PC EXHIBIT B

Attachment A

(*Combined CEQA Document*)—Air Quality and Greenhouse Gas Emissions Assessment for the Campus Oaks and Sierra Vista Land Use Amendments Project (Raney Planning & Management, August 2023)

Air Quality and Greenhouse Gas Impact Analysis

Campus Oaks and Sierra Vista Land Use Amendments Project in Western Roseville

Prepared for:
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August 2023

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INTRODUCTION

This Air Quality and Greenhouse Gas Impact Analysis identifies and analyzes the potential environmental impacts from the Campus Oaks and Sierra Vista Land Use Amendments Project in Western Roseville (proposed project) related to air quality and greenhouse gas (GHG) emissions. The information and analysis in this document are organized in accordance with the City of Roseville's standard addendum checklist in accordance with the California Environmental Quality Act (CEQA). The analysis provided in this document identifies previously approved mitigation measures that continue to apply to the project to reduce potentially significant environmental effects identified in the previous CEQA documents. All modeling results are included as an appendix to this document.

PROJECT LOCATION

The project sites (parcels CO-52, WB-30, WB-32, WB-52, and FD-34, aka "affected parcels") are located in two planning areas, the Hewlett-Packard Campus Oaks Master Plan Area (COMP), generally south of Blue Oaks Boulevard and west of New Meadow Drive; and the Sierra Vista Specific Plan (SVSP), generally west of Fiddyment Road, north of Baseline Road and south of Pleasant Grove Boulevard in the City of Roseville, California (see Figure 1, Roseville Specific Plans). The five parcels combined consist of 39.36 acres and are currently undeveloped. Parcel CO-52 surrounding land uses include undeveloped land to the north, residential apartments to the west and south, soccer field and industrial uses beyond to the east (see Figure 2 for parcel location in the COMP). Parcels WB-30 and WB-52 surrounding land uses include undeveloped land to the north and west, developing residential to the south, residential to the southeast, and undeveloped land to the east. Parcel WB-32 surrounding land uses include residential uses to the east and north, and undeveloped land to the west and south. Parcel FD-34 surrounding land uses include developing residential to the north and undeveloped lands to the south, west and east, except for an electrical substation to the immediate south (see Figure 3 for parcel locations in the SVSP).

PROJECT SUMMARY

The proposed project consists of two main components: the proposed General Plan and Campus Oaks Master Plan amendments, including rezoning, major project permit stage 1 modification, and development agreement amendment for parcel CO-52, and the proposed General Plan and Sierra Vista Specific Plan amendments, including rezoning for parcel WB-52, density bonuses for parcels WB-30, WB-32, and FD-34, modifications to the affordable housing obligations for parcels WB-30, WB-32, and FD-34, and development agreement amendments for all four parcels. As a result of the density bonuses, the proposed project will result in an increase in housing density and in the amount of very-low-income and low-income units within the City of Roseville. Table 1 below summarizes the City of Roseville's general plan designations and zoning for the project's parcels.

Table 1
General Plan and Zoning Designations

Parcel	Acres	Current General Plan	Current Zoning	Proposed General Plan	Proposed Zoning
CO-52	17.65	Tech Park/Business Professional, Light Industrial	Industrial/Business Park/Special Area	High-Density Residential	R3 Multi-Family Housing
WB-30	8.06	High Density Residential	R3 Multi-Family Housing	No change	No change
WB-32	5.11	High Density Residential	R3 Multi-Family Housing	No change	No change
WB-52	1.50	Park	Park	High-Density Residential	R3 Multi-Family Housing
FD-34	7.04	High Density Residential	R3 Multi-Family Housing	No change	No change

Figure 1
Roseville Specific Plans

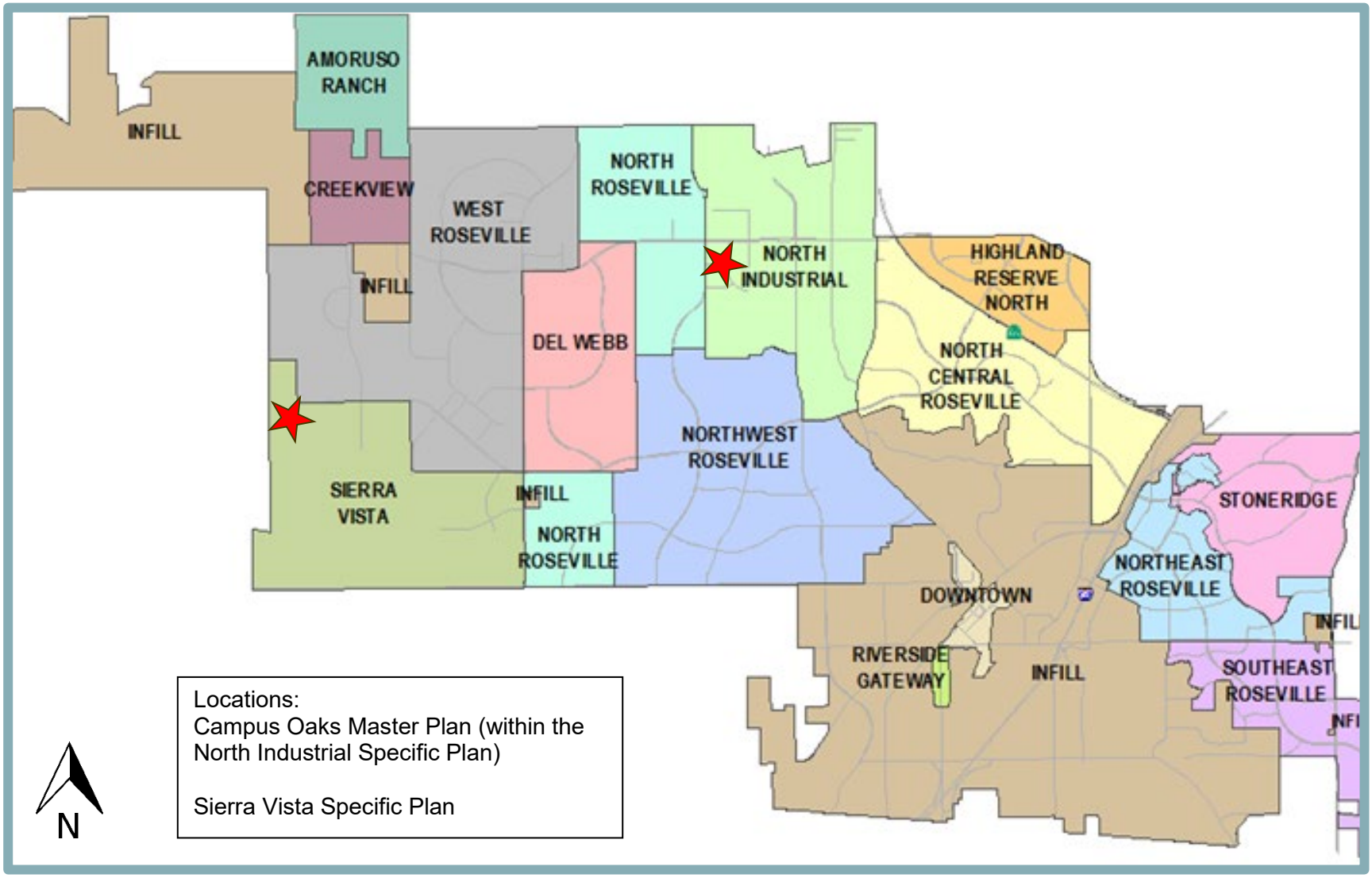

Figure 2
Project Location (Parcel CO-52 in the Campus Oaks Master Plan)

Figure 3
Project Locations (Parcels in the Sierra Vista Specific Plan)

SOURCES

1. CARB. *Air Quality and Land Use Handbook: A Community Health Perspective.* April 2005. Available at: https://ww2.arb.ca.gov/sites/default/files/2023-05/Land%20Use%20Handbook_0.pdf.
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11. Roseville, City of. *Sierra Vista Specific Plan Environmental Impact Report* (SCH# 2008032115). Certified May 5, 2010. Available at: https://www.roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8775140, Accessed August 11, 2023.
12. Roseville, City of. *Westbrook Specific Plan Amendment to the Sierra Vista Specific Plan Mitigated Negative Declaration*. April 2012. Available at: https://www.roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8775140. Accessed August 11, 2023.
13. Windy.App. Roseville data. Available at: https://windy.app/forecast2/spot/469575/Roseville+CA/statistics. Accessed July 31, 2023.

III. Air Quality

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Conflict with or obstruct implementation of the applicable air quality plan?	**COMP**[1] 4.10-1, 4.10-2, 4.10-4, 4.10-6 **SVSP**[2] 4.4-1, 4.4-2, 4.4-6	No	No	No	**Yes**
b) Result in a cumulatively considerable net increase of any criteria for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	See a) above	No	No	No	Yes
c) Expose sensitive receptors to substantial pollutant concentrations?	**COMP** 4.10-3, 4.10-7, 4.10-8, 4.10-9 **SVSP** 4.4-3, 4.4-4	No	No	No	**Yes**
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	**COMP** 4.10-5 **SVSP** 4.4-5	No	No	No	None required

[1] Roseville, City of. *Hewlett-Packard Campus Oaks Master Plan Environmental Impact Report* (SCH# 95112022). Certified June 5, 1996.

[2] Roseville, City of. Sierra Vista Specific Plan Environmental Impact Report (SCH# 2008032115). Certified May 5, 2010. *Westbrook Specific Plan Amendment to the Sierra Vista Specific Plan Mitigated Negative Declaration*. April 2012.

Discussion

a.b. The City of Roseville is located within the boundaries of the Sacramento Valley Air Basin (SVAB), which is under the jurisdiction of the Placer County Air Pollution Control District (PCAPCD). Federal and State ambient air quality standards (AAQS) have been established for six common air pollutants, known as criteria pollutants, due to the potential for pollutants to be detrimental to human health and the environment. The criteria pollutants include particulate matter (PM), ground-level ozone, carbon monoxide (CO), sulfur oxides, nitrogen oxides (NO_X), and lead. At the federal level, Placer County is designated as severe nonattainment for the 8-hour ozone AAQS, nonattainment for the 24-hour $PM_{2.5}$ AAQS, and attainment or unclassified for all other criteria pollutant AAQS. At the State level, the area is designated as a serious nonattainment area for the 1-hour ozone AAQS, nonattainment for the 8-hour ozone AAQS, nonattainment for the PM_{10} AAQS, and attainment or unclassified for all other State AAQS.

As a part of the SVAB federal ozone nonattainment area, the PCAPCD works with the other local air districts within the Sacramento area to develop a regional air quality management plan under the Federal Clean Air Act (FCAA) requirement. The regional air quality management plan is called the State Implementation Plan (SIP) which describes and demonstrates how Placer County, as well as the Sacramento nonattainment area, would attain the required federal ozone standard by the proposed attainment deadline. In accordance with the requirements of the FCAA, the PCAPCD, along with the other air districts in the region, prepared the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (Ozone Attainment Plan) in December 2008. The California Air Resources Board (CARB) determined that the Ozone Attainment Plan met FCAA requirements and approved the Plan on March 26, 2009 as a revision to the SIP. An update to the plan, the 2017 Revisions to the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2017 Ozone Attainment Plan), was prepared and adopted by CARB on November 16, 2017. An additional update to the plan was prepared and adopted by CARB on October 15, 2018, and known as the 2018 Updates to the California State Implementation Plan.

Nearly all development projects in the Sacramento region have the potential to generate air pollutants that may increase the difficultly of attaining federal and State AAQS. Therefore, evaluation of air quality impacts is required. In order to evaluate ozone and other criteria air pollutant emissions and support attainment goals for those pollutants that the area is designated nonattainment, PCAPCD has developed its California Environmental Quality Act (CEQA) Handbook,[3] which includes recommended thresholds of significance, including mass emission thresholds for construction-related and operational ozone precursors, as the area is under nonattainment for ozone. For development projects, PCAPCD established significance thresholds for emissions of the ozone precursors reactive organic gases (ROG) and NO_X, as well as for PM_{10}, expressed in pounds per day (lbs/day) presented in Table 2.

[3] PCAPCD. *2017 California Environmental Quality Act Handbook*. October 2016. Available at: https://www.placerair.org/1801/CEQA-Handbook. Accessed 7/27/2023

Table 2
PCAPCD Thresholds of Significance

Pollutant	Construction Thresholds Daily Maximum	Operational Thresholds Daily Maximum
ROG	82 lbs/day	55 lbs/day
NO_X	82 lbs/day	55 lbs/day
PM_{10}	82 lbs/day	82 lbs/day

Source: PCAPCD, 2017 CEQA Handbook, October 2016.

Construction Criteria Pollutant Emissions

The PCAPCD provides guidance on reviewing proposed projects for air quality impacts in its CEQA Handbook, specifically Chapter 3 covers construction activities.

The project is required to comply with all PCAPCD rules applicable to construction activity which can be found on the PCAPCD's Rules webpage.[4] Appendix A of PCAPCD's CEQA Handbook summarizes the most commonly applicable rules to construction including but not limited to the following rules:

- Rule 202, Visible Emissions;
- Rule 205, Nuisance;
- Rule 217, Cutback and Emulsified Asphalt Paving Materials;
- Rule 218, Architectural Coatings;
- Rule 225, Wood Burning Appliances;
- Rule 228, Fugitive Dust;
- Rule 231, Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters;
- Rule 246, Natural Gas-fired Water Heaters;
- Rule 247, Natural Gas-fired Water Heaters, Small Boilers, and Process Heaters;
- Rule 304, Land Developments Burning Smoke Management; and
- Rule 501, General Permit Requirements.

The project will comply with applicable PCAPCD recommended construction mitigation measures listed in Appendix C of the PCAPCD CEQA Handbook and listed below.

- Maintain all construction equipment properly according to manufacturer's specifications.
- Fuel all off-road and portable diesel-powered equipment with CARB certified motor vehicle diesel fuel (non-taxed version suitable for use off-road).
- Comply with the State Off-Road Regulation by using diesel construction equipment meeting CARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines.
- Comply with the State On-Road Regulation by using on-road heavy-duty trucks that meet the CARB's Tier 3 standard for on-road heavy-duty diesel engines.
- All on and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and/or job sites to remind drivers and operators of the 5-minute idling limit.
- Diesel idling within 1,000 feet of sensitive receptors is not permitted.

[4] PCAPCD Rulebook. Available at: https://www.placerair.org/1861/Rules. Accessed 7/28/2023

- Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors.
- Use Electrified equipment when feasible.
- Substitute gasoline-powered in place of diesel-powered equipment, where feasible.
- Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel.
- Require contractors to repower equipment with the cleanest engines available.
- Require construction equipment use installed California Verified Diesel Emission Control Strategies. These strategies are listed at http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm.
- Require the contractor to prepare a dust control plan when the disturbed area is more than one (1) acre.
- Reduce the amount of the disturbed area where possible.
- Use water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency is required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible.
- All dirt stock-pile areas should be sprayed daily as needed.
- All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible, with building pads laid as soon as possible after grading unless seeding or soil binders are used.
- All fugitive dust mitigation measures shall be shown on grading and building plans.
- The contractor or builder shall designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints, reduce visible emissions below 20% opacity, and prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress.

The proposed project was modeled using CalEEMod 2022's default construction information to provide full disclosure of emissions and to compare emissions to PCAPCD's thresholds of significance. Proposed project modeling results are included as Appendix A. A direct comparison of the construction emissions associated with the planning areas (COMP and SVSP) under the proposed project to the emissions that could occur in the same planning areas under the previously approved land uses (baseline) is provided in Table 3 to support the current environmental review and to provide an abundance of information. Appendix B includes the baseline project CalEEMod reports.

Table 3
Unmitigated Construction Criteria Pollutant Emissions Comparison (lbs/day)

Scenario	ROG	NO_X	PM_{10}
Baseline			
COMP	44.40	36.00	21.40
SVSP	14.40	36.00	21.40
Total Baseline	58.80	72.00	42.80
with Proposed Project			
COMP	10.20	36.00	21.40
SVSP	20.80	36.00	21.40
Total Proposed Project	31.00	72.00	42.80
CHANGE FROM BASELINE	-27.80	0.00	0.00
Threshold of Significance	82	82	82
Exceed Current Threshold?	No	No	No
Exceed Prior Impact Conclusions (significant and unavoidable in COMP and SVSP areas)	No	No	No

Source: CalEEMod, July and August 2023 (see Appendices A and B).

As shown in Table 3, the maximum daily unmitigated proposed project construction-related emissions for the COMP parcel would decrease slightly below current approved conditions for ROG and remain the same for NO_X and PM_{10}. For the SVSP parcels, the maximum daily unmitigated proposed project construction-related emissions would increase slightly above current approved conditions for ROG and remain the same for NO_X and PM_{10}. When looking at the project as a whole, if it is conservatively assumed that all parcels are developed concurrently, construction-related emissions would overall decrease for ROG and remain the same for NO_X and PM_{10},[5] and would be below the PCAPCD CEQA thresholds of significance used by the City of Roseville. Nonetheless, because the proposed project is part of two previously approved larger projects, COMP and SVSP, the air quality mitigation measures from the previous environmental documents remain applicable to the proposed project and would reduce construction-related emissions even further (COMP EIR MM 4.10-1 [Provide dust controls], COMP EIR MM 4.10-2(a) [Maintain construction equipment and vehicles], COMP EIR MM 4.10-2(b) [Develop and implement a Construction Employee Trip Reduction Plan], SVSP EIR MM 4.4-1 [Dust and construction control measures], SVSP EIR WMM 4.4-3 [Measures to reduce operational emissions], and SVSP EIR WMM 4.4-7 [Risk assessment and site specific measures]). Also, the proposed project is subject to Placer County Air Pollution Control District construction mitigation measures.

Therefore, project construction would not result in new or more substantially severe significant air quality impacts that have not been previously analyzed in the COMP and SVSP environmental documents, which found potential construction-related impacts to be significant and unavoidable in both the COMP and SVSP area, and indeed would result in fewer construction-related emissions.

[5] Since the proposed project construction details are not currently known, CalEEMod defaults were used in the analysis. CalEEMod construction default information (i.e., equipment usage, grading and site preparation activity) is based on project acres. Because the proposed project and baseline project acres are the same, the NO_X and PM_{10} emissions did not change from the baseline project to the proposed project.

Operational Criteria Pollutant Emissions

Operational emissions of ROG, NO_X, and PM_{10} would be generated by the project from mobile, area, and energy usage sources. CalEEMod modeling results for the proposed project, which include project trip rates from the *Draft Technical Memorandum on Transportation Impact Analysis for Rezoning Various Parcels in the Campus Oaks Master Plan and Sierra Vista Specific Plan*,[6] are included as Appendix A. A direct comparison of the operational emissions associated with the affected parcels under the proposed project to the operational emissions that could occur on the same parcels under the previously approved land uses (baseline) is provided in Table 4 to support the current environmental review and to provide an abundance of information. Appendix B includes the baseline project CalEEMod reports.

Table 4
Unmitigated Operational Criteria Pollutant Emissions Comparison (lbs/day)

Scenario	ROG	NO_X	PM_{10}
Baseline			
COMP	11.70	8.81	14.80
SVSP	29.20	14.10	22.00
Total Baseline	40.90	22.91	36.80
with Proposed Project			
COMP	15.50	7.49	11.60
SVSP	42.60	20.20	31.10
Total Proposed Project	58.10	27.69	42.70
CHANGE FROM BASELINE	+17.20	+4.78	+5.90
Threshold of Significance	55	55	82
Exceed Current Threshold?	Yes	No	No
Exceed Prior Impact Conclusions (significant and unavoidable in COMP and SVSP areas)	No	No	No

Source: CalEEMod, July and August 2023 (see Appendices A and B).

As demonstrated in Table 4, the proposed project's maximum daily unmitigated NO_X, and PM_{10} emissions for the COMP parcel would decrease, while the ROG emissions would incrementally increase, but all criteria pollutants of concern would be below the current PCAPCD CEQA thresholds of significance for the criteria pollutants of concern used by the City of Roseville. Project operation on the SVSP parcels would result in marginal to moderate increases in all three criteria pollutants, but would also still be below the current thresholds. When all affected parcels in both planning areas are viewed together, the unmitigated operation results in overall increases of the three criteria pollutants, but no threshold exceedances for NO_X, and PM_{10}. The unmitigated ROG emissions, however, would exceed the current threshold (by only 3.10 lbs/day). Although, notably, the operational ROG (and NO_X) threshold of significance used in the prior CEQA documents was markedly higher—82 lbs/day versus the current standard of 55 lbs/day. Thus, the threshold analysis presented here is highly conservative in comparison to the previously certified analysis.

