151 long term bicycle storage spaces dispersed throughout the site. The project will provide continuous sidewalks around the development, including wheelchair ramps. The parking structure provides 500 vehicle parking spaces, some of which will be available for public parking.

(c) As set forth in Planning Commission Resolution PCR2019-0015, the Planning Commission has independently considered and reviewed the information in the Environmental Impact Report, comments on the Environmental Impact Report, the responses and revisions contained in the Draft Final Impact Report and the Mitigation Monitoring and Reporting Program in making a recommendation on Ordinance No. 2019-11.

(iv) The custodian of records for all materials that constitute the record of proceedings upon which this decision is based is the Planning Division Manager. Those documents are available for public review in the Planning Division located at 415 South Ivy Avenue, Monrovia, California 91016.

(v) All legal prerequisites to the adoption of this Resolution have occurred.

RESOLUTION

NOW, THEREFORE, the Planning Commission of the City of Monrovia hereby finds, determines and resolves as follows:

1. The Planning Commission finds that all of the facts set forth in the Recitals of this Resolution are true and correct.

2. With the exception of a potentially significant and unavoidable noise impact to the occupants of the property located at 230 West Evergreen Avenue during the construction phase, the adoption of Ordinance No. 2019-11 will not have a significant effect on the environment. The noise control requirements during construction, including noise barriers incorporated into the EIR mitigation measures MM NOI-3, would reduce construction noise levels at sensitive receptor locations to the maximum extent feasible. However, given the proximity

of the occupants at 230 West Evergreen Avenue, project construction could increase hourly ambient noise levels by 10 dB or more for two or more hours per day, seven days a week, for a period of 12 months or more at this location. Although mitigation measure MM NOI-3 includes a provision to temporarily relocate the occupants of 230 West Evergreen Avenue, this relocation would be subject to negotiation by and between the applicant and the occupant of 230 West Evergreen Avenue. Therefore, the applicant cannot guarantee the effectiveness or implementation of this mitigation at this time. Thus, this construction noise impact would remain significant and unavoidable even with the implementation of feasible mitigation measures.

3. The project is in conformance with the environmental goals and policies adopted by the City.

4. Ordinance No. 2019-11 is consistent and compatible with existing land uses in the environs, in that the surrounding land uses include a mix of multiple residential, commercial, and light industrial uses and the area that is to be rezoned is within 450 feet of the Monrovia Gold Line Station. The amendments to the Official Zoning Map and Zoning Ordinance will facilitate a transit-oriented mixed-use residential/commercial development to include: 302 apartment units (including 15 designated affordable to very low income households and 3 designated as live/work units), 7,080 square feet of ground-floor commercial space, and a seven-story (8-levels above ground and one level semi-subterranean) 500-space parking garage which will be compatible with the surrounding mix of uses.

5. Ordinance No. 2019-11 is consistent with, and necessary to carry out General Plan goals and policies set forth in the Land Use and Housing Elements, and other Elements of the General Plan, and to guide and direct orderly development of the City and the respective neighborhoods.

    a) The Arroyo at Monrovia Station Specific Plan and development project, including revisions to the Zoning Ordinance and Zoning Map will facilitate the development of a five-story (6-level) mixed use building on a 2.90 acre site within the Station Square Transit Village. The project is consistent with the General Plan's land use, urban design, and planning objectives. The building would complement the transit village setting and enhance the character of the area with "signature architecture". Its height and unique architectural elements will create a highly recognizable landmark and orienting device that will help define the neighborhood. The site's design features public open spaces with adequate amenities for comfortable social interaction and promotes an increased level of pedestrian activity. Therefore, the Zoning Ordinance and Map Amendment is consistent with the City of Monrovia General Plan Land Use Element goals and policies that are listed in Section 5.2 of the proposed Arroyo at Monrovia Station Specific Plan, which are incorporated herein by this reference.