[6] Fehr and Peers. *Draft Technical Memorandum on Transportation Impact Analysis for Rezoning Various Parcels in the Campus Oaks Master Plan and Sierra Vista Specific Plan.* July 25, 2023.

Because the proposed project is part of two previously approved larger projects, COMP and SVSP, the parcels were analyzed in the previous environmental documents and are subject to various air quality mitigation measures from the previous environmental documents. The SVSP environmental document includes Mitigation Measure 4.4-3 to reduce vehicle emissions and operational emissions from development through installation of charging stations, higher residential densities, access to transit stops, and restriction of woodburning appliances in multi-family residential projects. The aforementioned mitigation measure would reduce the proposed project emissions, including ROG emissions. As well, the proposed project is subject to Placer County Air Pollution Control District operation mitigation measures.

Furthermore, 38 percent of the proposed project ROG emissions are estimated to come from the use of consumer products by the future residences (such as the use of things like hairspray and household cleaning products), which will vary and may be less than estimated by the CalEEMod modeling, but for which such individualized variance cannot be adjusted in the modeling. Particularly, ROG emissions from the age-restricted units planned for Parcel WB-30likely would be lesser than what is currently modeled. It is important to note the CARB is responsible for ROG emission reductions from the consumer products sector. In September 2022, CARB approved the 2022 State Strategy for the SIP, which included a commitment to reduce ROG emissions from consumer products by 20 tons/day by the year 2037, which will further reduce the ROG emissions from the proposed project.[7] Thus, with implementation of the previously required mitigation measure in conjunction with State regulations and local air district measures, the proposed project's combined ROG emissions would be reduced, but not below the applicable PCAPCD ROG threshold of significance as shown in Table 5.

Table 5
Mitigated Operational ROG Emissions (lbs/day)

with Proposed Project	ROG
COMP	15.40
SVSP	42.40
Total Proposed Project	57.80
Threshold of Significance	55
Exceed Current Threshold?	Yes
Exceed Prior Impact Conclusions (significant and unavoidable in COMP and SVSP areas)	No

Source: CalEEMod, August 2023 (see Appendix C).

As shown in Table 5, the proposed project's mitigated operational ROG emissions are estimated to be slightly higher (2.8 lbs/day) than the threshold level. This modest threshold exceedance is consistent with the prior COMP and SVSP environmental documents, which identified impacts related to air pollutant increases as significant and unavoidable for full buildout of the planning areas, even with implementation of mitigation.[8,9] And, as

[7] CARB Consumer Products Program. Available at https://ww2.arb.ca.gov/our-work/programs/consumer-products-program/about. Accessed August 3, 2023.

[8] Roseville, City of. *Hewlett-Packard Campus Oaks Master Plan Environmental Impact Report* (SCH# 95112022). Certified June 5, 1996. Page 6-19.

[9] Roseville, City of. Sierra Vista Specific Plan Environmental Impact Report (SCH# 2008032115). Certified May 5, 2010. Page 4.4-31.

discussed just above, the operational ROG threshold of significance used in the prior CEQA documents was markedly higher; thus, the threshold analysis presented here is highly conservative in comparison to the previously certified analysis.

Therefore, the above analysis demonstrates that the operational emissions from the proposed land use changes would not create any new impacts or substantially more severe significant impacts, as compared to the previously approved COMP and SVSP environmental documents, which found potential operation-related impacts to be significant and unavoidable in both areas.

Furthermore, the proposed project's ROG, NO_X, and PM_{10} increases contribute toward only a nominal percentage increase in these criteria pollutants within the larger SVSP and COMP planning areas. The results and comparison of the modeling efforts are presented in Table 6 and the modeling reports are provided in Appendix D.[10]

Table 6
Unmitigated Operational Criteria Pollutant Emissions Entire Planning Area Comparison (lbs/day)

Scenario	ROG	NO_X	PM_{10}
Baseline			
COMP Planning Area	302	95	189
SVSP Planning Area	4,297	2,348	5,115
Total Baseline	4,599	2,443	5,304
with Proposed Project			
COMP Planning Area	305	96	193
SVSP Planning Area	4,309	2,355	5,126
Total Proposed Project	4,614	2,451	5,319
CHANGE FROM BASELINE	+15	+8	+15
Threshold of Significance	55	55	82
Exceed Current Threshold?	Yes	Yes	Yes
Exceed Prior Impact Conclusions (significant and unavoidable in COMP and SVSP areas)	No	No	No

Source: CalEEMod, August 2023 (see Appendix D).

Cumulative Criteria Pollutant Emissions

Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By nature, air pollution is largely a cumulative impact. A single project is not sufficient in size to, by itself, result in nonattainment of ambient air quality standards (AAQS). Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, PCAPCD considered the emission levels for which a project's individual emissions would be cumulatively considerable.

[10] The lbs/day increases shown in Table 6 vary slightly from those shown in Table 4 as a result of different factors and variances involved in modeling air emissions for larger planning areas, including traffic analysis zone differences which impact motor vehicle trip distances.

The thresholds of significance presented in Table 2 represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the PCAPCD's existing air quality conditions. If a project exceeds the significance thresholds presented in Table 2, the proposed project's emissions would be cumulatively considerable, resulting in significant adverse cumulative air quality impacts to the region's existing air quality conditions.

Because, as discussed above, the proposed project would result in both construction-related and operational emissions that by-and-large do not exceed PCAPCD CEQA thresholds of significance with the adopted COMP and SVSP mitigation measures in conjunction with State regulations and local air district measures, construction and operations of the project would not be expected to result in a cumulatively considerable contribution to the region's existing air quality conditions. The exceedance of the ROG threshold is marginal and does not exceed the scope of analysis in the prior certified CEQA documents, which found the same impact to be significant and unavoidable. Accordingly, the proposed project would not create any new or substantially more severe significant impacts related to cumulative emissions of criteria pollutants as compared to the previously approved COMP and SVSP CEQA documents, both of which found the cumulative impact to be significant and unavoidable (see, e.g., COMP Draft EIR, p. 6-13; SVSP Final EIR, p. 5-130).

Conclusion

Based on the above, the proposed project would not create a new significant impact that had not been previously analyzed in the COMP and SVSP environmental documents or a substantially more severe impact than found in the previously certified and adopted CEQA documents, all of which found potential operation-related impacts to be significant and unavoidable in both the COMP and SVSP areas, in regard to conflicting with or obstructing implementation of the applicable air quality plan, violating any air quality standards, or contributing substantially to an existing or projected air quality violation, or resulting in a cumulatively considerable net increase in any criteria air pollutant. The approved construction and operational mitigation measures from the previous SVSP environmental document would remain applicable to the proposed project.

c. Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by existing health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Sensitive receptors are typically defined as facilities where sensitive receptor population groups (i.e., children, the elderly, the acutely ill, and the chronically ill) are likely to be located. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics. Sensitive receptors in the project vicinity include existing and developing residences surrounding the project sites.

The major pollutant concentrations of concern are localized CO emissions and toxic air contaminant (TAC) emissions which are addressed in further detail below.

Localized CO Emissions

Localized concentrations of CO are related to the levels of traffic and congestion along

streets and at intersections. High levels of localized CO concentrations are only expected where background levels are high, and traffic volumes and congestion levels are high. Emissions of CO are of potential concern, as the pollutant is a toxic gas that results from the incomplete combustion of carbon-containing fuels such as gasoline or wood. CO emissions are particularly related to traffic levels.

In order to provide a conservative indication of whether a project would result in localized CO emissions that would exceed the applicable threshold of significance, the PCAPCD has established screening criteria that if project operational CO emissions are below 550 lbs/day, the project would result in a less-than-significant impact related to localized CO emission concentrations. The maximum project CO emissions were estimated at 248 lbs/day for build out of all proposed project parcels, as included in the CalEEMod reports (see Appendix A). Therefore, based on PCAPCD's screening criteria for localized CO emissions, the proposed project would not be expected to result in substantial levels of localized CO at surrounding intersections or generate localized concentrations of CO that would exceed standards or cause health effects. Consequently, the proposed project would not result in any new or more severe significant impacts to air quality related to localized CO emissions beyond what was already analyzed in the COMP and SVSP environmental documents, which found potential operation-related CO impacts to be significant and unavoidable in both the COMP and SVSP areas.

TAC Emissions

Another category of environmental concern is exposure to TACs. Health risks associated with TACs are a function of both the concentration of emissions and the duration of exposure, where the higher the concentration and/or the longer the period of time that a sensitive receptor is exposed to pollutant concentrations would correlate to a higher health risk. The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommended setback distances for sensitive land uses from major sources of TACs, including, but not limited to, freeways and high traffic roads, distribution centers, rail yards, and gas-dispensing facilities (GDFs).[11]

Implementation of the proposed project would result in emissions of TACs related to project construction. In addition, the proposed project would introduce new residential land uses on COMP parcel CO-52; thus, the proposed project could potentially result in exposure of such residents to TAC emissions associated with the nearby Roseville Energy Park (REP). Each source of TACs is discussed in further depth in the sections below.

Construction TACS

Short-term, construction-related activities could result in the generation of TACs, specifically diesel particulate matter (DPM), from on-road haul trucks and off-road equipment exhaust emissions. Construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. Health risks are typically associated with exposure to high concentrations of TACs over extended periods of time (e.g., 30 years or greater), whereas the construction period associated with the proposed project would likely be less than three years over the multiple parcels. All construction equipment and operation thereof would be regulated in accordance with the In-Use Off-Road Diesel Vehicle Regulation,[12] which is intended to reduce emissions

[11] CARB. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.
[12] CARB. *In-Use Off-Road Diesel Fueled Fleets Regulation*. Available at: https://ww2.arb.ca.gov/our-work/programs/use-road-diesel-fueled-fleets-regulation. Accessed July 28, 2023.

associated with off-road diesel vehicles and equipment, including DPM. Additionally, project construction would be required to comply with all applicable PCAPCD rules and all applicable construction mitigation measures listed in Appendix C of the CEQA Handbook, as noted previously.

Because construction equipment on-site would be used at varying locations over multiple project sites, associated emissions of DPM would not occur at the same location for extended periods of time. Due to the temporary nature of construction and the duration of potential exposure to associated emissions, the potential for any one sensitive receptor in the area to be exposed to large concentrations of pollutants for a substantially extended period of time would be low. Moreover, construction activities on the affected parcels are considered under full buildout of the currently approved SVSP and COMP and their associated CEQA documents, regardless of the proposed project. Thus, TAC emissions associated with construction of the parcels would be ostensibly the same as those that would occur under the approved plans and that were previously analyzed in the SVSP and COMP environmental documents. Accordingly, the proposed project would not result in new or more severe impacts related to exposing sensitive receptors to substantial pollutant concentrations beyond what was already analyzed in the COMP and SVSP environmental documents, which likewise found potential construction-related TAC impacts to be less than significant in both the COMP and SVSP areas.

Operational TACS

The proposed project, consisting of residential land uses, is not considered a source of operational TAC emissions and, thus, would not impact nearby sensitive receptors.

Impacts of the environment on a project (as opposed to impacts of a project on the environment) are beyond the scope of required CEQA review.[13] While not a CEQA consideration, due to the proximity of the proposed project site to the Roseville Energy Park (REP), the REP is being included for an informational discussion only.

A review of CARB's Pollution Mapping Tool[14] did not reveal any large TAC pollution sources within 1,000 feet of the proposed project parcels. The REP is located near the intersection of Westpark Drive and Phillip Road and is listed as a source of TACs, including benzene, DPM and formaldehyde. The REP is approximately three miles to the west of parcel CO-52 and one and one-half miles to the northeast of parcels WB-30 and WB-52. The distances between the REP and the proposed project parcels are much farther than any of the recommended buffer distances in the Handbook; therefore, exposure to the future sensitive receptors on the site to TAC emissions associated with the REP would not occur.

[13] "[T]he purpose of an EIR is to identify the significant effects of a project on the environment, not the significant effects of the environment on the project." (*Ballona Wetlands Land Trust v. Town of Los Angeles,* (2011) 201 Cal.App.4th 455, 473 (Ballona).) The California Supreme Court recently held that "CEQA does not generally require an agency to consider the effects of existing environmental conditions on a proposed project's future users or residents. What CEQA does mandate… is an analysis of how a project might exacerbate existing environmental hazards." (*California Building Industry Assn. v. Bay Area Air Quality Management Dist*. (2015) 62 Cal.4th 369, 392; see also *Mission Bay Alliance v. Office of Community Investment & Infrastructure* (2016) 6 Cal.App.5th 160, 197 ["identifying the effects on the project and its users of locating the project in a particular environmental setting is neither consistent with CEQA's legislative purpose nor required by the CEQA statutes"], quoting *Ballona, supra*, 201 Cal.App.4th at p. 474.) In the case of the proposed project, the impact of placing future residents within area with odors is considered an existing environmental condition that would affect future users/residents.

[14] CARB Pollution Mapping Tool. Available at https://ww2.arb.ca.gov/resources/carb-pollution-mapping-tool. Accessed 8/3/2023.

Additionally, CARB's Handbook recommends avoiding siting new sensitive land uses within 500 feet of a freeway, urban road with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day. According to Appendix B of the *Draft Technical Memorandum on Transportation Impact Analysis for Rezoning Various Parcels in the Campus Oaks Master Plan and Sierra Vista Specific Plan*, traffic volumes on Pleasant Grove and Westbrook boulevards are well below any levels of concern noted in the Handbook. Therefore, TAC exposure from roadway emissions would not create an impact to future residences of the proposed project.

Conclusion

Based on the above discussion, the proposed project would not expose any sensitive receptors to substantial concentrations of localized CO or TACs associated with construction or operations of the proposed project. Thus, the proposed project would not result in new or more severe impacts related to exposing sensitive receptors to substantial pollutant concentrations beyond what was already analyzed in the COMP and SVSP environmental documents.

d. According to the PCAPCD's CEQA Handbook, odors can cause health symptoms such as nausea and headaches. PCAPCD is responsible for responding to odor complaints which can become a nuisance. Typical odor-generating land uses include, but are not limited to, wastewater treatment plants, landfills, and composting facilities. Although the proposed project would not introduce any such land uses, construction activities may lead to odors.

Construction activities often include diesel-fueled equipment and heavy-duty diesel trucks, which can create odors associated with diesel fumes, which could be found to be objectionable. However, as discussed above, construction activities would be temporary. Project construction would also be required to comply with all applicable PCAPCD rules and construction mitigation measures. The aforementioned regulations would help to minimize air pollutant emissions, as well as any associated odors. Furthermore, construction activities on the proposed project parcels are anticipated under full buildout of the currently approved SVSP and COMP, regardless of the proposed project. Thus, substantial objectionable odors would not occur during construction activities beyond what could already occur under the approved plans and were previously analyzed in the SVSP and COMP environmental documents.

As previously discussed, the Pleasant Grove WWTP is located near the intersection of Westpark Drive and Phillip Road. Impacts of the environment on a project (as opposed to impacts of a project on the environment) are beyond the scope of required CEQA review (see footnote 12). While not a CEQA consideration, due to the proximity of the proposed project site to the WWTP, the WWTP is being included for an informational discussion only.

Parcel CO-52, currently zoned for industrial/business park, is being proposed for residential uses. Parcel WB-52, currently zoned for park use, is being proposed for residential uses. Parcel CO-52 is approximately three miles to the east of the WWTP. Parcels WB-30 (residential use) and WB-52 are about one and one-half miles to the southwest of the WWTP. Distance and wind direction are factors in determining if a

potential odor source could impact its neighbors. According to the Windy.App website,[15] the prevailing wind direction in Roseville is from the south and southeast. Although the WWTP is within two miles of the proposed project site (parcels noted are the closest to the WWTP in the proposed project), the prevailing wind direction would disperse any odors away from the proposed project parcels. Therefore, the WWTP is not expected to create an odor impact for the new proposed residential parcels. Furthermore, because parcel WB-30 is already zoned for residential use, the proposed project would not result in any changes related to odor impacts previously anticipated and analyzed in the COMP and SVSP environmental documents.

Conclusion

For the aforementioned reasons, construction and operation of the proposed project would not result in new or more severe impacts from emissions (such as those leading to odors and dust) adversely affecting a substantial number of people beyond what was previously analyzed in the COMP and SVSP environmental documents, which likewise found potential operational odor impacts to be less than significant in both the COMP and SVSP areas.

[15] Windy.App. Available at: https://windy.app/forecast2/spot/469575/Roseville+CA/statistics. Accessed July 30, 2023.

VIII. Greenhouse Gases

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	**COMP** 1st, Addendum[16] Pages 93-95 **SVSP** 4.5-1	No	No	No	**Yes**
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	**COMP** 1st Addendum Page 95 **SVSP** 4.5-2	No	No	No	None required

Discussion

a.b. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. An individual project's GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

Implementation of the proposed project would cumulatively contribute to increases of GHG emissions. Estimated GHG emissions attributable to future development would be primarily associated with increases of carbon dioxide (CO_2) and, to a lesser extent, other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O) associated with area sources, mobile sources or vehicles, utilities (electricity), water usage, wastewater generation, and the generation of solid waste. The primary source of GHG emissions for the project would be mobile source emissions. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO_2 equivalents ($MTCO_2e$/yr).

[16] Roseville, City of, *Addendum and Initial Study of Environmental Significance, Campus Oaks Master Plan Amendment – General Plan Amendment, Rezone, Development Agreement Amendments – File #PL14-037 and File #PL14-0374.* July 6, 2015. Available at https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/Environmental%20Documents%20and%20Public%20Notices/Private%20Development%20Projects/Campus%20Oaks/Campus%20Oaks%20Addendum%2007.07.2015%20CLEAN.pdf. Accessed August 8, 2023.

The proposed project is located within the jurisdictional boundaries of PCAPCD. The most recent PCAPCD CEQA Handbook released in October 2016[17] includes GHG screening thresholds, bright line thresholds, and per capita thresholds for GHG emissions. PCAPCD's *California Environmental Quality Act Thresholds of Significance Justification Report*[18] considered GHG thresholds adopted by other air districts, historical CEQA projects reviewed by PCAPCD between 2003-2015, applicable statewide regulatory requirements by 2030 and special geographic features in Placer County when developing the thresholds of significance. The applicable thresholds are shown in Table 7.

Table 7
PCAPCD GHG Thresholds of Significance

	GHG Emissions ($MTCO_2e$/yr or efficiency metric where noted)
Construction Bright Line	10,000
Operational De minimis	1,100
Operational Bright Line	10,000
Operational Residential Urban Efficiency Metric	4.5/capita
Operational Non-Residential Urban Efficiency Metric	26.5/1,000 square foot

Source: PCAPCD CEQA Handbook. October 2016.

Construction GHG Emissions

The proposed project's construction GHG emissions have been estimated using CalEEMod under the same assumptions discussed in the Air Quality section of this document (see Appendix A). A direct comparison of the maximum annual unmitigated construction GHG emissions associated with the proposed project to the construction GHG emissions that could occur under the previously approved projects (baseline) is provided in Table 8 to support the current environmental review and to provide an abundance of information. Comparison to the PCAPCD's GHG thresholds in Table 7 is also provided. Appendix B includes the baseline project CalEEMod reports.

As shown in the table, although the construction GHG emissions associated with the proposed project's affected parcels are estimated to be higher than the same parcels under the baseline project, the emissions remain well below the applicable PCAPCD CEQA significance threshold. Nonetheless, because the proposed project is part of two previously approved larger projects, COMP and SVSP, the GHG (and other related) mitigation measures from the previous SVSP environmental documents remain applicable to the proposed project and would reduce emissions even further (SVSP EIR MM 4.4-1 [Dust and construction control measures], SVSP EIR MM 4.5-2 [Additional measures to reduce GHG emissions]).

[17] PCAPCD. *2017 California Environmental Quality Act Handbook*. October 2016. Available at: https://www.placerair.org/1801/CEQA-Handbook. Accessed 7/27/2023

[18] Placer County Air Pollution Control District. *California Environmental Quality Act Thresholds of Significance Justification Report.* October 2016. Available at: https://www.placer.ca.gov/DocumentCenter/View/2061/Threshold-Justification-Report-PDF?bidId=. Accessed 7/30/2023

Table 8
Construction GHG Emissions Comparison (MTCO2e/yr)

Scenario	MTCO2e/yr
Baseline	
COMP	378
SVSP	1,066
Total Baseline	1,444
with Proposed Project	
COMP	589
SVSP	1,445
Total Proposed Project	2,034
CHANGE FROM BASELINE	+590
Threshold of Significance	10,000
Exceed Current Threshold?	No
Exceed Prior Impact Conclusions	No

Source: CalEEMod, July and August 2023 (see Appendices A and B).