b) The Arroyo at Monrovia Station project, including the revisions to the Zoning Ordinance, allows the development of a transit-oriented mixed-use residential and commercial development that implements the City's goals to support the use of public transportation, including light rail transit to provide mobility to all City residents and encourage the use of public transportation as an alternative to automobile travel. The project provides 31 short term bicycle storage spaces and 151 long term bicycle storage spaces dispersed throughout the site. The project will provide continuous sidewalks around the development, including wheelchair ramps. The parking structure provides 500 vehicle parking spaces. Therefore, the Specific Plan is consistent with the City of Monrovia General Plan Circulation Element goals and policies that are listed in Section 5.3 of the Arroyo at Monrovia Station Specific Plan, which are incorporated herein by this reference.

c) The Arroyo at Monrovia Station project, including the revisions to the Zoning Ordinance, is located within the PD-12 Station Square Transit Village, designated in the Housing Element as "Residential Growth Area," with a realistic capacity to accommodate 2,064 residential units available from low to very low income households. The Arroyo at Monrovia Station project's addition of 302 units implements the Housing Element requirements and objectives. Fifteen of the dwelling units are set aside as very low income housing that will be will deed restricted for 55 or more years consistent with the State Density Bonus Law. Therefore, the project and the proposed ordinance is consistent with the City of Monrovia General Plan Housing Element goals and policies that are listed in Section 5.4 of the proposed Arroyo at Monrovia Station Specific Plan, which are incorporated herein by this reference.

d) The Arroyo at Monrovia Station project, including the revisions to the Zoning Ordinance, increases the availability of usable public and private open space. Public open space includes 5,541 square feet of plaza areas located along the street frontage of West Pomona Avenue. Private amenities include courtyards, a pool, and common roof deck, for a total of 18,426 square feet. Therefore, the project and the proposed ordinance are consistent with the City of Monrovia General Plan Open Space Element goals and policies that are listed in Section 5.5 of the proposed Arroyo at Monrovia Station Specific Plan, which are incorporated herein by this reference.

e) The Arroyo at Monrovia Station project, including the revisions to the Zoning Ordinance, will incorporate the building code requirements to attenuate noise as required by the Noise Element. Therefore, the project and the proposed ordinance are consistent with the City of Monrovia General Plan Open Space Element goals and policies.

6. Ordinance No. 2019-11, as well as the associated Arroyo at Monrovia Station Specific Plan and development project, is appropriate to the public interest, in that it will help implement the General Plan, and protect, maintain and enhance the built environment and economy of City of Monrovia.

7. With the exception of the potentially significant and unavoidable short term noise impact to the property located at 230 West Evergreen Avenue resulting from the construction phase of the development project, Ordinance No. 2019-11 will not adversely affect the public health, safety, or welfare in that it will provide for orderly and consistent development in the City.

8. Based upon the findings and conclusions set forth above, the Planning Commission hereby recommends approval to the City Council of Ordinance No. 2019-11 as set forth in "Exhibit A", attached hereto and incorporated herein by this reference.

9. The Secretary of the Planning Commission shall certify to the adoption of this Resolution.

PASSED, APPROVED, AND ADOPTED this 12th day of February, 2020.

BY:

Gary Schaeffler, Chair
Monrovia Planning Commission

ATTEST:

Craig Jimenez, AICP, Secretary
Monrovia Planning Commission

APPROVED AS TO FORM:

Craig A. Steele, City Attorney
City of Monrovia

PLANNING COMMISSION RESOLUTION NO. 2019-0016

EXHIBIT A

ORDINANCE NO. 2019-11

AN ORDINANCE OF THE CITY OF MONROVIA, CALIFORNIA, ADOPTING ZA2019-0005, A ZONING ORDINACE AND MAP AMENDMENT AMENDING THE OFFICIAL ZONING MAP SET FORTH IN SECTION 17.04.040 TO CHANGE PD (PLANNED DEVELOPMENT) TO THE SP (SPECIFIC PLAN) ZONE DESIGNATION AND AMENDING THE ZONING ORDINANCE TO ADD THE ARROYO AT MONROVIA STATION SPECIFIC PLAN TO SECTION 17.04.035 OF TITLE 17 (ZONING) OF THE MONROVIA MUNICIPAL CODE FOR PROPERTY LOCATED AT 202, 206, 210, 212, 216, 220, 224, 228, 234, AND 238 W. EVERGREEN AVENUE, AND 1551 SOUTH PRIMROSE AVENUE AND 1610 SOUTH MAGNOLIA AVENUE (ASSESSOR'S PARCEL NUMBERS [APN] 8507-002-011, -012, -014, -015, -017, -018, -019, -020, -022, -023, -036, -037)

THE CITY COUNCIL OF THE CITY OF MONROVIA, CALIFORNIA does ordain as follows:

SECTION 1. MW Investment Group, LLC has initiated an application to develop a 2.90-acre site with a transit-oriented, infill, mixed-use residential/commercial development to include: 302 residential units, including three live/work units and 15 affordable units for very low-income households, 7,080 square feet of ground floor commercial space, a parking structure containing 500 parking spaces, a leasing office, residential amenities including two courtyards and a roof deck, and public open space in the form of four plazas along the street frontage of West Pomona Avenue. The project is located at 202, 206, 210, 212, 216, 220, 224, 228, 234, and 238 W. Evergreen Avenue, and 1551 South Primrose Avenue and 1610 South Magnolia Avenue (Assessor's Parcel Numbers [APN] 8507-002-011, -012, -014, -015, -017, -018, -019, -020, -022, -023, -036, and -037). The development application includes a request to amend the City's Official Zoning Map changing the PD (Planned Development) Zone designation to the SP (Specific Plan) Zone and amend the text of the Zoning Ordinance to add the Arroyo at Monrovia Station Specific Plan to Section 17.04.035 of Title 17 (Zoning) of the Monrovia Municipal Code for the subject property.

SECTION 2. On November 13, 2019, December 11, 2019, January 15, 2020, and February 12, 2020 the Planning Commission of the City of Monrovia conducted a duly noticed public hearing on the project, including this Ordinance No. 2019-11, which incorporates the amendment to the Zoning Ordinance described above. At the hearing, all interested persons were given an opportunity to be heard. The Planning Commission

received and considered the staff report and all the information, evidence, and testimony presented in connection with this project. Following the close of the public hearing, the Planning Commission adopted Resolution No. PCR2019-0016 recommending approval of this Ordinance No. 2019-11.

SECTION 3. On _____, the City Council of the City of Monrovia conducted a duly noticed public hearing on the project, including this Ordinance No. 2019-11. At the hearing, all interested persons were given an opportunity to be heard. The City Council received and considered the staff report and all the information, evidence, and testimony presented in connection with this project.

SECTION 4. In accordance with California Environmental Quality Act (CEQA), a Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) was filed with the State Clearinghouse, which assigned State Clearinghouse Number 2019050016. The NOP was distributed to all responsible and trustee agencies and other interested parties for a 30-day public review period commencing on May 22, 2019 and ending on June 21, 2019. On September 26, 2019 a Notice of Completion (NOC) of the DEIR was filed with the State Clearinghouse and the DEIR was distributed to agencies, interested organizations, and interested individuals by the City. A 45-day public review period for the Draft EIR was established pursuant to state law, which commenced on September 26, 2019 and ended on November 13, 2019. During the review period, the Planning Commission conducted a public hearing to allow the public an opportunity to comment on the adequacy of the DEIR.

SECTION 5. On _____, the City Council adopted a resolution (2020-XX) certifying the Final Environmental Impact Report for the proposed Arroyo at Monrovia Station Specific Plan and development project, adopting the Mitigation Monitoring Plan and making certain findings and facts as required by the California Environmental Quality Act ("CEQA"), adopting a Statement of Overriding Considerations.

SECTION 6. The custodian of records for all materials that constitute the record of proceedings upon which this decision is based is the City Clerk. Those documents are available for public review in the Office of the City Clerk located at 415 South Ivy Avenue, Monrovia, California 91016.