It should be noted that the COMP environmental document did not previously analyze GHG impacts. As described in the *Addendum and Initial Study of Environmental Significance, Campus Oaks Master Plan Amendment – General Plan Amendment, Rezone, Development Agreement Amendments – File #PL14-037 and File #PL14-0374*, July 2015,[19] the potential environmental impact of GHG emissions was known or could have been known at the time of the certification of the 1996 COMP EIR, so does not constitute new circumstances or new information requiring a new EIR. The first COMP Amendment addendum confirms this finding, and cites case law that determined a new EIR is not required to be prepared due to the lack of GHG analysis in the previous applicable EIR, and does not preclude adoption of a future addendum to the previous applicable EIR.[20] The first COMP Amendment addendum also includes GHG analysis and concludes that the standard measures required by PCAPCD would adequately offset GHG emissions resulting from development on specific Campus Oaks parcels, including Parcel CO-52.

Based on this analysis, proposed project construction would not result in new or substantially more severe significant impacts related to GHG emissions that have not been previously analyzed in the SVSP environmental document or the first COMP Amendment addendum. In addition, the analysis of construction GHG emissions herein for the COMP parcel concludes that the GHG emissions from construction of the COMP parcel as proposed would not exceed the applicable PCAPCD's GHG construction threshold and, therefore, would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. Accordingly, construction of the proposed project would not create new or substantially more severe impacts related to construction GHG emissions than what could occur under buildout of

[19] Roseville, City of, *Addendum and Initial Study of Environmental Significance, Campus Oaks Master Plan Amendment – General Plan Amendment, Rezone, Development Agreement Amendments – File #PL14-037 and File #PL14-0374*. July 6, 2015. Available at https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/Environmental%20Documents%20and%20Public%20Notices/Private%20Development%20Projects/Campus%20Oaks/Campus%20Oaks%20Addendum%2007.07.2015%20CLEAN.pdf. Accessed August 8, 2023.

[20] *Ibid*. Pages 92-93.

the currently approved COMP and SVSP.

Operational GHG Emissions

The operational GHG emissions resulting from implementation of the proposed project have been estimated using CalEEMod (see Appendix A), including project-specific trip generation rates from the *Draft Technical Memorandum on Transportation Impact Analysis for Rezoning Various Parcels in the Campus Oaks Master Plan and Sierra Vista Specific Plan*. The results are reported in Table 9.

Table 9
Proposed Project Unmitigated Annual Operational GHG Emissions ($MTCO_2e$/yr)

Source	COMP	SVSP	Total with Proposed Project
Area	3.54	9.98	13.52
Energy	433.00	1,221.00	1,654.00
Mobile	2,140.00	5,639.00	7,779.00
Waste	65.80	185.00	250.80
Water	17.30	48.80	66.10
Refrigeration	0.32	0.91	1.23
Total Annual Operational GHG Emissions	**2,659.96**	**7,104.69**	**9,764.65**
Population	744	2,096	2,840

Source: CalEEMod, July 2023 (see Appendix A).

Project emissions are compared to the PCAPCD's GHG thresholds to determine significance. The proposed project's operational emissions exceed the de minimis threshold of 1,100 $MTCO_2e$/yr but are under the 10,000 $MTCO_2e$/yr bright line threshold. Thus, pursuant to the PCAPCD's CEQA Handbook, the emissions are further compared to the residential efficiency metric for urban areas of Placer County, which is 4.5 $MTCO_2e$/capita. CalEEMod estimated the population from the proposed overall project as 2,840 people. The proposed project's emissions per capita are estimated to be 3.44 $MTCO_2e$/capita, which is below the PCAPCD's efficiency metric threshold for residential urban projects. A review of the efficiency metric for the COMP and SVSP components separately results in emissions per capita for the COMP of 3.58 $MTCO_2e$/capita and for the SVSP of 3.39 $MTCO_2e$/capita, which are both below the PCAPCD's efficiency metric threshold for residential urban projects.

Therefore, the proposed project would not result in new or substantially more severe impacts related to GHG emissions than what could occur under buildout of the currently approved SVSP or COMP projects. As noted above, the COMP environmental document did not explicitly analyze GHG impacts previously. However, the potential environmental impact of GHG emissions was known or could have been known at the time of the certification of the 1996 COMP EIR, so does not constitute new circumstances or new information requiring a new EIR (see additional explanation above). Furthermore, the analysis of operational GHG emissions herein for the COMP parcel concludes that the GHG emissions from the operation of the COMP parcel as proposed would not exceed the applicable PCAPCD's operational GHG thresholds and, therefore, would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the

environment or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. Accordingly, operation of the proposed project would not create new or substantially more severe impacts related to GHG emissions than what could occur under buildout of the currently approved COMP and SVSP.

In addition, a direct comparison of the operational GHG emissions associated with the proposed project's affected parcels to operational GHG emissions that could occur from the same parcels under the previously approved projects (baseline) is provided in Table 10 to support the current environmental review and to provide an abundance of information. Appendix B includes the baseline project CalEEMod reports.

Table 10
Operational GHG Emissions Comparison (MTCO2e/yr)

Scenario	MTCO2e/yr
Baseline	
COMP	3,561
SVSP	5,016
Total Baseline	8,577
with Proposed Project	
COMP	2,660
SVSP	7,105
Total Proposed Project	9,765
CHANGE FROM BASELINE	+1,188
Threshold of Significance	1,100 de minimis, 10,000 bright line
Exceed de minimus Threshold? *Exceed bright-line threshold?*	Yes No
Exceed Prior Impact Conclusions	No

Proposed project values have been rounded and, thus, are not identical to the values in Table 9.
Source: CalEEMod, July and August 2023 (see Appendices A and B).

A review of the efficiency metric for the baseline COMP and SVSP components separately result in 23.74 $MTCO_2e$/square foot and in 3.58 $MTCO_2e$/capita, respectively, which are both below the PCAPCD's efficiency metric threshold for non-residential and residential urban projects, respectively.

Although the proposed project's affected parcels' operational GHG emissions are estimated to be higher than the same parcels under the baseline project, as discussed above, the emissions remain below the applicable PCAPCD CEQA bright-line significance threshold. Nonetheless, because the proposed project is part of two previously approved larger projects, COMP and SVSP, the GHG mitigation measures from the SVSP previous environmental document (listed above) remain applicable to the proposed project and would reduce GHG emissions even further, ensuring the GHG emissions from the proposed project would not create a new or substantial increase in the severity of GHG impacts of the previously approved projects.

Conclusion

Based on the above, construction and operation of the proposed project would not create new or substantially more severe impacts related to GHG emissions than what could occur under buildout of the existing approved projects. Additionally, the GHG impacts have been previously analyzed in the currently approved COMP and SVSP.

Appendix A

CalEEMod Air Quality and Greenhouse Gas Modeling Results Proposed Project (COMP and SVSP separately)

SVSP and COMP Amendments (CO-52 Only) Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	SVSP and COMP Amendments (CO-52 Only)
Construction Start Date	6/1/2024
Operational Year	2028
Lead Agency	City of Roseville
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	7.80
Location	38.77562705656766, -121.40023406585973
County	Placer-Sacramento
City	Roseville
Air District	Placer County APCD
Air Basin	Sacramento Valley
TAZ	432
EDFZ	4
Electric Utility	Roseville Electric
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.16

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Apartments Mid Rise	285	Dwelling Unit	13.7	273,600	1.00	—	744	CO-52
Parking Lot	456	Space	4.00	0.00	1.00	—	—	minimum spaces 1.5 plus 1/10 units guests

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.13	36.0	33.9	0.06	1.60	19.8	21.4	1.47	10.1	11.6	—	6,826	6,826	0.27	0.26	13.2	6,852
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.2	20.8	34.4	0.04	0.82	2.86	3.68	0.76	0.68	1.44	—	7,484	7,484	0.23	0.27	0.34	7,570
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.53	8.09	14.6	0.02	0.33	2.12	2.45	0.30	0.77	1.08	—	3,511	3,511	0.09	0.15	3.08	3,559
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.01	1.48	2.66	< 0.005	0.06	0.39	0.45	0.06	0.14	0.20	—	581	581	0.02	0.02	0.51	589
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	82.0	82.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—

Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	Yes
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	82.0	82.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	Yes
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	9.13	36.0	33.9	0.06	1.60	19.8	21.4	1.47	10.1	11.6	—	6,826	6,826	0.27	0.26	13.2	6,852
2025	8.93	13.0	27.3	0.03	0.47	2.71	3.18	0.43	0.65	1.08	—	6,145	6,145	0.15	0.24	12.2	6,234
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	8.93	14.3	24.6	0.03	0.54	2.71	3.25	0.50	0.65	1.14	—	5,889	5,889	0.17	0.26	0.34	5,970
2025	10.2	20.8	34.4	0.04	0.82	2.86	3.68	0.76	0.68	1.44	—	7,484	7,484	0.23	0.27	0.33	7,570
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.78	8.09	11.0	0.02	0.33	2.12	2.45	0.30	0.77	1.08	—	2,509	2,509	0.08	0.08	1.75	2,538
2025	5.53	8.05	14.6	0.02	0.29	1.58	1.88	0.27	0.38	0.65	—	3,511	3,511	0.09	0.15	3.08	3,559
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.51	1.48	2.00	< 0.005	0.06	0.39	0.45	0.06	0.14	0.20	—	415	415	0.01	0.01	0.29	420

2025	1.01	1.47	2.66	< 0.005	0.05	0.29	0.34	0.05	0.07	0.12	—	581	581	0.02	0.02	0.51	589

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	15.5	6.71	74.2	0.14	0.19	11.4	11.6	0.18	2.91	3.09	132	16,322	16,453	13.9	0.63	39.0	17,027
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.2	7.49	49.7	0.13	0.18	11.4	11.6	0.18	2.91	3.09	132	15,110	15,241	14.0	0.68	2.92	15,796
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.9	7.18	56.9	0.13	0.19	11.4	11.6	0.18	2.90	3.08	132	15,373	15,504	14.0	0.65	17.9	16,066
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.54	1.31	10.4	0.02	0.03	2.08	2.11	0.03	0.53	0.56	21.8	2,545	2,567	2.31	0.11	2.97	2,660
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	55.0	55.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	55.0	55.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,100
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Yes

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.57	5.57	57.6	0.13	0.10	11.4	11.5	0.10	2.91	3.01	—	13,647	13,647	0.49	0.56	37.0	13,864
Area	7.88	0.15	16.2	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	43.2	43.2	< 0.005	< 0.005	—	43.4
Energy	0.06	0.99	0.42	0.01	0.08	—	0.08	0.08	—	0.08	—	2,604	2,604	0.24	0.02	—	2,616
Water	—	—	—	—	—	—	—	—	—	—	17.9	27.4	45.3	1.84	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	397
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.96	1.96
Total	15.5	6.71	74.2	0.14	0.19	11.4	11.6	0.18	2.91	3.09	132	16,322	16,453	13.9	0.63	39.0	17,027
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.65	6.50	49.2	0.12	0.10	11.4	11.5	0.10	2.91	3.01	—	12,478	12,478	0.57	0.61	0.96	12,676
Area	6.47	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.06	0.99	0.42	0.01	0.08	—	0.08	0.08	—	0.08	—	2,604	2,604	0.24	0.02	—	2,616
Water	—	—	—	—	—	—	—	—	—	—	17.9	27.4	45.3	1.84	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	397
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.96	1.96
Total	13.2	7.49	49.7	0.13	0.18	11.4	11.6	0.18	2.91	3.09	132	15,110	15,241	14.0	0.68	2.92	15,796
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.70	6.11	48.5	0.12	0.10	11.4	11.5	0.10	2.90	2.99	—	12,720	12,720	0.53	0.59	16.0	12,925

Area	7.16	0.08	7.99	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	21.3	21.3	< 0.005	< 0.005	—	21.4
Energy	0.06	0.99	0.42	0.01	0.08	—	0.08	0.08	—	0.08	—	2,604	2,604	0.24	0.02	—	2,616
Water	—	—	—	—	—	—	—	—	—	—	17.9	27.4	45.3	1.84	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	397
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.96	1.96
Total	13.9	7.18	56.9	0.13	0.19	11.4	11.6	0.18	2.90	3.08	132	15,373	15,504	14.0	0.65	17.9	16,066
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.22	1.12	8.85	0.02	0.02	2.08	2.10	0.02	0.53	0.55	—	2,106	2,106	0.09	0.10	2.65	2,140
Area	1.31	0.01	1.46	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.53	3.53	< 0.005	< 0.005	—	3.54
Energy	0.01	0.18	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	431	431	0.04	< 0.005	—	433
Water	—	—	—	—	—	—	—	—	—	—	2.97	4.53	7.51	0.31	0.01	—	17.3
Waste	—	—	—	—	—	—	—	—	—	—	18.8	0.00	18.8	1.88	0.00	—	65.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.32	0.32
Total	2.54	1.31	10.4	0.02	0.03	2.08	2.11	0.03	0.53	0.56	21.8	2,545	2,567	2.31	0.11	2.97	2,660

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314

Dust From Material Movement	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.99	0.90	< 0.005	0.04	—	0.04	0.04	—	0.04	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	0.54	0.54	—	0.28	0.28	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.05	0.98	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	199	199	< 0.005	0.01	0.78	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.95	4.95	< 0.005	< 0.005	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.82	0.82	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	2.82	2.48	0.01	0.12	—	0.12	0.11	—	0.11	—	542	542	0.02	< 0.005	—	544
Dust From Material Movement	—	—	—	—	—	0.76	0.76	—	0.30	0.30	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.51	0.45	< 0.005	0.02	—	0.02	0.02	—	0.02	—	89.8	89.8	< 0.005	< 0.005	—	90.1
Dust From Material Movement	—	—	—	—	—	0.14	0.14	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.05	1.11	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	228	228	< 0.005	0.01	0.89	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.0	17.0	< 0.005	< 0.005	0.03	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.81	2.81	< 0.005	< 0.005	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	3.45	4.03	0.01	0.15	—	0.15	0.14	—	0.14	—	737	737	0.03	0.01	—	739
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.07	0.63	0.74	< 0.005	0.03	—	0.03	0.03	—	0.03	—	122	122	< 0.005	< 0.005	—	122
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.81	0.53	11.4	0.00	0.00	2.07	2.07	0.00	0.49	0.49	—	2,336	2,336	0.03	0.08	9.12	—
Vendor	0.03	1.22	0.31	0.01	0.01	0.22	0.24	0.01	0.06	0.07	—	883	883	0.01	0.14	2.30	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.64	0.68	8.34	0.00	0.00	2.07	2.07	0.00	0.49	0.49	—	2,062	2,062	0.05	0.08	0.24	—
Vendor	0.02	1.31	0.32	0.01	0.01	0.22	0.24	0.01	0.06	0.07	—	883	883	0.01	0.14	0.06	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.18	2.63	0.00	0.00	0.63	0.63	0.00	0.15	0.15	—	651	651	0.01	0.03	1.21	—
Vendor	0.01	0.39	0.10	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	271	271	< 0.005	0.04	0.30	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.48	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	108	108	< 0.005	< 0.005	0.20	—
Vendor	< 0.005	0.07	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.9	44.9	< 0.005	0.01	0.05	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	6.01	7.50	0.01	0.25	—	0.25	0.23	—	0.23	—	1,379	1,379	0.06	0.01	—	1,384
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.10	1.37	< 0.005	0.05	—	0.05	0.04	—	0.04	—	228	228	0.01	< 0.005	—	229
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	0.46	10.7	0.00	0.00	2.07	2.07	0.00	0.49	0.49	—	2,289	2,289	0.03	0.08	8.24	—
Vendor	0.03	1.15	0.30	0.01	0.01	0.22	0.24	0.01	0.06	0.07	—	868	868	0.01	0.13	2.28	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.62	0.61	7.79	0.00	0.00	2.07	2.07	0.00	0.49	0.49	—	2,021	2,021	0.05	0.08	0.21	—
Vendor	0.02	1.24	0.31	0.01	0.01	0.22	0.24	0.01	0.06	0.07	—	868	868	0.01	0.13	0.06	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.35	0.31	4.60	0.00	0.00	1.19	1.19	0.00	0.28	0.28	—	1,195	1,195	0.02	0.05	2.05	—
Vendor	0.01	0.70	0.18	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	499	499	< 0.005	0.07	0.57	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.84	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	198	198	< 0.005	0.01	0.34	—
Vendor	< 0.005	0.13	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	82.7	82.7	< 0.005	0.01	0.09	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	0.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.41	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.57	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	148	148	< 0.005	0.01	0.02	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.32	8.32	< 0.005	< 0.005	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.38	1.38	< 0.005	< 0.005	< 0.005	—

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.11. Architectural Coating (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	6.80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	6.80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.23	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	33.7	33.7	< 0.005	< 0.005	—	33.8

Architectural Coatings	1.72	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.58	5.58	< 0.005	< 0.005	—	5.60
Architectural Coatings	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.11	2.29	0.00	0.00	0.41	0.41	0.00	0.10	0.10	—	467	467	0.01	0.02	1.82	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.14	1.67	0.00	0.00	0.41	0.41	0.00	0.10	0.10	—	412	412	0.01	0.02	0.05	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.43	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	107	107	< 0.005	< 0.005	0.20	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.7	17.7	< 0.005	< 0.005	0.03	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.13. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	6.80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	6.80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.56	0.72	< 0.005	0.02	—	0.02	0.02	—	0.02	—	84.1	84.1	< 0.005	< 0.005	—	84.4

Architectu Coatings	4.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.9	13.9	< 0.005	< 0.005	—	14.0
Architectu ral Coatings	0.78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.09	2.14	0.00	0.00	0.41	0.41	0.00	0.10	0.10	—	458	458	0.01	0.02	1.65	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.12	1.56	0.00	0.00	0.41	0.41	0.00	0.10	0.10	—	404	404	0.01	0.02	0.04	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	1.01	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	262	262	< 0.005	0.01	0.45	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.18	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	43.3	43.3	< 0.005	< 0.005	0.07	—

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	7.57	5.57	57.6	0.13	0.10	11.4	11.5	0.10	2.91	3.01	—	13,647	13,647	0.49	0.56	37.0	13,864
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	7.57	5.57	57.6	0.13	0.10	11.4	11.5	0.10	2.91	3.01	—	13,647	13,647	0.49	0.56	37.0	13,864
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	6.65	6.50	49.2	0.12	0.10	11.4	11.5	0.10	2.91	3.01	—	12,478	12,478	0.57	0.61	0.96	12,676
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	6.65	6.50	49.2	0.12	0.10	11.4	11.5	0.10	2.91	3.01	—	12,478	12,478	0.57	0.61	0.96	12,676
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	1.22	1.12	8.85	0.02	0.02	2.08	2.10	0.02	0.53	0.55	—	2,106	2,106	0.09	0.10	2.65	2,140

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.22	1.12	8.85	0.02	0.02	2.08	2.10	0.02	0.53	0.55	—	2,106	2,106	0.09	0.10	2.65	2,140

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,202	1,202	0.12	0.01	—	1,209
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	142	142	0.01	< 0.005	—	143
Total	—	—	—	—	—	—	—	—	—	—	—	1,345	1,345	0.13	0.02	—	1,353
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,202	1,202	0.12	0.01	—	1,209
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	142	142	0.01	< 0.005	—	143
Total	—	—	—	—	—	—	—	—	—	—	—	1,345	1,345	0.13	0.02	—	1,353
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	199	199	0.02	< 0.005	—	200
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	23.6	23.6	< 0.005	< 0.005	—	23.7

Total	—	—	—	—	—	—	—	—	—	—	—	223	223	0.02	< 0.005	—	224

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.06	0.99	0.42	0.01	0.08	—	0.08	0.08	—	0.08	—	1,260	1,260	0.11	< 0.005	—	1,263
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.06	0.99	0.42	0.01	0.08	—	0.08	0.08	—	0.08	—	1,260	1,260	0.11	< 0.005	—	1,263
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.06	0.99	0.42	0.01	0.08	—	0.08	0.08	—	0.08	—	1,260	1,260	0.11	< 0.005	—	1,263
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.06	0.99	0.42	0.01	0.08	—	0.08	0.08	—	0.08	—	1,260	1,260	0.11	< 0.005	—	1,263
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.01	0.18	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	209	209	0.02	< 0.005	—	209
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.18	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	209	209	0.02	< 0.005	—	209

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	5.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.41	0.15	16.2	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.2	43.2	< 0.005	< 0.005	—	43.4
Total	7.88	0.15	16.2	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	43.2	43.2	< 0.005	< 0.005	—	43.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	5.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	6.47	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consumer Products	1.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.13	0.01	1.46	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.53	3.53	< 0.005	< 0.005	—	3.54
Total	1.31	0.01	1.46	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.53	3.53	< 0.005	< 0.005	—	3.54

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	17.9	27.4	45.3	1.84	0.04	—	105
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	17.9	27.4	45.3	1.84	0.04	—	105
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	17.9	27.4	45.3	1.84	0.04	—	105
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005

Total	—	—	—	—	—	—	—	—	—	—	17.9	27.4	45.3	1.84	0.04	—	105
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	2.97	4.53	7.51	0.31	0.01	—	17.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	2.97	4.53	7.51	0.31	0.01	—	17.3

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	397
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	397
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	397
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	397

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	18.8	0.00	18.8	1.88	0.00	—	65.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	18.8	0.00	18.8	1.88	0.00	—	65.8

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.96	1.96
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.96	1.96
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.96	1.96
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.96	1.96
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.32	0.32
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.32	0.32

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	6/1/2024	6/14/2024	5.00	10.0	—
Grading	Grading	6/15/2024	7/26/2024	5.00	30.0	—
Building Construction	Building Construction	7/28/2024	10/21/2025	5.00	322	—
Paving	Paving	10/7/2025	11/3/2025	5.00	20.0	—
Architectural Coating	Architectural Coating	8/25/2024	11/18/2025	5.00	322	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45

Building Construction	Tractors/Loaders/Backh	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	205	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	30.5	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	14.3	LDA,LDT1,LDT2

Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	41.0	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	554,040	184,680	0.00	0.00	10,454

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	15.0	0.00	—
Grading	—	—	90.0	0.00	—
Paving	0.00	0.00	0.00	0.00	4.00

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Parking Lot	4.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	446	0.03	< 0.005
2025	0.00	391	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	1,852	1,852	1,852	676,162	16,092	16,092	16,092	5,873,639
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0

Gas Fireplaces	86
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	200
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
554040	184,680	0.00	0.00	10,454

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	1,287,576	341	0.0330	0.0040	3,930,860
Parking Lot	152,634	341	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	9,366,931	14.1
Parking Lot	0.00	11.5

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	211	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

8. User Changes to Default Data

Screen	Justification
Land Use	CO52 only run

Construction: Construction Phases	no demo. adjusted arch coatings to start 2 weeks after start of building construction and last same # of days. no applicant questionnaire for construction.
Operations: Vehicle Data	using Roseville trip rates from F&P transportation impact analysis dated 7/25/23.

SVSP and COMP Amendments (SVSP parcels only) Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	SVSP and COMP Amendments (SVSP parcels only)
Construction Start Date	6/1/2024
Operational Year	2028
Lead Agency	City of Roseville
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	7.80
Location	38.77562705656766, -121.40023406585973
County	Placer-Sacramento
City	Roseville
Air District	Placer County APCD
Air Basin	Sacramento Valley
TAZ	432
EDFZ	4
Electric Utility	Roseville Electric
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.16

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Apartments Mid Rise	355	Dwelling Unit	2.95	340,800	1.00	—	927	WB-30
Apartments Mid Rise	192	Dwelling Unit	2.34	184,320	1.00	—	501	WB-32
Apartments Mid Rise	256	Dwelling Unit	3.35	245,760	1.00	—	668	FD-34
City Park	1.50	Acre	1.50	0.00	1.00	1.00	—	park
Parking Lot	1,258	Space	11.3	0.00	1.00	—	—	minimum spaces 1.5 plus 1/10 units guests

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	20.8	36.0	53.8	0.06	1.60	19.8	21.4	1.47	10.1	11.6	—	12,917	12,917	0.27	0.68	37.3	13,163
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	20.3	18.1	43.4	0.04	0.56	7.64	8.21	0.52	1.82	2.34	—	11,992	11,992	0.29	0.68	0.97	12,204
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14.3	11.8	30.1	0.03	0.35	5.43	5.78	0.33	1.29	1.62	—	8,570	8,570	0.18	0.48	10.6	8,727
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.62	2.16	5.48	0.01	0.06	0.99	1.06	0.06	0.24	0.30	—	1,419	1,419	0.03	0.08	1.75	1,445

Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	82.0	82.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	Yes
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	82.0	82.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	Yes
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	20.8	36.0	53.8	0.06	1.60	19.8	21.4	1.47	10.1	11.6	—	12,917	12,917	0.27	0.68	37.3	13,163
2025	20.4	16.1	51.2	0.04	0.49	7.64	8.14	0.46	1.82	2.27	—	12,714	12,714	0.23	0.65	34.3	12,948
2026	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	20.3	18.1	43.4	0.04	0.56	7.64	8.21	0.52	1.82	2.34	—	11,992	11,992	0.29	0.68	0.97	12,204
2025	20.1	16.9	41.4	0.04	0.49	7.64	8.14	0.46	1.82	2.27	—	11,811	11,811	0.28	0.67	0.89	12,017
2026	19.9	15.8	39.7	0.04	0.44	7.64	8.08	0.40	1.82	2.22	—	11,631	11,631	0.26	0.67	0.80	11,837

2027	2.13	6.98	10.5	0.01	0.30	0.15	0.45	0.27	0.04	0.31	—	1,653	1,653	0.06	0.02	0.01	1,660
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	6.03	9.50	16.8	0.02	0.35	3.66	4.01	0.32	1.16	1.48	—	4,367	4,367	0.11	0.21	4.75	4,436
2025	14.3	11.8	30.1	0.03	0.35	5.43	5.78	0.33	1.29	1.62	—	8,570	8,570	0.18	0.48	10.6	8,727
2026	0.55	0.09	0.30	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.02	—	81.3	81.3	< 0.005	< 0.005	0.10	82.6
2027	0.13	0.42	0.63	< 0.005	0.02	0.01	0.03	0.02	< 0.005	0.02	—	99.9	99.9	< 0.005	< 0.005	0.01	100
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.10	1.73	3.06	< 0.005	0.06	0.67	0.73	0.06	0.21	0.27	—	723	723	0.02	0.03	0.79	734
2025	2.62	2.16	5.48	0.01	0.06	0.99	1.06	0.06	0.24	0.30	—	1,419	1,419	0.03	0.08	1.75	1,445
2026	0.10	0.02	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	13.5	13.5	< 0.005	< 0.005	0.02	13.7
2027	0.02	0.08	0.12	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.5	16.5	< 0.005	< 0.005	< 0.005	16.6

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	42.6	18.1	201	0.38	0.52	30.6	31.1	0.50	7.78	8.28	371	44,026	44,397	39.2	1.68	104	45,983
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	36.2	20.2	133	0.35	0.50	30.6	31.1	0.49	7.78	8.27	371	40,779	41,150	39.4	1.82	8.09	42,684
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	38.0	19.1	152	0.35	0.51	30.0	30.5	0.49	7.63	8.12	371	40,998	41,369	39.3	1.73	47.6	42,913
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	6.93	3.49	27.6	0.06	0.09	5.48	5.57	0.09	1.39	1.48	61.4	6,788	6,849	6.50	0.29	7.89	7,105
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	55.0	55.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	55.0	55.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,100
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Yes

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	20.2	14.9	154	0.36	0.28	30.6	30.9	0.26	7.78	8.04	—	36,488	36,488	1.32	1.51	98.9	37,069
Area	22.2	0.43	45.6	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	122	122	0.01	< 0.005	—	122
Energy	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	7,340	7,340	0.68	0.05	—	7,372
Water	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
Waste	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
Total	42.6	18.1	201	0.38	0.52	30.6	31.1	0.50	7.78	8.28	371	44,026	44,397	39.2	1.68	104	45,983

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	17.8	17.4	132	0.33	0.28	30.6	30.9	0.26	7.78	8.04	—	33,362	33,362	1.52	1.64	2.57	33,892
Area	18.2	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	7,340	7,340	0.68	0.05	—	7,372
Water	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
Waste	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
Total	36.2	20.2	133	0.35	0.50	30.6	31.1	0.49	7.78	8.27	371	40,779	41,150	39.4	1.82	8.09	42,684
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	17.6	16.1	128	0.33	0.27	30.0	30.3	0.26	7.63	7.89	—	33,521	33,521	1.39	1.55	42.1	34,061
Area	20.2	0.21	22.5	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	60.1	60.1	< 0.005	< 0.005	—	60.3
Energy	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	7,340	7,340	0.68	0.05	—	7,372
Water	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
Waste	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
Total	38.0	19.1	152	0.35	0.51	30.0	30.5	0.49	7.63	8.12	371	40,998	41,369	39.3	1.73	47.6	42,913
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.22	2.94	23.3	0.06	0.05	5.48	5.53	0.05	1.39	1.44	—	5,550	5,550	0.23	0.26	6.97	5,639
Area	3.68	0.04	4.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	9.94	9.94	< 0.005	< 0.005	—	9.98
Energy	0.03	0.51	0.22	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,215	1,215	0.11	0.01	—	1,221
Water	—	—	—	—	—	—	—	—	—	—	8.37	12.8	21.1	0.86	0.02	—	48.8
Waste	—	—	—	—	—	—	—	—	—	—	53.0	0.00	53.0	5.30	0.00	—	185
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91	0.91
Total	6.93	3.49	27.6	0.06	0.09	5.48	5.57	0.09	1.39	1.48	61.4	6,788	6,849	6.50	0.29	7.89	7,105

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.99	0.90	< 0.005	0.04	—	0.04	0.04	—	0.04	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	0.54	0.54	—	0.28	0.28	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1

Dust From Material Movement	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.05	0.98	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	199	199	< 0.005	0.01	0.78	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.95	4.95	< 0.005	< 0.005	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.82	0.82	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	3.29	2.89	0.01	0.14	—	0.14	0.13	—	0.13	—	633	633	0.03	0.01	—	635
Dust From Material Movement	—	—	—	—	—	0.88	0.88	—	0.35	0.35	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.60	0.53	< 0.005	0.03	—	0.03	0.02	—	0.02	—	105	105	< 0.005	< 0.005	—	105
Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.05	1.11	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	228	228	< 0.005	0.01	0.89	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.8	19.8	< 0.005	< 0.005	0.04	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.28	3.28	< 0.005	< 0.005	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	3.32	3.88	0.01	0.15	—	0.15	0.14	—	0.14	—	708	708	0.03	0.01	—	711
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.61	0.71	< 0.005	0.03	—	0.03	0.02	—	0.02	—	117	117	< 0.005	< 0.005	—	118
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.28	1.49	32.2	0.00	0.00	5.84	5.84	0.00	1.37	1.37	—	6,581	6,581	0.09	0.23	25.7	—
Vendor	0.07	3.43	0.89	0.02	0.03	0.63	0.67	0.03	0.18	0.21	—	2,488	2,488	0.02	0.38	6.48	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.81	1.93	23.5	0.00	0.00	5.84	5.84	0.00	1.37	1.37	—	5,810	5,810	0.14	0.23	0.67	—
Vendor	0.07	3.68	0.91	0.02	0.03	0.63	0.67	0.03	0.18	0.21	—	2,489	2,489	0.02	0.38	0.17	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.59	0.50	7.13	0.00	0.00	1.72	1.72	0.00	0.40	0.40	—	1,764	1,764	0.03	0.07	3.28	—
Vendor	0.02	1.07	0.27	< 0.005	0.01	0.19	0.20	0.01	0.05	0.06	—	735	735	0.01	0.11	0.82	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.09	1.30	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	292	292	0.01	0.01	0.54	—
Vendor	< 0.005	0.19	0.05	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	122	122	< 0.005	0.02	0.14	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.46	9.31	0.02	0.31	—	0.31	0.28	—	0.28	—	1,713	1,713	0.07	0.01	—	1,719

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	1.36	1.70	< 0.005	0.06	—	0.06	0.05	—	0.05	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.00	1.29	30.1	0.00	0.00	5.84	5.84	0.00	1.37	1.37	—	6,448	6,448	0.09	0.22	23.2	—
Vendor	0.07	3.25	0.85	0.02	0.03	0.63	0.67	0.03	0.18	0.21	—	2,445	2,445	0.02	0.36	6.43	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.74	1.72	22.0	0.00	0.00	5.84	5.84	0.00	1.37	1.37	—	5,695	5,695	0.13	0.23	0.60	—
Vendor	0.07	3.49	0.88	0.02	0.03	0.63	0.67	0.03	0.18	0.21	—	2,446	2,446	0.02	0.36	0.17	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.24	1.07	16.1	0.00	0.00	4.15	4.15	0.00	0.97	0.97	—	4,180	4,180	0.07	0.17	7.17	—
Vendor	0.05	2.44	0.62	0.01	0.02	0.45	0.47	0.02	0.12	0.15	—	1,747	1,747	0.02	0.26	1.99	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.20	2.94	0.00	0.00	0.76	0.76	0.00	0.18	0.18	—	692	692	0.01	0.03	1.19	—
Vendor	0.01	0.44	0.11	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	289	289	< 0.005	0.04	0.33	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.9. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.38	9.38	< 0.005	< 0.005	—	9.41
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.55	1.55	< 0.005	< 0.005	—	1.56
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	1.65	1.53	20.6	0.00	0.00	5.84	5.84	0.00	1.37	1.37	—	5,584	5,584	0.11	0.23	0.54	—
Vendor	0.07	3.31	0.86	0.02	0.03	0.63	0.67	0.03	0.18	0.21	—	2,400	2,400	0.02	0.36	0.15	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	22.5	22.5	< 0.005	< 0.005	0.04	—
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.39	9.39	< 0.005	< 0.005	0.01	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.72	3.72	< 0.005	< 0.005	0.01	—
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.56	1.56	< 0.005	< 0.005	< 0.005	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.11. Paving (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	6.94	9.95	0.01	0.30	—	0.30	0.27	—	0.27	—	1,511	1,511	0.06	0.01	—	1,516
Paving	1.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	0.42	0.60	< 0.005	0.02	—	0.02	0.02	—	0.02	—	91.1	91.1	< 0.005	< 0.005	—	91.4
Paving	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.1	15.1	< 0.005	< 0.005	—	15.1
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.50	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	142	142	< 0.005	0.01	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.81	8.81	< 0.005	< 0.005	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.46	1.46	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.13. Architectural Coating (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	16.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	16.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.24	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.8	35.8	< 0.005	< 0.005	—	35.9
Architectural Coatings	4.47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.93	5.93	< 0.005	< 0.005	—	5.95
Architectural Coatings	0.82	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.30	6.45	0.00	0.00	1.17	1.17	0.00	0.27	0.27	—	1,316	1,316	0.02	0.05	5.14	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.36	0.39	4.70	0.00	0.00	1.17	1.17	0.00	0.27	0.27	—	1,162	1,162	0.03	0.05	0.13	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.09	1.29	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	320	320	0.01	0.01	0.60	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.24	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	53.0	53.0	< 0.005	< 0.005	0.10	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.15. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	16.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	16.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.63	0.81	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architectural Coatings	11.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.12	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architectural Coatings	2.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.40	0.26	6.03	0.00	0.00	1.17	1.17	0.00	0.27	0.27	—	1,290	1,290	0.02	0.04	4.64	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.35	0.34	4.39	0.00	0.00	1.17	1.17	0.00	0.27	0.27	—	1,139	1,139	0.03	0.05	0.12	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.21	3.22	0.00	0.00	0.83	0.83	0.00	0.19	0.19	—	836	836	0.01	0.03	1.43	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.59	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	138	138	< 0.005	0.01	0.24	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.17. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	16.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.18	4.18	< 0.005	< 0.005	—	4.19
Architectural Coatings	0.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.69	0.69	< 0.005	< 0.005	—	0.69
Architectural Coatings	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.33	0.31	4.13	0.00	0.00	1.17	1.17	0.00	0.27	0.27	—	1,117	1,117	0.02	0.05	0.11	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.13	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	35.9	35.9	< 0.005	< 0.005	0.06	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.95	5.95	< 0.005	< 0.005	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	20.2	14.9	154	0.36	0.28	30.6	30.8	0.26	7.77	8.03	—	36,452	36,452	1.32	1.51	98.8	37,032
City Park	0.01	0.01	0.14	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	36.0	36.0	< 0.005	< 0.005	0.10	36.6
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	20.2	14.9	154	0.36	0.28	30.6	30.9	0.26	7.78	8.04	—	36,488	36,488	1.32	1.51	98.9	37,069
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	17.8	17.4	132	0.33	0.28	30.6	30.8	0.26	7.77	8.03	—	33,330	33,330	1.52	1.64	2.56	33,859
City Park	0.01	0.02	0.12	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	32.9	32.9	< 0.005	< 0.005	< 0.005	33.4
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	17.8	17.4	132	0.33	0.28	30.6	30.9	0.26	7.78	8.04	—	33,362	33,362	1.52	1.64	2.57	33,892
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	3.22	2.94	23.3	0.06	0.05	5.47	5.52	0.05	1.39	1.44	—	5,547	5,547	0.23	0.26	6.97	5,636
City Park	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.92	2.92	< 0.005	< 0.005	< 0.005	2.96
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.22	2.94	23.3	0.06	0.05	5.48	5.53	0.05	1.39	1.44	—	5,550	5,550	0.23	0.26	6.97	5,639

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	3,387	3,387	0.33	0.04	—	3,407
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	403	403	0.04	< 0.005	—	406
Total	—	—	—	—	—	—	—	—	—	—	—	3,790	3,790	0.37	0.04	—	3,813
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	3,387	3,387	0.33	0.04	—	3,407
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	403	403	0.04	< 0.005	—	406
Total	—	—	—	—	—	—	—	—	—	—	—	3,790	3,790	0.37	0.04	—	3,813
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	561	561	0.05	0.01	—	564
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	66.8	66.8	0.01	< 0.005	—	67.2
Total	—	—	—	—	—	—	—	—	—	—	—	628	628	0.06	0.01	—	631

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	3,549	3,549	0.31	0.01	—	3,559
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	3,549	3,549	0.31	0.01	—	3,559
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	3,549	3,549	0.31	0.01	—	3,559
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	3,549	3,549	0.31	0.01	—	3,559
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.03	0.51	0.22	< 0.005	0.04	—	0.04	0.04	—	0.04	—	588	588	0.05	< 0.005	—	589
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.51	0.22	< 0.005	0.04	—	0.04	0.04	—	0.04	—	588	588	0.05	< 0.005	—	589

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	16.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.97	0.43	45.6	< 0.005	0.02	—	0.02	0.02	—	0.02	—	122	122	0.01	< 0.005	—	122
Total	22.2	0.43	45.6	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	122	122	0.01	< 0.005	—	122
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	16.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	18.2	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consumer Products	3.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.36	0.04	4.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.94	9.94	< 0.005	< 0.005	—	9.98
Total	3.68	0.04	4.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	9.94	9.94	< 0.005	< 0.005	—	9.98

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295

City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	8.37	12.8	21.1	0.86	0.02	—	48.8
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	8.37	12.8	21.1	0.86	0.02	—	48.8

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
City Park	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.24
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
City Park	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.24
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	53.0	0.00	53.0	5.30	0.00	—	185
City Park	—	—	—	—	—	—	—	—	—	—	0.01	0.00	0.01	< 0.005	0.00	—	0.04
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	53.0	0.00	53.0	5.30	0.00	—	185

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91	0.91
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91	0.91

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	6/1/2024	6/14/2024	5.00	10.0	—
Grading	Grading	6/15/2024	8/2/2024	5.00	35.0	—
Building Construction	Building Construction	8/3/2024	1/2/2026	5.00	370	—
Paving	Paving	1/3/2027	2/2/2027	5.00	22.0	—
Architectural Coating	Architectural Coating	8/17/2024	1/16/2026	5.00	370	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37

Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	14.3	LDA,LDT1,LDT2

Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	578	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	85.8	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	116	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	1,561,032	520,344	0.00	0.00	29,591

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	15.0	0.00	—
Grading	—	—	105	0.00	—
Paving	0.00	0.00	0.00	0.00	11.3

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Apartments Mid Rise	—	0%
Apartments Mid Rise	—	0%
City Park	0.00	0%
Parking Lot	11.3	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	528	0.03	< 0.005
2025	0.00	528	0.03	< 0.005
2026	0.00	528	0.03	< 0.005
2027	0.00	528	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	2,307	2,307	2,307	842,237	20,045	20,045	20,045	7,316,287
Apartments Mid Rise	1,248	1,248	1,248	455,520	10,841	10,841	10,841	3,956,978
Apartments Mid Rise	1,393	1,257	1,047	483,218	12,097	10,919	9,095	4,197,585
City Park	1.17	2.94	3.29	630	15.2	38.3	42.8	8,204
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	107
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	249
Wood Fireplaces	0
Gas Fireplaces	58
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	134

Wood Fireplaces	0
Gas Fireplaces	77
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	179
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
1561032	520,344	0.00	0.00	29,591

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	1,603,823	341	0.0330	0.0040	4,896,335
Apartments Mid Rise	867,420	341	0.0330	0.0040	2,648,158
Apartments Mid Rise	1,156,560	341	0.0330	0.0040	3,530,878
City Park	0.00	341	0.0330	0.0040	0.00
Parking Lot	432,031	341	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	11,667,581	14.1
Apartments Mid Rise	6,310,354	14.1
Apartments Mid Rise	8,413,805	14.1
City Park	0.00	25.6
Parking Lot	0.00	11.5

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	263	—
Apartments Mid Rise	142	—

Apartments Mid Rise	189	—
City Park	0.13	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

8. User Changes to Default Data

Screen	Justification

Land Use	Included lot acreage from applicant. reduced lot acreage to account for minimum amount of parking required by code. No landscaping area estimated (put in 1 sf to eliminated zeros and allow model to run without errors). SVSP only parcels.
Construction: Construction Phases	no demo. adjusted arch coatings to start 2 weeks after start of building construction and last same # of days. no applicant questionnaire for construction.
Operations: Vehicle Data	using Roseville trip rates from F&P transportation impact analysis dated 7/25/23.