SECTION 7. All legal prerequisites to the adoption of the Ordinance have occurred.

SECTION 8. The Official Zoning Map for the City of Monrovia set forth in Title 17 (Zoning), Chapter 17.04 (General Provisions), Section 17.04.040 (Official Zoning Map) of the Monrovia Municipal Code, is hereby amended by changing the zoning designation of the property that is identified in Exhibit "A", attached hereto and incorporated herein by this reference, to SP (Specific Plan).

SECTION 9. Title 17 (Zoning), Chapter 17.04 (General Provisions), Section 17.04.035 (Relationship to Specific Plans), is hereby amended by adding the following at the end of the list of Specific Plans:

"Arroyo at Monrovia Station."

SECTION 10. Severability. If any section, subsection, subdivision, sentence, clause, phrase, or portion of this ordinance or the application thereof to any person or place, is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remainder of this ordinance. The City Council hereby declares that it would have adopted this ordinance, and each and every section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, sentences, clauses, phrases, or portions thereof be declared invalid or unconstitutional.

SECTION 11. The City Clerk shall certify to the passage of this ordinance and shall cause same to be published pursuant to state law within fifteen (15) days after its passage, and this ordinance shall become effective thirty (30) days after its passage.

INTRODUCED this _____day of _____, 2020.

PASSED, APPROVED, AND ADOPTED this _____ day of _____, 2020.

Tom Adams, Mayor

ATTEST:

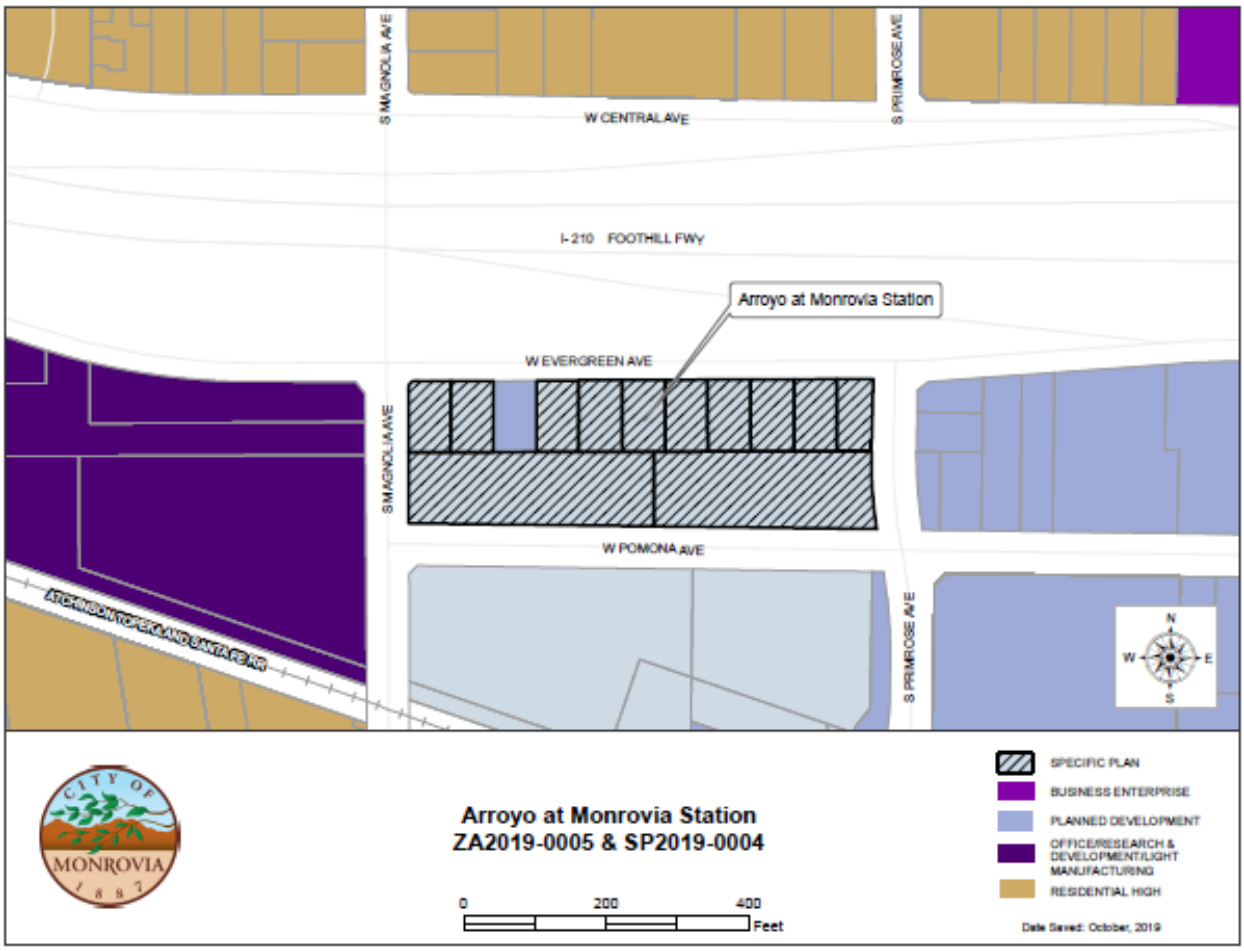
Alice D. Atkins, CMC, City Clerk
City of Monrovia