Appendix B

CalEEMod Air Quality and Greenhouse Gas Modeling Results Baseline Project (COMP and SVSP separately)

COMP (baseline) Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	COMP (baseline)
Construction Start Date	6/1/2024
Operational Year	2028
Lead Agency	City of Roseville
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	7.80
Location	38.77562705656766, -121.40023406585973
County	Placer-Sacramento
City	Roseville
Air District	Placer County APCD
Air Basin	Sacramento Valley
TAZ	432
EDFZ	4
Electric Utility	Roseville Electric
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.16

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Parking Lot	150	Space	1.35	0.00	1.00	—	—	minimum spaces 1.5 plus 1/10 units guests
Industrial Park	150	1000sqft	15.7	150,000	1.00	—	—	BASELINE CO-52

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.71	36.0	33.9	0.06	1.60	19.8	21.4	1.47	10.1	11.6	—	6,826	6,826	0.27	0.15	4.66	6,852
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	44.4	12.5	15.9	0.03	0.51	0.82	1.33	0.47	0.20	0.67	—	3,744	3,744	0.12	0.15	0.12	3,793
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.26	8.27	9.73	0.02	0.35	1.53	1.87	0.32	0.63	0.95	—	2,255	2,255	0.07	0.09	1.11	2,284
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.60	1.51	1.77	< 0.005	0.06	0.28	0.34	0.06	0.12	0.17	—	373	373	0.01	0.01	0.18	378
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	82.0	82.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—

Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	Yes
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	82.0	82.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	Yes
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.71	36.0	33.9	0.06	1.60	19.8	21.4	1.47	10.1	11.6	—	6,826	6,826	0.27	0.15	4.66	6,852
2025	1.37	11.5	16.6	0.03	0.44	0.82	1.26	0.41	0.20	0.61	—	3,801	3,801	0.11	0.15	4.37	3,852
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.42	12.5	15.9	0.03	0.51	0.82	1.33	0.47	0.20	0.67	—	3,744	3,744	0.12	0.15	0.12	3,793
2025	44.4	11.6	15.7	0.03	0.44	0.82	1.26	0.41	0.20	0.61	—	3,719	3,719	0.12	0.15	0.11	3,766
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.90	8.27	8.67	0.02	0.35	1.53	1.87	0.32	0.63	0.95	—	1,840	1,840	0.06	0.05	0.56	1,856
2025	3.26	7.13	9.73	0.02	0.27	0.48	0.76	0.25	0.12	0.37	—	2,255	2,255	0.07	0.09	1.11	2,284
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.16	1.51	1.58	< 0.005	0.06	0.28	0.34	0.06	0.12	0.17	—	305	305	0.01	0.01	0.09	307

2025	0.60	1.30	1.77	< 0.005	0.05	0.09	0.14	0.05	0.02	0.07	—	373	373	0.01	0.01	0.18	378

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.7	7.75	76.9	0.18	0.23	14.6	14.8	0.22	3.71	3.93	167	21,764	21,931	17.8	0.87	86.2	22,721
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.88	8.81	57.7	0.16	0.22	14.6	14.8	0.21	3.71	3.92	167	20,243	20,409	17.9	0.93	40.3	21,172
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.4	8.39	61.1	0.17	0.22	14.5	14.7	0.21	3.69	3.91	167	20,566	20,733	17.8	0.90	59.4	21,506
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.91	1.53	11.2	0.03	0.04	2.65	2.69	0.04	0.67	0.71	27.6	3,405	3,433	2.95	0.15	9.84	3,561
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	55.0	55.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	55.0	55.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,100
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Yes

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.14	6.53	69.4	0.17	0.13	14.6	14.7	0.12	3.71	3.83	—	17,269	17,269	0.54	0.67	47.2	17,529
Area	4.53	0.05	6.52	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Energy	0.06	1.16	0.98	0.01	0.09	—	0.09	0.09	—	0.09	—	4,367	4,367	0.41	0.04	—	4,388
Water	—	—	—	—	—	—	—	—	—	—	66.5	101	168	6.83	0.16	—	387
Waste	—	—	—	—	—	—	—	—	—	—	100	0.00	100	10.0	0.00	—	351
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.0	39.0
Total	11.7	7.75	76.9	0.18	0.23	14.6	14.8	0.22	3.71	3.93	167	21,764	21,931	17.8	0.87	86.2	22,721
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.36	7.64	56.7	0.15	0.13	14.6	14.7	0.12	3.71	3.83	—	15,774	15,774	0.60	0.73	1.22	16,007
Area	3.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.06	1.16	0.98	0.01	0.09	—	0.09	0.09	—	0.09	—	4,367	4,367	0.41	0.04	—	4,388
Water	—	—	—	—	—	—	—	—	—	—	66.5	101	168	6.83	0.16	—	387
Waste	—	—	—	—	—	—	—	—	—	—	100	0.00	100	10.0	0.00	—	351
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.0	39.0
Total	9.88	8.81	57.7	0.16	0.22	14.6	14.8	0.21	3.71	3.92	167	20,243	20,409	17.9	0.93	40.3	21,172
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.39	7.20	56.9	0.16	0.13	14.5	14.7	0.12	3.69	3.81	—	16,085	16,085	0.56	0.70	20.4	16,328

Area	3.99	0.03	3.22	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	13.2	13.2	< 0.005	< 0.005	—	13.3
Energy	0.06	1.16	0.98	0.01	0.09	—	0.09	0.09	—	0.09	—	4,367	4,367	0.41	0.04	—	4,388
Water	—	—	—	—	—	—	—	—	—	—	66.5	101	168	6.83	0.16	—	387
Waste	—	—	—	—	—	—	—	—	—	—	100	0.00	100	10.0	0.00	—	351
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.0	39.0
Total	10.4	8.39	61.1	0.17	0.22	14.5	14.7	0.21	3.69	3.91	167	20,566	20,733	17.8	0.90	59.4	21,506
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.17	1.31	10.4	0.03	0.02	2.65	2.67	0.02	0.67	0.70	—	2,663	2,663	0.09	0.12	3.37	2,703
Area	0.73	< 0.005	0.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.19	2.19	< 0.005	< 0.005	—	2.20
Energy	0.01	0.21	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	—	723	723	0.07	0.01	—	727
Water	—	—	—	—	—	—	—	—	—	—	11.0	16.8	27.8	1.13	0.03	—	64.1
Waste	—	—	—	—	—	—	—	—	—	—	16.6	0.00	16.6	1.66	0.00	—	58.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.46	6.46
Total	1.91	1.53	11.2	0.03	0.04	2.65	2.69	0.04	0.67	0.71	27.6	3,405	3,433	2.95	0.15	9.84	3,561

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314

Dust From Material Movement	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.99	0.90	< 0.005	0.04	—	0.04	0.04	—	0.04	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	0.54	0.54	—	0.28	0.28	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.05	0.98	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	199	199	< 0.005	0.01	0.78	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.95	4.95	< 0.005	< 0.005	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.82	0.82	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	2.82	2.48	0.01	0.12	—	0.12	0.11	—	0.11	—	542	542	0.02	< 0.005	—	544
Dust From Material Movement	—	—	—	—	—	0.76	0.76	—	0.30	0.30	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.51	0.45	< 0.005	0.02	—	0.02	0.02	—	0.02	—	89.8	89.8	< 0.005	< 0.005	—	90.1
Dust From Material Movement	—	—	—	—	—	0.14	0.14	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.05	1.11	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	228	228	< 0.005	0.01	0.89	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.0	17.0	< 0.005	< 0.005	0.03	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.81	2.81	< 0.005	< 0.005	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.79	3.26	0.01	0.12	—	0.12	0.11	—	0.11	—	596	596	0.02	< 0.005	—	598
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.05	0.51	0.59	< 0.005	0.02	—	0.02	0.02	—	0.02	—	98.7	98.7	< 0.005	< 0.005	—	99.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.16	3.51	0.00	0.00	0.64	0.64	0.00	0.15	0.15	—	717	717	0.01	0.03	2.80	—
Vendor	0.02	0.98	0.25	< 0.005	0.01	0.18	0.19	0.01	0.05	0.06	—	713	713	0.01	0.11	1.86	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.21	2.56	0.00	0.00	0.64	0.64	0.00	0.15	0.15	—	633	633	0.02	0.03	0.07	—
Vendor	0.02	1.05	0.26	< 0.005	0.01	0.18	0.19	0.01	0.05	0.06	—	713	713	0.01	0.11	0.05	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.65	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	162	162	< 0.005	0.01	0.30	—
Vendor	0.01	0.26	0.06	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	177	177	< 0.005	0.03	0.20	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	26.8	26.8	< 0.005	< 0.005	0.05	—
Vendor	< 0.005	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.3	29.3	< 0.005	< 0.005	0.03	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	6.01	7.50	0.01	0.25	—	0.25	0.23	—	0.23	—	1,379	1,379	0.06	0.01	—	1,384
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.10	1.37	< 0.005	0.05	—	0.05	0.04	—	0.04	—	228	228	0.01	< 0.005	—	229
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.14	3.28	0.00	0.00	0.64	0.64	0.00	0.15	0.15	—	703	703	0.01	0.02	2.53	—
Vendor	0.02	0.93	0.24	< 0.005	0.01	0.18	0.19	0.01	0.05	0.06	—	700	700	0.01	0.10	1.84	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.19	2.39	0.00	0.00	0.64	0.64	0.00	0.15	0.15	—	621	621	0.01	0.03	0.07	—
Vendor	0.02	1.00	0.25	< 0.005	0.01	0.18	0.19	0.01	0.05	0.06	—	701	701	0.01	0.10	0.05	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.09	1.41	0.00	0.00	0.36	0.36	0.00	0.09	0.09	—	367	367	0.01	0.01	0.63	—
Vendor	0.01	0.56	0.14	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	403	403	< 0.005	0.06	0.46	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.26	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	60.7	60.7	< 0.005	< 0.005	0.10	—
Vendor	< 0.005	0.10	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	66.7	66.7	< 0.005	0.01	0.08	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.41	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.57	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	148	148	< 0.005	0.01	0.02	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.32	8.32	< 0.005	< 0.005	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.38	1.38	< 0.005	< 0.005	< 0.005	—

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	44.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	2.43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22

Architectu Coatings	0.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.48	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	124	124	< 0.005	0.01	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.99	6.99	< 0.005	< 0.005	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.16	1.16	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.13. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.36	1.19	< 0.005	0.06	—	0.06	0.05	—	0.05	—	188	188	0.01	< 0.005	—	188
Demolition	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.25	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Demolition	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.04	0.84	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	171	171	< 0.005	0.01	0.67	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.49	8.49	< 0.005	< 0.005	0.02	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.41	1.41	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Industrial Park	7.14	6.53	69.4	0.17	0.13	14.6	14.7	0.12	3.71	3.83	—	17,269	17,269	0.54	0.67	47.2	17,529
Total	7.14	6.53	69.4	0.17	0.13	14.6	14.7	0.12	3.71	3.83	—	17,269	17,269	0.54	0.67	47.2	17,529

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Industrial Park	6.36	7.64	56.7	0.15	0.13	14.6	14.7	0.12	3.71	3.83	—	15,774	15,774	0.60	0.73	1.22	16,007
Total	6.36	7.64	56.7	0.15	0.13	14.6	14.7	0.12	3.71	3.83	—	15,774	15,774	0.60	0.73	1.22	16,007
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Industrial Park	1.17	1.31	10.4	0.03	0.02	2.65	2.67	0.02	0.67	0.70	—	2,663	2,663	0.09	0.12	3.37	2,703
Total	1.17	1.31	10.4	0.03	0.02	2.65	2.67	0.02	0.67	0.70	—	2,663	2,663	0.09	0.12	3.37	2,703

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	48.1	48.1	< 0.005	< 0.005	—	48.4
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	2,931	2,931	0.28	0.03	—	2,948
Total	—	—	—	—	—	—	—	—	—	—	—	2,979	2,979	0.29	0.03	—	2,997
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	48.1	48.1	< 0.005	< 0.005	—	48.4
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	2,931	2,931	0.28	0.03	—	2,948
Total	—	—	—	—	—	—	—	—	—	—	—	2,979	2,979	0.29	0.03	—	2,997
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	7.96	7.96	< 0.005	< 0.005	—	8.01
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	485	485	0.05	0.01	—	488
Total	—	—	—	—	—	—	—	—	—	—	—	493	493	0.05	0.01	—	496

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Industrial Park	0.06	1.16	0.98	0.01	0.09	—	0.09	0.09	—	0.09	—	1,388	1,388	0.12	< 0.005	—	1,392
Total	0.06	1.16	0.98	0.01	0.09	—	0.09	0.09	—	0.09	—	1,388	1,388	0.12	< 0.005	—	1,392
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Industrial Park	0.06	1.16	0.98	0.01	0.09	—	0.09	0.09	—	0.09	—	1,388	1,388	0.12	< 0.005	—	1,392
Total	0.06	1.16	0.98	0.01	0.09	—	0.09	0.09	—	0.09	—	1,388	1,388	0.12	< 0.005	—	1,392
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Industrial Park	0.01	0.21	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	—	230	230	0.02	< 0.005	—	230
Total	0.01	0.21	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	—	230	230	0.02	< 0.005	—	230

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.07	0.05	6.52	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Total	4.53	0.05	6.52	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	3.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.10	< 0.005	0.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.19	2.19	< 0.005	< 0.005	—	2.20
Total	0.73	< 0.005	0.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.19	2.19	< 0.005	< 0.005	—	2.20

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Industrial Park	—	—	—	—	—	—	—	—	—	—	66.5	101	168	6.83	0.16	—	387
Total	—	—	—	—	—	—	—	—	—	—	66.5	101	168	6.83	0.16	—	387
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005

Industrial Park	—	—	—	—	—	—	—	—	—	—	66.5	101	168	6.83	0.16	—	387
Total	—	—	—	—	—	—	—	—	—	—	66.5	101	168	6.83	0.16	—	387
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Industrial Park	—	—	—	—	—	—	—	—	—	—	11.0	16.8	27.8	1.13	0.03	—	64.1
Total	—	—	—	—	—	—	—	—	—	—	11.0	16.8	27.8	1.13	0.03	—	64.1

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Industrial Park	—	—	—	—	—	—	—	—	—	—	100	0.00	100	10.0	0.00	—	351
Total	—	—	—	—	—	—	—	—	—	—	100	0.00	100	10.0	0.00	—	351
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Industrial Park	—	—	—	—	—	—	—	—	—	—	100	0.00	100	10.0	0.00	—	351
Total	—	—	—	—	—	—	—	—	—	—	100	0.00	100	10.0	0.00	—	351
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Industrial Park	—	—	—	—	—	—	—	—	—	—	16.6	0.00	16.6	1.66	0.00	—	58.1
Total	—	—	—	—	—	—	—	—	—	—	16.6	0.00	16.6	1.66	0.00	—	58.1

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.0	39.0
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.0	39.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.0	39.0
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.0	39.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.46	6.46
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.46	6.46

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	6/30/2024	7/14/2024	5.00	10.0	—
Grading	Grading	7/15/2024	8/26/2024	5.00	30.0	—
Building Construction	Building Construction	8/27/2024	10/21/2025	5.00	300	—
Paving	Paving	10/22/2025	11/19/2025	5.00	20.0	—
Architectural Coating	Architectural Coating	11/20/2025	12/18/2025	5.00	20.0	—
Demolition	Demolition	6/1/2024	6/29/2024	5.00	20.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37

Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	63.0	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	24.6	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT

Paving	—	—	—	—
Paving	Worker	15.0	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	12.6	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Demolition	—	—	—	—
Demolition	Worker	15.0	14.3	LDA,LDT1,LDT2
Demolition	Vendor	—	8.80	HHDT,MHDT
Demolition	Hauling	0.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	225,000	75,000	3,528

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	15.0	0.00	—
Grading	—	—	90.0	0.00	—
Paving	0.00	0.00	0.00	0.00	1.35
Demolition	0.00	0.00	0.00	—	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Parking Lot	1.35	100%
Industrial Park	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	528	0.03	< 0.005
2025	0.00	528	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial Park	1,575	1,575	1,575	574,875	20,522	20,522	20,522	7,490,620

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	225,000	75,000	3,528

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Parking Lot	51,514	341	0.0330	0.0040	0.00
Industrial Park	3,139,400	341	0.0330	0.0040	4,330,353

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)

Parking Lot	0.00	11.5
Industrial Park	34,687,500	11.5

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Parking Lot	0.00	—
Industrial Park	186	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Industrial Park	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

8. User Changes to Default Data

Screen	Justification
Land Use	Included lot acreage from applicant. reduced lot acreage to account for minimum amount of parking required by code. No landscaping area estimated (put in 1 sf to eliminated zeros and allow model to run without errors). Baseline CO-52.
Construction: Construction Phases	no demo. adjusted arch coatings to start 2 weeks after start of building construction and last same # of days. no applicant questionnaire for construction.
Operations: Vehicle Data	using Roseville trip rates from F&P transportation impact analysis dated 7/25/23.

SVSP (baseline) Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	SVSP (baseline)
Construction Start Date	6/1/2024
Operational Year	2028
Lead Agency	City of Roseville
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	7.80
Location	38.77562705656766, -121.40023406585973
County	Placer-Sacramento
City	Roseville
Air District	Placer County APCD
Air Basin	Sacramento Valley
TAZ	432
EDFZ	4
Electric Utility	Roseville Electric
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.16

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Apartments Mid Rise	237	Dwelling Unit	4.68	227,520	1.00	—	619	WB-30
Apartments Mid Rise	128	Dwelling Unit	3.28	122,880	1.00	—	334	WB-32
Apartments Mid Rise	172	Dwelling Unit	4.59	165,120	1.00	—	449	FD-34
City Park	1.50	Acre	1.50	0.00	1.00	1.00	—	park
Parking Lot	859	Space	7.73	0.00	1.00	—	—	minimum spaces 1.5 plus 1/10 units guests

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14.4	36.0	40.7	0.06	1.60	19.8	21.4	1.47	10.1	11.6	—	9,476	9,476	0.27	0.46	25.0	9,644
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14.0	16.1	33.7	0.04	0.55	5.11	5.66	0.51	1.22	1.73	—	8,858	8,858	0.23	0.46	0.65	9,003
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.89	10.6	23.5	0.03	0.34	3.63	3.98	0.32	0.99	1.30	—	6,330	6,330	0.14	0.32	7.08	6,437
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.81	1.93	4.28	< 0.005	0.06	0.66	0.73	0.06	0.18	0.24	—	1,048	1,048	0.02	0.05	1.17	1,066

Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	82.0	82.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	Yes
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	82.0	82.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	Yes
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	14.4	36.0	40.7	0.06	1.60	19.8	21.4	1.47	10.1	11.6	—	9,476	9,476	0.27	0.46	25.0	9,644
2025	14.1	14.5	38.9	0.04	0.48	5.11	5.59	0.44	1.22	1.66	—	9,341	9,341	0.19	0.44	22.9	9,500
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	14.0	16.1	33.7	0.04	0.55	5.11	5.66	0.51	1.22	1.73	—	8,858	8,858	0.23	0.46	0.65	9,003
2025	13.8	15.0	32.4	0.04	0.48	5.11	5.59	0.44	1.22	1.66	—	8,737	8,737	0.22	0.45	0.59	8,878
2026	13.7	14.1	31.2	0.04	0.42	5.11	5.54	0.39	1.22	1.61	—	8,617	8,617	0.21	0.45	0.53	8,757
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2024	4.31	8.95	13.9	0.02	0.34	2.93	3.27	0.32	0.99	1.30	—	3,433	3,433	0.09	0.14	3.19	3,481
2025	9.89	10.6	23.5	0.03	0.34	3.63	3.98	0.32	0.86	1.18	—	6,330	6,330	0.14	0.32	7.08	6,437
2026	0.47	0.48	0.81	< 0.005	0.02	0.05	0.07	0.02	0.01	0.03	—	150	150	< 0.005	< 0.005	0.08	151
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.79	1.63	2.54	< 0.005	0.06	0.53	0.60	0.06	0.18	0.24	—	568	568	0.02	0.02	0.53	576
2025	1.81	1.93	4.28	< 0.005	0.06	0.66	0.73	0.06	0.16	0.22	—	1,048	1,048	0.02	0.05	1.17	1,066
2026	0.09	0.09	0.15	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	—	24.8	24.8	< 0.005	< 0.005	0.01	25.0

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	29.2	12.7	140	0.27	0.36	21.6	22.0	0.35	5.49	5.84	248	30,797	31,045	26.3	1.18	73.5	32,127
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	24.8	14.1	93.7	0.24	0.35	21.6	21.9	0.34	5.49	5.83	248	28,510	28,758	26.4	1.28	5.50	29,803
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	26.2	13.5	107	0.25	0.35	21.5	21.8	0.34	5.46	5.80	248	28,990	29,238	26.3	1.23	33.8	30,297
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.79	2.47	19.6	0.05	0.06	3.92	3.98	0.06	1.00	1.06	41.1	4,800	4,841	4.36	0.20	5.60	5,016
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	55.0	55.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—

Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	55.0	55.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,100
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Yes

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	14.3	10.5	109	0.25	0.20	21.6	21.8	0.18	5.49	5.67	—	25,750	25,750	0.93	1.06	69.8	26,160
Area	14.8	0.29	30.5	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	81.5	81.5	< 0.005	< 0.005	—	81.7
Energy	0.11	1.87	0.80	0.01	0.15	—	0.15	0.15	—	0.15	—	4,914	4,914	0.46	0.03	—	4,936
Water	—	—	—	—	—	—	—	—	—	—	33.8	51.6	85.4	3.47	0.08	—	197
Waste	—	—	—	—	—	—	—	—	—	—	214	0.00	214	21.4	0.00	—	749
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.69	3.69
Total	29.2	12.7	140	0.27	0.36	21.6	22.0	0.35	5.49	5.84	248	30,797	31,045	26.3	1.18	73.5	32,127
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	12.5	12.3	92.9	0.23	0.20	21.6	21.8	0.18	5.49	5.67	—	23,544	23,544	1.07	1.16	1.81	23,918
Area	12.2	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.11	1.87	0.80	0.01	0.15	—	0.15	0.15	—	0.15	—	4,914	4,914	0.46	0.03	—	4,936

Water	—	—	—	—	—	—	—	—	—	—	33.8	51.6	85.4	3.47	0.08	—	197
Waste	—	—	—	—	—	—	—	—	—	—	214	0.00	214	21.4	0.00	—	749
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.69	3.69
Total	24.8	14.1	93.7	0.24	0.35	21.6	21.9	0.34	5.49	5.83	248	28,510	28,758	26.4	1.28	5.50	29,803
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	12.6	11.5	91.4	0.24	0.20	21.5	21.7	0.18	5.46	5.64	—	23,984	23,984	0.99	1.11	30.1	24,371
Area	13.5	0.14	15.1	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	40.2	40.2	< 0.005	< 0.005	—	40.3
Energy	0.11	1.87	0.80	0.01	0.15	—	0.15	0.15	—	0.15	—	4,914	4,914	0.46	0.03	—	4,936
Water	—	—	—	—	—	—	—	—	—	—	33.8	51.6	85.4	3.47	0.08	—	197
Waste	—	—	—	—	—	—	—	—	—	—	214	0.00	214	21.4	0.00	—	749
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.69	3.69
Total	26.2	13.5	107	0.25	0.35	21.5	21.8	0.34	5.46	5.80	248	28,990	29,238	26.3	1.23	33.8	30,297
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.30	2.10	16.7	0.04	0.04	3.92	3.95	0.03	1.00	1.03	—	3,971	3,971	0.16	0.18	4.99	4,035
Area	2.46	0.03	2.75	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	6.65	6.65	< 0.005	< 0.005	—	6.67
Energy	0.02	0.34	0.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	814	814	0.08	0.01	—	817
Water	—	—	—	—	—	—	—	—	—	—	5.60	8.54	14.1	0.57	0.01	—	32.6
Waste	—	—	—	—	—	—	—	—	—	—	35.5	0.00	35.5	3.54	0.00	—	124
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.61	0.61
Total	4.79	2.47	19.6	0.05	0.06	3.92	3.98	0.06	1.00	1.06	41.1	4,800	4,841	4.36	0.20	5.60	5,016

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.99	0.90	< 0.005	0.04	—	0.04	0.04	—	0.04	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	0.54	0.54	—	0.28	0.28	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.05	0.98	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	199	199	< 0.005	0.01	0.78	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.95	4.95	< 0.005	< 0.005	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.82	0.82	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621

Dust From Material Movement	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	3.29	2.89	0.01	0.14	—	0.14	0.13	—	0.13	—	633	633	0.03	0.01	—	635
Dust From Material Movement	—	—	—	—	—	0.88	0.88	—	0.35	0.35	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.60	0.53	< 0.005	0.03	—	0.03	0.02	—	0.02	—	105	105	< 0.005	< 0.005	—	105
Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.05	1.11	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	228	228	< 0.005	0.01	0.89	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.8	19.8	< 0.005	< 0.005	0.04	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.28	3.28	< 0.005	< 0.005	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	3.32	3.88	0.01	0.15	—	0.15	0.14	—	0.14	—	708	708	0.03	0.01	—	711
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.61	0.71	< 0.005	0.03	—	0.03	0.02	—	0.02	—	117	117	< 0.005	< 0.005	—	118
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.52	1.00	21.6	0.00	0.00	3.91	3.91	0.00	0.92	0.92	—	4,401	4,401	0.06	0.16	17.2	—
Vendor	0.05	2.29	0.59	0.01	0.02	0.42	0.45	0.02	0.12	0.14	—	1,664	1,664	0.01	0.26	4.33	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.21	1.29	15.7	0.00	0.00	3.91	3.91	0.00	0.92	0.92	—	3,886	3,886	0.09	0.16	0.45	—
Vendor	0.05	2.46	0.61	0.01	0.02	0.42	0.45	0.02	0.12	0.14	—	1,664	1,664	0.01	0.26	0.11	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.40	0.34	4.77	0.00	0.00	1.15	1.15	0.00	0.27	0.27	—	1,180	1,180	0.02	0.05	2.19	—
Vendor	0.01	0.71	0.18	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	492	492	< 0.005	0.08	0.55	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.87	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	195	195	< 0.005	0.01	0.36	—

Vendor	< 0.005	0.13	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	81.4	81.4	< 0.005	0.01	0.09	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.46	9.31	0.02	0.31	—	0.31	0.28	—	0.28	—	1,713	1,713	0.07	0.01	—	1,719
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	1.36	1.70	< 0.005	0.06	—	0.06	0.05	—	0.05	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.34	0.87	20.1	0.00	0.00	3.91	3.91	0.00	0.92	0.92	—	4,312	4,312	0.06	0.15	15.5	—
Vendor	0.05	2.17	0.57	0.01	0.02	0.42	0.45	0.02	0.12	0.14	—	1,635	1,635	0.01	0.24	4.30	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.16	1.15	14.7	0.00	0.00	3.91	3.91	0.00	0.92	0.92	—	3,808	3,808	0.09	0.16	0.40	—
Vendor	0.05	2.33	0.59	0.01	0.02	0.42	0.45	0.02	0.12	0.14	—	1,636	1,636	0.01	0.24	0.11	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.83	0.72	10.8	0.00	0.00	2.78	2.78	0.00	0.65	0.65	—	2,795	2,795	0.05	0.11	4.79	—
Vendor	0.03	1.63	0.42	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,168	1,168	0.01	0.17	1.33	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.13	1.96	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	463	463	0.01	0.02	0.79	—
Vendor	0.01	0.30	0.08	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	193	193	< 0.005	0.03	0.22	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.9. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.38	9.38	< 0.005	< 0.005	—	9.41
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.55	1.55	< 0.005	< 0.005	—	1.56
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.10	1.02	13.8	0.00	0.00	3.91	3.91	0.00	0.92	0.92	—	3,734	3,734	0.08	0.16	0.36	—
Vendor	0.05	2.21	0.57	0.01	0.02	0.42	0.45	0.02	0.12	0.14	—	1,605	1,605	0.01	0.24	0.10	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.0	15.0	< 0.005	< 0.005	0.02	—
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.28	6.28	< 0.005	< 0.005	0.01	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.49	2.49	< 0.005	< 0.005	< 0.005	—
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.04	1.04	< 0.005	< 0.005	< 0.005	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.11. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	1.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.39	0.54	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.54	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	145	145	< 0.005	0.01	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.16	8.16	< 0.005	< 0.005	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.35	1.35	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.13. Architectural Coating (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	11.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	11.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.24	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.8	35.8	< 0.005	< 0.005	—	35.9
Architectural Coatings	2.99	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.93	5.93	< 0.005	< 0.005	—	5.95
Architectural Coatings	0.55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.30	0.20	4.31	0.00	0.00	0.78	0.78	0.00	0.18	0.18	—	880	880	0.01	0.03	3.44	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.26	3.14	0.00	0.00	0.78	0.78	0.00	0.18	0.18	—	777	777	0.02	0.03	0.09	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.87	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	214	214	< 0.005	0.01	0.40	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.16	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	35.4	35.4	< 0.005	< 0.005	0.07	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.15. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	11.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	11.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.63	0.81	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architectural Coatings	7.97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.12	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architectural Coatings	1.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.17	4.03	0.00	0.00	0.78	0.78	0.00	0.18	0.18	—	862	862	0.01	0.03	3.11	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.23	2.94	0.00	0.00	0.78	0.78	0.00	0.18	0.18	—	762	762	0.02	0.03	0.08	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.14	2.15	0.00	0.00	0.56	0.56	0.00	0.13	0.13	—	559	559	0.01	0.02	0.96	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.39	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	92.6	92.6	< 0.005	< 0.005	0.16	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.17. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	11.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.18	4.18	< 0.005	< 0.005	—	4.19
Architectural Coatings	0.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.69	0.69	< 0.005	< 0.005	—	0.69
Architectural Coatings	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.20	2.76	0.00	0.00	0.78	0.78	0.00	0.18	0.18	—	747	747	0.02	0.03	0.07	—

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	24.0	24.0	< 0.005	< 0.005	0.04	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.98	3.98	< 0.005	< 0.005	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	14.3	10.5	109	0.25	0.20	21.6	21.8	0.18	5.48	5.67	—	25,714	25,714	0.93	1.06	69.7	26,123
City Park	0.01	0.01	0.14	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	36.0	36.0	< 0.005	< 0.005	0.10	36.6
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	14.3	10.5	109	0.25	0.20	21.6	21.8	0.18	5.49	5.67	—	25,750	25,750	0.93	1.06	69.8	26,160

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	12.5	12.2	92.8	0.23	0.20	21.6	21.8	0.18	5.48	5.67	—	23,511	23,511	1.07	1.16	1.81	23,884
City Park	0.01	0.02	0.12	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	32.9	32.9	< 0.005	< 0.005	< 0.005	33.4
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	12.5	12.3	92.9	0.23	0.20	21.6	21.8	0.18	5.49	5.67	—	23,544	23,544	1.07	1.16	1.81	23,918
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	2.30	2.10	16.7	0.04	0.04	3.92	3.95	0.03	1.00	1.03	—	3,968	3,968	0.16	0.18	4.98	4,032
City Park	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.92	2.92	< 0.005	< 0.005	< 0.005	2.96
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.30	2.10	16.7	0.04	0.04	3.92	3.95	0.03	1.00	1.03	—	3,971	3,971	0.16	0.18	4.99	4,035

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	2,265	2,265	0.22	0.03	—	2,278
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	275	275	0.03	< 0.005	—	277
Total	—	—	—	—	—	—	—	—	—	—	—	2,540	2,540	0.25	0.03	—	2,555
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	2,265	2,265	0.22	0.03	—	2,278
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	275	275	0.03	< 0.005	—	277
Total	—	—	—	—	—	—	—	—	—	—	—	2,540	2,540	0.25	0.03	—	2,555
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	375	375	0.04	< 0.005	—	377
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	45.6	45.6	< 0.005	< 0.005	—	45.9
Total	—	—	—	—	—	—	—	—	—	—	—	421	421	0.04	< 0.005	—	423

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.11	1.87	0.80	0.01	0.15	—	0.15	0.15	—	0.15	—	2,374	2,374	0.21	< 0.005	—	2,380
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.11	1.87	0.80	0.01	0.15	—	0.15	0.15	—	0.15	—	2,374	2,374	0.21	< 0.005	—	2,380
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.11	1.87	0.80	0.01	0.15	—	0.15	0.15	—	0.15	—	2,374	2,374	0.21	< 0.005	—	2,380
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.11	1.87	0.80	0.01	0.15	—	0.15	0.15	—	0.15	—	2,374	2,374	0.21	< 0.005	—	2,380
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.02	0.34	0.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	393	393	0.03	< 0.005	—	394
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.02	0.34	0.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	393	393	0.03	< 0.005	—	394

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consumer	11.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.66	0.29	30.5	< 0.005	0.01	—	0.01	0.01	—	0.01	—	81.5	81.5	< 0.005	< 0.005	—	81.7
Total	14.8	0.29	30.5	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	81.5	81.5	< 0.005	< 0.005	—	81.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	11.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	12.2	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	2.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.24	0.03	2.75	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.65	6.65	< 0.005	< 0.005	—	6.67
Total	2.46	0.03	2.75	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	6.65	6.65	< 0.005	< 0.005	—	6.67

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	33.8	51.6	85.4	3.47	0.08	—	197
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	33.8	51.6	85.4	3.47	0.08	—	197
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	33.8	51.6	85.4	3.47	0.08	—	197
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	33.8	51.6	85.4	3.47	0.08	—	197
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	5.60	8.54	14.1	0.57	0.01	—	32.6
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005

Total	—	—	—	—	—	—	—	—	—	—	5.60	8.54	14.1	0.57	0.01	—	32.6

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	214	0.00	214	21.4	0.00	—	749
City Park	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.24
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	214	0.00	214	21.4	0.00	—	749
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	214	0.00	214	21.4	0.00	—	749
City Park	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.24
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	214	0.00	214	21.4	0.00	—	749
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	35.4	0.00	35.4	3.54	0.00	—	124
City Park	—	—	—	—	—	—	—	—	—	—	0.01	0.00	0.01	< 0.005	0.00	—	0.04

Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	35.5	0.00	35.5	3.54	0.00	—	124

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.69	3.69
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.69	3.69
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.69	3.69
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.69	3.69
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.61	0.61
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.61	0.61

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	6/1/2024	6/14/2024	5.00	10.0	—
Grading	Grading	6/15/2024	8/2/2024	5.00	35.0	—
Building Construction	Building Construction	8/3/2024	1/2/2026	5.00	370	—
Paving	Paving	1/3/2026	1/30/2026	5.00	20.0	—
Architectural Coating	Architectural Coating	8/17/2024	1/16/2026	5.00	370	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45

Building Construction	Tractors/Loaders/Backh	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	387	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	57.4	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	14.3	LDA,LDT1,LDT2

Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	77.3	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	1,043,928	347,976	0.00	0.00	20,206

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	15.0	0.00	—
Grading	—	—	105	0.00	—
Paving	0.00	0.00	0.00	0.00	7.73

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Apartments Mid Rise	—	0%
Apartments Mid Rise	—	0%
City Park	0.00	0%
Parking Lot	7.73	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	528	0.03	< 0.005
2025	0.00	528	0.03	< 0.005
2026	0.00	528	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	1,540	1,540	1,540	562,282	13,382	13,382	13,382	4,884,394
Apartments Mid Rise	832	832	832	303,680	7,227	7,227	7,227	2,637,985
Apartments Mid Rise	1,118	1,118	1,118	408,070	9,712	9,712	9,712	3,544,792
City Park	1.17	2.94	3.29	630	15.2	38.3	42.8	8,204
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	71
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	166
Wood Fireplaces	0
Gas Fireplaces	38
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	90
Wood Fireplaces	0
Gas Fireplaces	52
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	120
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Conventional Wood Stoves	0

Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
1043928	347,976	0.00	0.00	20,206

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	1,070,721	341	0.0330	0.0040	3,268,821
Apartments Mid Rise	578,280	341	0.0330	0.0040	1,765,439
Apartments Mid Rise	777,063	341	0.0330	0.0040	2,372,309
City Park	0.00	341	0.0330	0.0040	0.00

Parking Lot	295,004	341	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	7,789,343	14.1
Apartments Mid Rise	4,206,902	14.1
Apartments Mid Rise	5,653,025	14.1
City Park	0.00	25.6
Parking Lot	0.00	11.5

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	175	—
Apartments Mid Rise	94.6	—
Apartments Mid Rise	127	—
City Park	0.13	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

8. User Changes to Default Data

Screen	Justification
Land Use	Included lot acreage from applicant. reduced lot acreage to account for minimum amount of parking required by code. No landscaping area estimated (put in 1 sf to eliminated zeros and allow model to run without errors).
Construction: Construction Phases	no demo. adjusted arch coatings to start 2 weeks after start of building construction and last same # of days. no applicant questionnaire for construction.
Operations: Vehicle Data	using Roseville trip rates from F&P transportation impact analysis dated 7/25/23.