APPROVED AS TO FORM:

Craig A. Steele, City Attorney
City of Monrovia

ORDINANCE 2019-19 - EXHIBIT A

Zoning Map Amendment



PLANNING COMMISSION RESOLUTION NO. 2019-0017

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MONROVIA, CALIFORNIA, RECOMMENDING TO THE CITY COUNCIL APPROVAL OF THE ARROYO AT MONROVIA STATION SPECIFIC PLAN

RECITALS

(i) MW Investment Group, LLC has initiated an application to develop a 2.90-acre site with a transit-oriented, infill, mixed-use residential/commercial development to include: 302 residential units, including three live/work units and 15 affordable units for very low-income households, 7,080 square feet of ground floor commercial space, a parking structure containing 500 parking spaces, a leasing office, residential amenities including two courtyards and a roof deck, and public open space in the form of four plazas along the street frontage of West Pomona Avenue. The project is located at 202, 206, 210, 212, 216, 220, 224, 228, 234, and 238 W. Evergreen Avenue, and 1551 South Primrose Avenue and 1610 South Magnolia Avenue (Assessor's Parcel Numbers [APN] 8507-002-011, -012, -014, -015, -017, -018, -019, -020, -022, -023, -036, and -037). The development application includes an amendment to the City's Official Zoning Map changing the PD (Planned Development) Zone designations to the SP (Specific Plan) Zone and a request to amend the text of the Zoning Ordinance to add Arroyo at Monrovia Station Specific Plan to Section 17.04.035 of Title 17 (Zoning) of the Monrovia Municipal Code for the subject properties (ZA2019-0005/Ordinance No. 2019-11), the adoption of Arroyo at Monrovia Station Specific Plan (SP2019-0001), the approval of a vesting tentative tract map for consolidation of twelve lots (TPM 82517), and the approval of a Conditional Use Permit to construct the development (CUP2019-0016).

(ii) On November 13, 2019, December 11, 2019, January 15, 2020, and February 12, 2020 the Planning Commission of the City of Monrovia conducted a duly noticed public hearing regarding the Arroyo at Monrovia Station Specific Plan. At the hearing, all interested persons were given an opportunity to be heard. The Planning Commission received and considered the staff report and all the information, evidence, and testimony presented in connection with this project.

(iii) Environmental Review

(a) Based on the information in the application and accompanying technical reports, an Environmental Impact Report (EIR) was prepared in accordance with California Environmental Quality Act ("CEQA") and the City's local CEQA Guidelines. The EIR identified several potentially significant environmental effects associated with the adoption of the Arroyo at Monrovia Specific Plan and associated mixed-use development project. Such effects and corresponding mitigation measures are identified in the EIR. Except for the area of short term noise during construction, all significant environmental effects have been reduced to an acceptable level in that all such effects that can feasibly be avoided have been avoided or reduced to a level of insignificance by the imposition of mitigation measures.