Appendix C

CalEEMod Air Quality and Greenhouse Gas Modeling Results
Mitigated Operational ROG
(COMP and SVSP separately)

SVSP and COMP Amendments (CO-52 Only) Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	SVSP and COMP Amendments (CO-52 Only)
Construction Start Date	6/1/2024
Operational Year	2028
Lead Agency	City of Roseville
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	7.80
Location	38.77562705656766, -121.40023406585973
County	Placer-Sacramento
City	Roseville
Air District	Placer County APCD
Air Basin	Sacramento Valley
TAZ	432
EDFZ	4
Electric Utility	Roseville Electric
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.16

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Apartments Mid Rise	285	Dwelling Unit	13.7	273,600	1.00	—	744	CO-52
Parking Lot	456	Space	4.00	0.00	1.00	—	—	minimum spaces 1.5 plus 1/10 units guests

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	15.4	6.71	74.2	0.14	0.19	11.4	11.6	0.18	2.91	3.09	132	17,078	17,209	13.9	0.63	39.0	17,783
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.1	7.49	49.7	0.13	0.18	11.4	11.6	0.18	2.91	3.09	132	15,865	15,997	14.0	0.68	2.92	16,552
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.8	7.18	56.9	0.13	0.19	11.4	11.6	0.18	2.90	3.08	132	16,129	16,260	14.0	0.65	17.9	16,822
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.53	1.31	10.4	0.02	0.03	2.08	2.11	0.03	0.53	0.56	21.8	2,670	2,692	2.31	0.11	2.97	2,785
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	55.0	55.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—

Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	55.0	55.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,100
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Yes

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.57	5.57	57.6	0.13	0.10	11.4	11.5	0.10	2.91	3.01	—	13,647	13,647	0.49	0.56	37.0	13,864
Area	7.80	0.15	16.2	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	43.2	43.2	< 0.005	< 0.005	—	43.4
Energy	0.06	0.99	0.42	0.01	0.08	—	0.08	0.08	—	0.08	—	3,345	3,345	0.24	0.02	—	3,356
Water	—	—	—	—	—	—	—	—	—	—	17.9	42.5	60.4	1.84	0.04	—	120
Waste	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	397
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.96	1.96
Total	15.4	6.71	74.2	0.14	0.19	11.4	11.6	0.18	2.91	3.09	132	17,078	17,209	13.9	0.63	39.0	17,783
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.65	6.50	49.2	0.12	0.10	11.4	11.5	0.10	2.91	3.01	—	12,478	12,478	0.57	0.61	0.96	12,676
Area	6.39	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.06	0.99	0.42	0.01	0.08	—	0.08	0.08	—	0.08	—	3,345	3,345	0.24	0.02	—	3,356

Water	—	—	—	—	—	—	—	—	—	—	17.9	42.5	60.4	1.84	0.04	—	120
Waste	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	397
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.96	1.96
Total	13.1	7.49	49.7	0.13	0.18	11.4	11.6	0.18	2.91	3.09	132	15,865	15,997	14.0	0.68	2.92	16,552
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.70	6.11	48.5	0.12	0.10	11.4	11.5	0.10	2.90	2.99	—	12,720	12,720	0.53	0.59	16.0	12,925
Area	7.08	0.08	7.99	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	21.3	21.3	< 0.005	< 0.005	—	21.4
Energy	0.06	0.99	0.42	0.01	0.08	—	0.08	0.08	—	0.08	—	3,345	3,345	0.24	0.02	—	3,356
Water	—	—	—	—	—	—	—	—	—	—	17.9	42.5	60.4	1.84	0.04	—	120
Waste	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	397
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.96	1.96
Total	13.8	7.18	56.9	0.13	0.19	11.4	11.6	0.18	2.90	3.08	132	16,129	16,260	14.0	0.65	17.9	16,822
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.22	1.12	8.85	0.02	0.02	2.08	2.10	0.02	0.53	0.55	—	2,106	2,106	0.09	0.10	2.65	2,140
Area	1.29	0.01	1.46	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.53	3.53	< 0.005	< 0.005	—	3.54
Energy	0.01	0.18	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	554	554	0.04	< 0.005	—	556
Water	—	—	—	—	—	—	—	—	—	—	2.97	7.03	10.0	0.31	0.01	—	19.8
Waste	—	—	—	—	—	—	—	—	—	—	18.8	0.00	18.8	1.88	0.00	—	65.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.32	0.32
Total	2.53	1.31	10.4	0.02	0.03	2.08	2.11	0.03	0.53	0.56	21.8	2,670	2,692	2.31	0.11	2.97	2,785

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	7.57	5.57	57.6	0.13	0.10	11.4	11.5	0.10	2.91	3.01	—	13,647	13,647	0.49	0.56	37.0	13,864
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	7.57	5.57	57.6	0.13	0.10	11.4	11.5	0.10	2.91	3.01	—	13,647	13,647	0.49	0.56	37.0	13,864
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	6.65	6.50	49.2	0.12	0.10	11.4	11.5	0.10	2.91	3.01	—	12,478	12,478	0.57	0.61	0.96	12,676
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	6.65	6.50	49.2	0.12	0.10	11.4	11.5	0.10	2.91	3.01	—	12,478	12,478	0.57	0.61	0.96	12,676
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	1.22	1.12	8.85	0.02	0.02	2.08	2.10	0.02	0.53	0.55	—	2,106	2,106	0.09	0.10	2.65	2,140
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.22	1.12	8.85	0.02	0.02	2.08	2.10	0.02	0.53	0.55	—	2,106	2,106	0.09	0.10	2.65	2,140

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,864	1,864	0.12	0.01	—	1,871
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	221	221	0.01	< 0.005	—	222
Total	—	—	—	—	—	—	—	—	—	—	—	2,085	2,085	0.13	0.02	—	2,093
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,864	1,864	0.12	0.01	—	1,871
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	221	221	0.01	< 0.005	—	222
Total	—	—	—	—	—	—	—	—	—	—	—	2,085	2,085	0.13	0.02	—	2,093
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	309	309	0.02	< 0.005	—	310
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	36.6	36.6	< 0.005	< 0.005	—	36.7
Total	—	—	—	—	—	—	—	—	—	—	—	345	345	0.02	< 0.005	—	347

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	0.06	0.99	0.42	0.01	0.08	—	0.08	0.08	—	0.08	—	1,260	1,260	0.11	< 0.005	—	1,263
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.06	0.99	0.42	0.01	0.08	—	0.08	0.08	—	0.08	—	1,260	1,260	0.11	< 0.005	—	1,263
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.06	0.99	0.42	0.01	0.08	—	0.08	0.08	—	0.08	—	1,260	1,260	0.11	< 0.005	—	1,263
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.06	0.99	0.42	0.01	0.08	—	0.08	0.08	—	0.08	—	1,260	1,260	0.11	< 0.005	—	1,263
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.01	0.18	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	209	209	0.02	< 0.005	—	209
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.18	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	209	209	0.02	< 0.005	—	209

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consumer	5.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.41	0.15	16.2	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.2	43.2	< 0.005	< 0.005	—	43.4
Total	7.80	0.15	16.2	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	43.2	43.2	< 0.005	< 0.005	—	43.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	5.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	6.39	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	1.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.13	0.01	1.46	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.53	3.53	< 0.005	< 0.005	—	3.54
Total	1.29	0.01	1.46	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.53	3.53	< 0.005	< 0.005	—	3.54

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	17.9	42.5	60.4	1.84	0.04	—	120
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	17.9	42.5	60.4	1.84	0.04	—	120
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	17.9	42.5	60.4	1.84	0.04	—	120
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	17.9	42.5	60.4	1.84	0.04	—	120
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	2.97	7.03	10.0	0.31	0.01	—	19.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	2.97	7.03	10.0	0.31	0.01	—	19.8

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	397
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	397
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	397
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	397
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	18.8	0.00	18.8	1.88	0.00	—	65.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	18.8	0.00	18.8	1.88	0.00	—	65.8

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.96	1.96
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.96	1.96
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.96	1.96
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.96	1.96
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.32	0.32
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.32	0.32

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	1,852	1,852	1,852	676,162	16,092	16,092	16,092	5,873,639
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	86
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	200
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
554040	184,680	0.00	0.00	10,454

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	1,287,576	528	0.0330	0.0040	3,930,860
Parking Lot	152,634	528	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	9,366,931	14.1
Parking Lot	0.00	11.5

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	211	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

8. User Changes to Default Data

Screen	Justification
Land Use	CO52 only run
Construction: Construction Phases	no demo. adjusted arch coatings to start 2 weeks after start of building construction and last same # of days. no applicant questionnaire for construction.
Operations: Vehicle Data	using Roseville trip rates from F&P transportation impact analysis dated 7/25/23.
Operations: Consumer Products	reduced lb VOC/sf/day from 0.0000214 to 0.0000211 due to CARB consumer products regulation, reducing VOC by 1.2% in 2023 (3 tpd reduction from 260 tpd VOC). https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2021/consumerproducts2021/isor.pdf

SVSP and COMP Amendments (SVSP parcels only) Custom Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	SVSP and COMP Amendments (SVSP parcels only)
Construction Start Date	6/1/2024
Operational Year	2028
Lead Agency	City of Roseville
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	7.80
Location	38.77562705656766, -121.40023406585973
County	Placer-Sacramento
City	Roseville
Air District	Placer County APCD
Air Basin	Sacramento Valley
TAZ	432
EDFZ	4
Electric Utility	Roseville Electric
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.16

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Apartments Mid Rise	355	Dwelling Unit	2.95	340,800	1.00	—	927	WB-30
Apartments Mid Rise	192	Dwelling Unit	2.34	184,320	1.00	—	501	WB-32
Apartments Mid Rise	256	Dwelling Unit	3.35	245,760	1.00	—	668	FD-34
City Park	1.50	Acre	1.50	0.00	1.00	1.00	—	park
Parking Lot	1,258	Space	11.3	0.00	1.00	—	—	minimum spaces 1.5 plus 1/10 units guests

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Transportation	T-4	Integrate A ordable and Below Market Rate Housing

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	42.4	18.1	201	0.38	0.52	30.6	31.1	0.50	7.78	8.28	371	44,026	44,397	39.2	1.68	104	45,983
Mit.	42.4	18.1	201	0.38	0.52	30.6	31.1	0.50	7.78	8.28	371	44,026	44,397	39.2	1.68	104	45,983
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	35.9	20.2	133	0.35	0.50	30.6	31.1	0.49	7.78	8.27	371	40,779	41,150	39.4	1.82	8.09	42,684
Mit.	35.9	20.2	133	0.35	0.50	30.6	31.1	0.49	7.78	8.27	371	40,779	41,150	39.4	1.82	8.09	42,684

% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	37.8	19.1	152	0.35	0.51	30.0	30.5	0.49	7.63	8.12	371	40,998	41,369	39.3	1.73	47.6	42,913
Mit.	37.8	19.1	152	0.35	0.51	30.0	30.5	0.49	7.63	8.12	371	40,998	41,369	39.3	1.73	47.6	42,913
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.89	3.49	27.6	0.06	0.09	5.48	5.57	0.09	1.39	1.48	61.4	6,788	6,849	6.50	0.29	7.89	7,105
Mit.	6.89	3.49	27.6	0.06	0.09	5.48	5.57	0.09	1.39	1.48	61.4	6,788	6,849	6.50	0.29	7.89	7,105
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	55.0	55.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	—
Mit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	55.0	55.0	—	—	—	—	82.0	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	—
Mit.	No	No	—	—	—	—	No	—	—	—	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,100
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Yes
Mit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Yes

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	20.2	14.9	154	0.36	0.28	30.6	30.9	0.26	7.78	8.04	—	36,488	36,488	1.32	1.51	98.9	37,069
Area	22.0	0.43	45.6	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	122	122	0.01	< 0.005	—	122
Energy	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	7,340	7,340	0.68	0.05	—	7,372
Water	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
Waste	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
Total	42.4	18.1	201	0.38	0.52	30.6	31.1	0.50	7.78	8.28	371	44,026	44,397	39.2	1.68	104	45,983
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	17.8	17.4	132	0.33	0.28	30.6	30.9	0.26	7.78	8.04	—	33,362	33,362	1.52	1.64	2.57	33,892
Area	18.0	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	7,340	7,340	0.68	0.05	—	7,372
Water	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
Waste	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
Total	35.9	20.2	133	0.35	0.50	30.6	31.1	0.49	7.78	8.27	371	40,779	41,150	39.4	1.82	8.09	42,684
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	17.6	16.1	128	0.33	0.27	30.0	30.3	0.26	7.63	7.89	—	33,521	33,521	1.39	1.55	42.1	34,061
Area	20.0	0.21	22.5	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	60.1	60.1	< 0.005	< 0.005	—	60.3
Energy	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	7,340	7,340	0.68	0.05	—	7,372
Water	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295

Waste	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
Total	37.8	19.1	152	0.35	0.51	30.0	30.5	0.49	7.63	8.12	371	40,998	41,369	39.3	1.73	47.6	42,913
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.22	2.94	23.3	0.06	0.05	5.48	5.53	0.05	1.39	1.44	—	5,550	5,550	0.23	0.26	6.97	5,639
Area	3.64	0.04	4.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	9.94	9.94	< 0.005	< 0.005	—	9.98
Energy	0.03	0.51	0.22	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,215	1,215	0.11	0.01	—	1,221
Water	—	—	—	—	—	—	—	—	—	—	8.37	12.8	21.1	0.86	0.02	—	48.8
Waste	—	—	—	—	—	—	—	—	—	—	53.0	0.00	53.0	5.30	0.00	—	185
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91	0.91
Total	6.89	3.49	27.6	0.06	0.09	5.48	5.57	0.09	1.39	1.48	61.4	6,788	6,849	6.50	0.29	7.89	7,105

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	20.2	14.9	154	0.36	0.28	30.6	30.9	0.26	7.78	8.04	—	36,488	36,488	1.32	1.51	98.9	37,069
Area	22.0	0.43	45.6	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	122	122	0.01	< 0.005	—	122
Energy	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	7,340	7,340	0.68	0.05	—	7,372
Water	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
Waste	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
Total	42.4	18.1	201	0.38	0.52	30.6	31.1	0.50	7.78	8.28	371	44,026	44,397	39.2	1.68	104	45,983
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	17.8	17.4	132	0.33	0.28	30.6	30.9	0.26	7.78	8.04	—	33,362	33,362	1.52	1.64	2.57	33,892

Area	18.0	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	7,340	7,340	0.68	0.05	—	7,372
Water	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
Waste	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
Total	35.9	20.2	133	0.35	0.50	30.6	31.1	0.49	7.78	8.27	371	40,779	41,150	39.4	1.82	8.09	42,684
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	17.6	16.1	128	0.33	0.27	30.0	30.3	0.26	7.63	7.89	—	33,521	33,521	1.39	1.55	42.1	34,061
Area	20.0	0.21	22.5	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	60.1	60.1	< 0.005	< 0.005	—	60.3
Energy	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	7,340	7,340	0.68	0.05	—	7,372
Water	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
Waste	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
Total	37.8	19.1	152	0.35	0.51	30.0	30.5	0.49	7.63	8.12	371	40,998	41,369	39.3	1.73	47.6	42,913
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.22	2.94	23.3	0.06	0.05	5.48	5.53	0.05	1.39	1.44	—	5,550	5,550	0.23	0.26	6.97	5,639
Area	3.64	0.04	4.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	9.94	9.94	< 0.005	< 0.005	—	9.98
Energy	0.03	0.51	0.22	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,215	1,215	0.11	0.01	—	1,221
Water	—	—	—	—	—	—	—	—	—	—	8.37	12.8	21.1	0.86	0.02	—	48.8
Waste	—	—	—	—	—	—	—	—	—	—	53.0	0.00	53.0	5.30	0.00	—	185
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91	0.91
Total	6.89	3.49	27.6	0.06	0.09	5.48	5.57	0.09	1.39	1.48	61.4	6,788	6,849	6.50	0.29	7.89	7,105

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	20.2	14.9	154	0.36	0.28	30.6	30.8	0.26	7.77	8.03	—	36,452	36,452	1.32	1.51	98.8	37,032
City Park	0.01	0.01	0.14	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	36.0	36.0	< 0.005	< 0.005	0.10	36.6
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	20.2	14.9	154	0.36	0.28	30.6	30.9	0.26	7.78	8.04	—	36,488	36,488	1.32	1.51	98.9	37,069
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	17.8	17.4	132	0.33	0.28	30.6	30.8	0.26	7.77	8.03	—	33,330	33,330	1.52	1.64	2.56	33,859
City Park	0.01	0.02	0.12	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	32.9	32.9	< 0.005	< 0.005	< 0.005	33.4
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	17.8	17.4	132	0.33	0.28	30.6	30.9	0.26	7.78	8.04	—	33,362	33,362	1.52	1.64	2.57	33,892
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	3.22	2.94	23.3	0.06	0.05	5.47	5.52	0.05	1.39	1.44	—	5,547	5,547	0.23	0.26	6.97	5,636
City Park	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.92	2.92	< 0.005	< 0.005	< 0.005	2.96
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.22	2.94	23.3	0.06	0.05	5.48	5.53	0.05	1.39	1.44	—	5,550	5,550	0.23	0.26	6.97	5,639

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	20.2	14.9	154	0.36	0.28	30.6	30.8	0.26	7.77	8.03	—	36,452	36,452	1.32	1.51	98.8	37,032
City Park	0.01	0.01	0.14	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	36.0	36.0	< 0.005	< 0.005	0.10	36.6
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	20.2	14.9	154	0.36	0.28	30.6	30.9	0.26	7.78	8.04	—	36,488	36,488	1.32	1.51	98.9	37,069
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	17.8	17.4	132	0.33	0.28	30.6	30.8	0.26	7.77	8.03	—	33,330	33,330	1.52	1.64	2.56	33,859
City Park	0.01	0.02	0.12	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	32.9	32.9	< 0.005	< 0.005	< 0.005	33.4
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	17.8	17.4	132	0.33	0.28	30.6	30.9	0.26	7.78	8.04	—	33,362	33,362	1.52	1.64	2.57	33,892
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	3.22	2.94	23.3	0.06	0.05	5.47	5.52	0.05	1.39	1.44	—	5,547	5,547	0.23	0.26	6.97	5,636
City Park	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.92	2.92	< 0.005	< 0.005	< 0.005	2.96
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.22	2.94	23.3	0.06	0.05	5.48	5.53	0.05	1.39	1.44	—	5,550	5,550	0.23	0.26	6.97	5,639

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	3,387	3,387	0.33	0.04	—	3,407
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	403	403	0.04	< 0.005	—	406
Total	—	—	—	—	—	—	—	—	—	—	—	3,790	3,790	0.37	0.04	—	3,813
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	3,387	3,387	0.33	0.04	—	3,407
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	403	403	0.04	< 0.005	—	406
Total	—	—	—	—	—	—	—	—	—	—	—	3,790	3,790	0.37	0.04	—	3,813
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	561	561	0.05	0.01	—	564
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	66.8	66.8	0.01	< 0.005	—	67.2

Total	—	—	—	—	—	—	—	—	—	—	—	628	628	0.06	0.01	—	631

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	3,387	3,387	0.33	0.04	—	3,407
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	403	403	0.04	< 0.005	—	406
Total	—	—	—	—	—	—	—	—	—	—	—	3,790	3,790	0.37	0.04	—	3,813
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	3,387	3,387	0.33	0.04	—	3,407
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	403	403	0.04	< 0.005	—	406
Total	—	—	—	—	—	—	—	—	—	—	—	3,790	3,790	0.37	0.04	—	3,813
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	561	561	0.05	0.01	—	564
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	66.8	66.8	0.01	< 0.005	—	67.2

Total	—	—	—	—	—	—	—	—	—	—	—	628	628	0.06	0.01	—	631

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	3,549	3,549	0.31	0.01	—	3,559
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	3,549	3,549	0.31	0.01	—	3,559
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	3,549	3,549	0.31	0.01	—	3,559
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	3,549	3,549	0.31	0.01	—	3,559
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.03	0.51	0.22	< 0.005	0.04	—	0.04	0.04	—	0.04	—	588	588	0.05	< 0.005	—	589
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	0.03	0.51	0.22	< 0.005	0.04	—	0.04	0.04	—	0.04	—	588	588	0.05	< 0.005	—	589

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	3,549	3,549	0.31	0.01	—	3,559
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	3,549	3,549	0.31	0.01	—	3,559
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	3,549	3,549	0.31	0.01	—	3,559
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.16	2.80	1.19	0.02	0.23	—	0.23	0.23	—	0.23	—	3,549	3,549	0.31	0.01	—	3,559
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.03	0.51	0.22	< 0.005	0.04	—	0.04	0.04	—	0.04	—	588	588	0.05	< 0.005	—	589
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	0.03	0.51	0.22	< 0.005	0.04	—	0.04	0.04	—	0.04	—	588	588	0.05	< 0.005	—	589

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	16.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.97	0.43	45.6	< 0.005	0.02	—	0.02	0.02	—	0.02	—	122	122	0.01	< 0.005	—	122
Total	22.0	0.43	45.6	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	122	122	0.01	< 0.005	—	122
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	16.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	18.0	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	2.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.36	0.04	4.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.94	9.94	< 0.005	< 0.005	—	9.98
Total	3.64	0.04	4.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	9.94	9.94	< 0.005	< 0.005	—	9.98

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	16.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.97	0.43	45.6	< 0.005	0.02	—	0.02	0.02	—	0.02	—	122	122	0.01	< 0.005	—	122
Total	22.0	0.43	45.6	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	122	122	0.01	< 0.005	—	122

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	16.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	18.0	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	2.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.36	0.04	4.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.94	9.94	< 0.005	< 0.005	—	9.98
Total	3.64	0.04	4.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	9.94	9.94	< 0.005	< 0.005	—	9.98

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartment Mid Rise	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	8.37	12.8	21.1	0.86	0.02	—	48.8
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	8.37	12.8	21.1	0.86	0.02	—	48.8

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	50.6	77.2	128	5.19	0.12	—	295
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	8.37	12.8	21.1	0.86	0.02	—	48.8
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	8.37	12.8	21.1	0.86	0.02	—	48.8

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
City Park	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.24
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
City Park	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.24
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	53.0	0.00	53.0	5.30	0.00	—	185
City Park	—	—	—	—	—	—	—	—	—	—	0.01	0.00	0.01	< 0.005	0.00	—	0.04
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	53.0	0.00	53.0	5.30	0.00	—	185

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
City Park	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.24
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
City Park	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.24
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	320	0.00	320	32.0	0.00	—	1,120
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	53.0	0.00	53.0	5.30	0.00	—	185
City Park	—	—	—	—	—	—	—	—	—	—	0.01	0.00	0.01	< 0.005	0.00	—	0.04
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	53.0	0.00	53.0	5.30	0.00	—	185

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91	0.91
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91	0.91

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91	0.91
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91	0.91

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	2,307	2,307	2,307	842,237	20,045	20,045	20,045	7,316,287
Apartments Mid Rise	1,248	1,248	1,248	455,520	10,841	10,841	10,841	3,956,978
Apartments Mid Rise	1,393	1,257	1,047	483,218	12,097	10,919	9,095	4,197,585
City Park	1.17	2.94	3.29	630	15.2	38.3	42.8	8,204
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	2,307	2,307	2,307	842,237	20,045	20,045	20,045	7,316,287
Apartments Mid Rise	1,248	1,248	1,248	455,520	10,841	10,841	10,841	3,956,978
Apartments Mid Rise	1,393	1,257	1,047	483,218	12,097	10,919	9,095	4,197,585
City Park	1.17	2.94	3.29	630	15.2	38.3	42.8	8,204
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	107
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	249
Wood Fireplaces	0
Gas Fireplaces	58
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	134
Wood Fireplaces	0
Gas Fireplaces	77

Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	179
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	107
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	249
Wood Fireplaces	0
Gas Fireplaces	58
Propane Fireplaces	0

Electric Fireplaces	0
No Fireplaces	134
Wood Fireplaces	0
Gas Fireplaces	77
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	179
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
1561032	520,344	0.00	0.00	29,591

5.10.3. Landscape Equipment

Season	Unit	Value

Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	1,603,823	341	0.0330	0.0040	4,896,335
Apartments Mid Rise	867,420	341	0.0330	0.0040	2,648,158
Apartments Mid Rise	1,156,560	341	0.0330	0.0040	3,530,878
City Park	0.00	341	0.0330	0.0040	0.00
Parking Lot	432,031	341	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	1,603,823	341	0.0330	0.0040	4,896,335
Apartments Mid Rise	867,420	341	0.0330	0.0040	2,648,158
Apartments Mid Rise	1,156,560	341	0.0330	0.0040	3,530,878
City Park	0.00	341	0.0330	0.0040	0.00
Parking Lot	432,031	341	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	11,667,581	14.1
Apartments Mid Rise	6,310,354	14.1
Apartments Mid Rise	8,413,805	14.1
City Park	0.00	25.6
Parking Lot	0.00	11.5

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	11,667,581	14.1
Apartments Mid Rise	6,310,354	14.1
Apartments Mid Rise	8,413,805	14.1
City Park	0.00	25.6
Parking Lot	0.00	11.5

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	263	—
Apartments Mid Rise	142	—
Apartments Mid Rise	189	—
City Park	0.13	—
Parking Lot	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	263	—
Apartments Mid Rise	142	—
Apartments Mid Rise	189	—
City Park	0.13	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

8. User Changes to Default Data

Screen	Justification
Land Use	Included lot acreage from applicant. reduced lot acreage to account for minimum amount of parking required by code. No landscaping area estimated (put in 1 sf to eliminated zeros and allow model to run without errors). SVSP only parcels.