(b) The DEIR found that the proposed project would result in significant and unavoidable adverse impacts in the area of noise. Consistent with Section 15093 of the State of California CEQA Guidelines, the Planning Commission recommends to the City Council that the Council adopt a Statement of Overriding Considerations and find that the benefits of approval and implementation of the Arroyo at Monrovia Station project outweigh the unavoidable environmental impact because the Planning Commission believes the proposed project will:

(i) Help the City attain a balanced mix of land use within the City, thereby providing residents with ready access to housing, employment, and commercial services that will be close to public transit;

(ii) Contribute to attaining regional jobs/housing balance goals;

(iii) Encourage private investment and redevelopment of property in the City;

(iv) Ensure that residents from all income levels, including very low income households, will have access to decent, affordable housing;

(v) Revitalize and improve this area of the City;

(vi) Create a City environment which makes Monrovia a pleasant place to live, work, shop, and do business;

(vii) Encourage pedestrian activity, provide public open space and enhancing landscaping;

(viii) Provide public automobile parking and bicycle parking for the public and for residents; and

(ix) Comply with mandates from the State of California to increase the supply of housing adjacent to public transit because the project is a transit-oriented mixed-use residential and commercial development that implements the use of public transportation, including light rail transit, to provide mobility to all City residents and encourages the use of public transportation as an alternative to automobile travel. The project provides 31 short term bicycle storage spaces and 151 long term bicycle storage spaces dispersed throughout the site. The project will provide continuous sidewalks around the development, including wheelchair ramps. The parking structure provides 500 vehicle parking spaces, some of which will be available for public parking.

(c) As set forth in Planning Commission Resolution PCR2019-0015, the Planning Commission has independently considered and reviewed the information in the Environmental Impact Report, comments on the Environmental Impact Report, the responses to comments and revisions contained in the Draft Final Impact Report and the Mitigation Monitoring and Reporting Program in making a recommendation on the adoption of the Arroyo at Monrovia Station Specific Plan.

(iv) The custodian of records for all materials that constitute the record of the proceedings upon which this decision is based is the Planning Division Manager. Those documents are available for public review in the Planning Division located at 415 South Ivy Avenue, Monrovia, California 91016.

(v) All legal prerequisites to the adoption of this Resolution have occurred.

RESOLUTION

NOW, THEREFORE, the Planning Commission of the City of Monrovia hereby finds, determines and resolves as follows:

1. The Planning Commission finds that all of the facts set forth in the Recitals of this Resolution are true and correct.

2. With the exception of a potentially significant and unavoidable noise impact to the occupants of the property located at 230 West Evergreen Avenue during the construction phase, the adoption of the Arroyo at Monrovia Station Specific Plan will not have a significant effect on the environment. The noise control requirements during construction, including noise barriers incorporated into the EIR mitigation measures MM NOI-3, would reduce construction noise levels at sensitive receptor locations to the maximum extent feasible. However, given the proximity of the occupants at 230 West Evergreen Avenue, project construction could increase hourly ambient noise levels by 10 dB or more for two or more hours per day, seven days a week, for a period of 12 months or more at this location. Although mitigation measure MM NOI-3 includes a provision to temporarily relocate the occupants of 230 West Evergreen Avenue, this relocation would be subject to negotiation by and between the applicant and the occupant of 230 West Evergreen Avenue. Therefore, the applicant cannot guarantee the effectiveness or implementation of this mitigation at this time. Thus, this construction noise impact would remain significant and unavoidable even with the implementation of feasible mitigation measures.

3. The proposed Specific Plan is consistent with the objectives, policies, general land uses, and programs of the City of Monrovia General Plan, and adopted goals and policies of the City.

    a. The Arroyo at Monrovia Station Specific Plan will facilitate the development of a five-story (6-level) mixed use building on a 2.90 acre

site within the Station Square Transit Village. The project is consistent with the General Plan's land use, urban design, and planning objectives. The building would complement the transit village setting and enhance the character of the area with "signature architecture". Its height and unique architectural elements will create a highly recognizable land mark and orienting device that will help define the neighborhood. The site's design features public open spaces with adequate amenities for comfortable social interaction and promotes an increased level of pedestrian activity. Therefore, the Specific Plan is consistent with the City of Monrovia General Plan Land Use Element goals and policies that are listed in Section 5.2 of the proposed Arroyo at Monrovia Station Specific Plan, which are incorporated herein by this reference.

b. The Arroyo at Monrovia Station Specific Plan allows the development of a mixed-use residential and commercial development that implements the City's pedestrian, bicycle, and vehicle parking urban design and transportation and provides 31 short term bicycle storage spaces and 151 long term bicycle storage spaces dispersed throughout the site. The parking structured provides 500 vehicle parking spaces. Circulation improvements include sidewalks, and bicycle parking. Therefore, the Specific Plan is consistent with the City of Monrovia General Plan Land Use Element goals and policies that are listed in Section 5.3 of the Arroyo at Monrovia Station Specific Plan, which are incorporated herein by this reference.

c. The Arroyo at Monrovia Station Specific Plan is located within the PD-12 Station Square Transit Village, designated in the Housing Element as "Residential Growth Area," with a realistic capacity to accommodate 2,064 residential units available from low to very low income households. The Arroyo at Monrovia Station project's addition of 302 units implements the Housing Element requirements and objectives. Fifteen of the dwelling units are set aside as very low income housing that will be will deed restricted for 55 or more years consistent with the State Density Bonus Law. Therefore, the project and the proposed specific plan are consistent with the City of Monrovia General Plan Housing Element goals and policies that are listed in Section 5.4 of the proposed Arroyo at Monrovia Station Specific Plan, which are incorporated herein by this reference.

d. The Arroyo at Monrovia Station Specific Plan increases the availability of usable public and private open space. Public open space includes 5,541 square feet of plaza areas located along the street frontage of West Pomona Avenue. Private amenities include courtyards, a pool, and common roof deck, for a total of 18,426 square feet. Therefore, the project and the proposed specific plan are consistent with the City of Monrovia General Plan Open Space Element goals and policies that are listed in Section 5.5 of the proposed Arroyo at Monrovia Station Specific Plan, which are incorporated herein by this reference.

e. The Arroyo at Monrovia Station Specific Plan will incorporate the building code requirements to attenuate noise as required by the Noise Element.

Therefore, the project and the proposed ordinance is consistent with the City of Monrovia General Plan Open Space Element goals and policies.

4. The proposed Specific Plan would not be detrimental to the public interest, health, safety, convenience or welfare of the City.

5. The subject property is physically suitable for the requested land use designation and the anticipated land use development.

6. The proposed Specific Plan shall ensure development of desirable character, which will be compatible with existing and proposed development in the surrounding neighborhood.

7. Based upon the findings and conclusions set forth above, the Planning Commission hereby recommends approval of the Arroyo at Monrovia Station Specific Plan to the City Council as set forth in "Exhibit A" attached hereto and incorporated herein by this reference.

8. The Secretary of the Planning Commission shall certify to the adoption of this Resolution.

PASSED, APPROVED, AND ADOPTED this 12th day of February, 2020.

Gary Schaeffler, Chair
Monrovia Planning Commission

ATTEST:

Craig Jimenez, AICP, Secretary
Monrovia Planning Commission

APPROVED AS TO FORM:

Craig A. Steele, City Attorney
City of Monrovia

EXHIBIT A

ARROYO AT MONROVIA STATION SPECIFIC PLAN

A copy of the Specific Plan is on file in the City Clerk's Office. Also, an electronic copy of the Arroyo at Monrovia Station Specific Plan is located on the City of Monrovia's website at the following link: https://www.cityofmonrovia.org/your-government/community-development/planning/development-spotlight