Construction: Construction Phases	no demo. adjusted arch coatings to start 2 weeks after start of building construction and last same # of days. no applicant questionnaire for construction.
Operations: Vehicle Data	using Roseville trip rates from F&P transportation impact analysis dated 7/25/23.
Operations: Consumer Products	reduced lb VOC/sf/day from 0.0000214 to 0.0000211 based on CARB consumer products regulation assumption that by 2023 reduction in VOC by 1.2% (260 tpd reduced by 3 tpd) https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2021/consumerproducts2021/isor.pdf

Appendix D

CalEEMod Air Quality and Greenhouse Gas Modeling Results
Entire Specific Plans Operational Emissions (COMP and SVSP separately)

COMP approved (baseline) Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	COMP approved (baseline)
Operational Year	2028
Lead Agency	City of Roseville
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	7.80
Location	38.79005794450529, -121.3222527472185
County	Placer-Sacramento
City	Roseville
Air District	Placer County APCD
Air Basin	Sacramento Valley
TAZ	428
EDFZ	15
Electric Utility	Roseville Electric
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.16

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	233	Dwelling Unit	42.6	454,350	2,729,096	—	608	—

Apartments Low Rise	319	Dwelling Unit	36.0	338,140	1.00	—	833	—
Apartments Mid Rise	396	Dwelling Unit	17.8	380,160	1.00	—	1,034	—
Research & Development	300	1000sqft	32.9	300,000	1.00	—	—	—
Strip Mall	240	1000sqft	29.7	240,000	1.00	—	—	—
City Park	11.1	Acre	11.1	0.00	1.00	1.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	302	83.3	1,091	2.34	38.9	151	189	38.3	38.3	76.5	5,013	203,294	208,307	110	8.49	505	214,087
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	283	94.5	895	2.18	38.8	151	189	38.2	38.3	76.5	5,013	187,655	192,668	111	9.13	30.2	198,182
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	150	78.3	658	1.64	10.1	135	145	9.87	34.3	44.2	1,811	172,582	174,393	99.9	7.92	207	179,457
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	27.3	14.3	120	0.30	1.84	24.6	26.5	1.80	6.27	8.07	300	28,573	28,873	16.5	1.31	34.3	29,711

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	88.9	70.8	741	1.76	1.35	151	152	1.27	38.3	39.6	—	179,011	179,011	6.09	7.20	487	181,796
Area	213	5.80	346	0.54	37.0	—	37.0	36.5	—	36.5	4,130	2,693	6,823	12.4	0.20	—	7,194
Energy	0.38	6.64	4.11	0.04	0.52	—	0.52	0.52	—	0.52	—	20,958	20,958	1.96	0.17	—	21,056
Water	—	—	—	—	—	—	—	—	—	—	376	632	1,009	38.7	0.92	—	2,251
Waste	—	—	—	—	—	—	—	—	—	—	507	0.00	507	50.6	0.00	—	1,772
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.6	17.6
Total	302	83.3	1,091	2.34	38.9	151	189	38.3	38.3	76.5	5,013	203,294	208,307	110	8.49	505	214,087
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	78.4	82.8	622	1.61	1.35	151	152	1.27	38.3	39.6	—	163,612	163,612	6.93	7.84	12.6	166,133
Area	204	5.10	269	0.53	36.9	—	36.9	36.4	—	36.4	4,130	2,453	6,583	12.4	0.20	—	6,953
Energy	0.38	6.64	4.11	0.04	0.52	—	0.52	0.52	—	0.52	—	20,958	20,958	1.96	0.17	—	21,056
Water	—	—	—	—	—	—	—	—	—	—	376	632	1,009	38.7	0.92	—	2,251
Waste	—	—	—	—	—	—	—	—	—	—	507	0.00	507	50.6	0.00	—	1,772
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.6	17.6
Total	283	94.5	895	2.18	38.8	151	189	38.2	38.3	76.5	5,013	187,655	192,668	111	9.13	30.2	198,182
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	70.9	70.1	556	1.48	1.22	135	136	1.14	34.3	35.5	—	150,323	150,323	5.82	6.78	190	152,680
Area	78.5	1.49	98.5	0.12	8.33	—	8.33	8.20	—	8.20	928	670	1,597	2.79	0.05	—	1,681
Energy	0.38	6.64	4.11	0.04	0.52	—	0.52	0.52	—	0.52	—	20,958	20,958	1.96	0.17	—	21,056
Water	—	—	—	—	—	—	—	—	—	—	376	632	1,009	38.7	0.92	—	2,251

Waste	—	—	—	—	—	—	—	—	—	—	507	0.00	507	50.6	0.00	—	1,772
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.6	17.6
Total	150	78.3	658	1.64	10.1	135	145	9.87	34.3	44.2	1,811	172,582	174,393	99.9	7.92	207	179,457
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	12.9	12.8	101	0.27	0.22	24.6	24.9	0.21	6.27	6.48	—	24,888	24,888	0.96	1.12	31.4	25,278
Area	14.3	0.27	18.0	0.02	1.52	—	1.52	1.50	—	1.50	154	111	264	0.46	0.01	—	278
Energy	0.07	1.21	0.75	0.01	0.10	—	0.10	0.10	—	0.10	—	3,470	3,470	0.32	0.03	—	3,486
Water	—	—	—	—	—	—	—	—	—	—	62.3	105	167	6.40	0.15	—	373
Waste	—	—	—	—	—	—	—	—	—	—	83.9	0.00	83.9	8.38	0.00	—	293
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.91	2.91
Total	27.3	14.3	120	0.30	1.84	24.6	26.5	1.80	6.27	8.07	300	28,573	28,873	16.5	1.31	34.3	29,711

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	9.92	8.81	93.3	0.23	0.17	19.5	19.7	0.16	4.96	5.12	—	23,101	23,101	0.73	0.90	63.1	23,450
Apartments Low Rise	11.6	10.3	109	0.27	0.20	22.8	23.0	0.19	5.79	5.98	—	26,986	26,986	0.86	1.05	73.7	27,394

Apartments Mid Rise	9.61	8.54	90.5	0.22	0.17	18.9	19.1	0.16	4.81	4.96	—	22,388	22,388	0.71	0.87	61.1	22,727
Research & Development	13.9	10.4	108	0.25	0.19	21.5	21.7	0.18	5.47	5.65	—	25,634	25,634	0.91	1.05	69.6	26,040
Strip Mall	43.8	32.7	339	0.79	0.61	67.7	68.3	0.58	17.2	17.8	—	80,717	80,717	2.88	3.32	219	81,996
City Park	0.10	0.07	0.78	< 0.005	< 0.005	0.16	0.16	< 0.005	0.04	0.04	—	185	185	0.01	0.01	0.50	188
Total	88.9	70.8	741	1.76	1.35	151	152	1.27	38.3	39.6	—	179,011	179,011	6.09	7.20	487	181,796
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	8.82	10.3	76.7	0.21	0.17	19.5	19.7	0.16	4.96	5.12	—	21,104	21,104	0.82	0.98	1.64	21,418
Apartments Low Rise	10.3	12.0	89.6	0.24	0.20	22.8	23.0	0.19	5.79	5.98	—	24,653	24,653	0.96	1.14	1.91	25,020
Apartments Mid Rise	8.55	10.00	74.4	0.20	0.17	18.9	19.1	0.16	4.81	4.96	—	20,453	20,453	0.79	0.95	1.59	20,757
Research & Development	12.2	12.1	91.7	0.23	0.19	21.5	21.7	0.18	5.47	5.65	—	23,436	23,436	1.05	1.15	1.80	23,806
Strip Mall	38.5	38.2	289	0.72	0.61	67.7	68.3	0.58	17.2	17.8	—	73,797	73,797	3.31	3.61	5.68	74,961
City Park	0.09	0.09	0.66	< 0.005	< 0.005	0.16	0.16	< 0.005	0.04	0.04	—	169	169	0.01	0.01	0.01	172
Total	78.4	82.8	622	1.61	1.35	151	152	1.27	38.3	39.6	—	163,612	163,612	6.93	7.84	12.6	166,133
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.58	1.73	13.7	0.04	0.03	3.46	3.49	0.03	0.88	0.91	—	3,483	3,483	0.12	0.15	4.41	3,536
Apartments Low Rise	1.69	1.85	14.7	0.04	0.03	3.71	3.74	0.03	0.94	0.97	—	3,726	3,726	0.13	0.16	4.72	3,783

Apartment Mid Rise	1.49	1.63	12.9	0.04	0.03	3.26	3.29	0.03	0.83	0.86	—	3,282	3,282	0.12	0.14	4.15	3,332
Research & Development	1.69	1.57	12.4	0.03	0.03	2.94	2.97	0.03	0.75	0.77	—	2,976	2,976	0.12	0.14	3.74	3,024
Strip Mall	6.47	6.00	47.6	0.12	0.10	11.3	11.4	0.10	2.86	2.96	—	11,404	11,404	0.47	0.53	14.3	11,587
City Park	0.01	0.01	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	15.0	15.0	< 0.005	< 0.005	0.02	15.2
Total	12.9	12.8	101	0.27	0.22	24.6	24.9	0.21	6.27	6.48	—	24,888	24,888	0.96	1.12	31.4	25,278

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,909	1,909	0.18	0.02	—	1,920
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	1,357	1,357	0.13	0.02	—	1,365
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,782	1,782	0.17	0.02	—	1,793
Research & Development	—	—	—	—	—	—	—	—	—	—	—	5,710	5,710	0.55	0.07	—	5,743
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2,005	2,005	0.19	0.02	—	2,017
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	12,763	12,763	1.24	0.15	—	12,838

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,909	1,909	0.18	0.02	—	1,920
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	1,357	1,357	0.13	0.02	—	1,365
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,782	1,782	0.17	0.02	—	1,793
Research & Development	—	—	—	—	—	—	—	—	—	—	—	5,710	5,710	0.55	0.07	—	5,743
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2,005	2,005	0.19	0.02	—	2,017
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	12,763	12,763	1.24	0.15	—	12,838
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	316	316	0.03	< 0.005	—	318
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	225	225	0.02	< 0.005	—	226
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	295	295	0.03	< 0.005	—	297
Research & Development	—	—	—	—	—	—	—	—	—	—	—	945	945	0.09	0.01	—	951
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	332	332	0.03	< 0.005	—	334
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2,113	2,113	0.20	0.02	—	2,125

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.06	0.99	0.42	0.01	0.08	—	0.08	0.08	—	0.08	—	1,262	1,262	0.11	< 0.005	—	1,266
Apartments Low Rise	0.07	1.27	0.54	0.01	0.10	—	0.10	0.10	—	0.10	—	1,609	1,609	0.14	< 0.005	—	1,613
Apartments Mid Rise	0.08	1.29	0.55	0.01	0.10	—	0.10	0.10	—	0.10	—	1,634	1,634	0.14	< 0.005	—	1,638
Research & Development	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	3,046	3,046	0.27	0.01	—	3,054
Strip Mall	0.03	0.54	0.45	< 0.005	0.04	—	0.04	0.04	—	0.04	—	645	645	0.06	< 0.005	—	646
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.38	6.64	4.11	0.04	0.52	—	0.52	0.52	—	0.52	—	8,195	8,195	0.73	0.02	—	8,218
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.06	0.99	0.42	0.01	0.08	—	0.08	0.08	—	0.08	—	1,262	1,262	0.11	< 0.005	—	1,266
Apartments Low Rise	0.07	1.27	0.54	0.01	0.10	—	0.10	0.10	—	0.10	—	1,609	1,609	0.14	< 0.005	—	1,613
Apartments Mid Rise	0.08	1.29	0.55	0.01	0.10	—	0.10	0.10	—	0.10	—	1,634	1,634	0.14	< 0.005	—	1,638

Research & Development	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	3,046	3,046	0.27	0.01	—	3,054
Strip Mall	0.03	0.54	0.45	< 0.005	0.04	—	0.04	0.04	—	0.04	—	645	645	0.06	< 0.005	—	646
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.38	6.64	4.11	0.04	0.52	—	0.52	0.52	—	0.52	—	8,195	8,195	0.73	0.02	—	8,218
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.01	0.18	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	209	209	0.02	< 0.005	—	210
Apartments Low Rise	0.01	0.23	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	266	266	0.02	< 0.005	—	267
Apartments Mid Rise	0.01	0.23	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	270	270	0.02	< 0.005	—	271
Research & Development	0.03	0.47	0.39	< 0.005	0.04	—	0.04	0.04	—	0.04	—	504	504	0.04	< 0.005	—	506
Strip Mall	0.01	0.10	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	107	107	0.01	< 0.005	—	107
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.07	1.21	0.75	0.01	0.10	—	0.10	0.10	—	0.10	—	1,357	1,357	0.12	< 0.005	—	1,361

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	168	5.10	269	0.53	36.9	—	36.9	36.4	—	36.4	4,130	2,453	6,583	12.4	0.20	—	6,953

Consumer Products	36.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	8.55	0.71	77.4	< 0.005	0.07	—	0.07	0.05	—	0.05	—	240	240	0.01	< 0.005	—	241
Total	213	5.80	346	0.54	37.0	—	37.0	36.5	—	36.5	4,130	2,693	6,823	12.4	0.20	—	7,194
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	168	5.10	269	0.53	36.9	—	36.9	36.4	—	36.4	4,130	2,453	6,583	12.4	0.20	—	6,953
Consumer Products	36.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	204	5.10	269	0.53	36.9	—	36.9	36.4	—	36.4	4,130	2,453	6,583	12.4	0.20	—	6,953
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	6.87	0.21	11.0	0.02	1.51	—	1.51	1.49	—	1.49	154	91.2	245	0.46	0.01	—	259
Consumer Products	6.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.77	0.06	6.96	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	19.6	19.6	< 0.005	< 0.005	—	19.7
Total	14.3	0.27	18.0	0.02	1.52	—	1.52	1.50	—	1.50	154	111	264	0.46	0.01	—	278

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	14.7	80.2	94.8	1.51	0.04	—	144
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	20.1	30.7	50.7	2.06	0.05	—	117
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	24.9	38.1	63.0	2.56	0.06	—	145
Research & Development	—	—	—	—	—	—	—	—	—	—	283	431	714	29.0	0.69	—	1,646
Strip Mall	—	—	—	—	—	—	—	—	—	—	34.1	52.0	86.0	3.50	0.08	—	198
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	376	632	1,009	38.7	0.92	—	2,251
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	14.7	80.2	94.8	1.51	0.04	—	144
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	20.1	30.7	50.7	2.06	0.05	—	117
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	24.9	38.1	63.0	2.56	0.06	—	145
Research & Development	—	—	—	—	—	—	—	—	—	—	283	431	714	29.0	0.69	—	1,646
Strip Mall	—	—	—	—	—	—	—	—	—	—	34.1	52.0	86.0	3.50	0.08	—	198
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005

Total	—	—	—	—	—	—	—	—	—	—	376	632	1,009	38.7	0.92	—	2,251
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	2.43	13.3	15.7	0.25	0.01	—	23.8
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	3.33	5.08	8.40	0.34	0.01	—	19.4
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	4.13	6.30	10.4	0.42	0.01	—	24.0
Research & Development	—	—	—	—	—	—	—	—	—	—	46.8	71.4	118	4.81	0.11	—	273
Strip Mall	—	—	—	—	—	—	—	—	—	—	5.64	8.61	14.2	0.58	0.01	—	32.8
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	62.3	105	167	6.40	0.15	—	373

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	72.9	0.00	72.9	7.28	0.00	—	255
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	127	0.00	127	12.7	0.00	—	445

Apartments	—	—	—	—	—	—	—	—	—	—	158	0.00	158	15.8	0.00	—	552
Research & Development	—	—	—	—	—	—	—	—	—	—	12.3	0.00	12.3	1.23	0.00	—	43.0
Strip Mall	—	—	—	—	—	—	—	—	—	—	136	0.00	136	13.6	0.00	—	475
City Park	—	—	—	—	—	—	—	—	—	—	0.52	0.00	0.52	0.05	0.00	—	1.80
Total	—	—	—	—	—	—	—	—	—	—	507	0.00	507	50.6	0.00	—	1,772
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	72.9	0.00	72.9	7.28	0.00	—	255
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	127	0.00	127	12.7	0.00	—	445
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	158	0.00	158	15.8	0.00	—	552
Research & Development	—	—	—	—	—	—	—	—	—	—	12.3	0.00	12.3	1.23	0.00	—	43.0
Strip Mall	—	—	—	—	—	—	—	—	—	—	136	0.00	136	13.6	0.00	—	475
City Park	—	—	—	—	—	—	—	—	—	—	0.52	0.00	0.52	0.05	0.00	—	1.80
Total	—	—	—	—	—	—	—	—	—	—	507	0.00	507	50.6	0.00	—	1,772
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	12.1	0.00	12.1	1.21	0.00	—	42.2
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	21.1	0.00	21.1	2.10	0.00	—	73.7

Apartments	—	—	—	—	—	—	—	—	—	—	26.1	0.00	26.1	2.61	0.00	—	91.5
Research & Development	—	—	—	—	—	—	—	—	—	—	2.03	0.00	2.03	0.20	0.00	—	7.12
Strip Mall	—	—	—	—	—	—	—	—	—	—	22.5	0.00	22.5	2.25	0.00	—	78.7
City Park	—	—	—	—	—	—	—	—	—	—	0.09	0.00	0.09	0.01	0.00	—	0.30
Total	—	—	—	—	—	—	—	—	—	—	83.9	0.00	83.9	8.38	0.00	—	293

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.25	3.25
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.42	2.42
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.72	2.72
Research & Development	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.67	7.67
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.49	1.49
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.6	17.6

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.25	3.25
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.42	2.42
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.72	2.72
Research & Development	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.67	7.67
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.49	1.49
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.6	17.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.54	0.54
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.40	0.40
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.45	0.45
Research & Development	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.27	1.27
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.91	2.91

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	2,200	2,223	1,992	793,227	27,141	27,429	24,582	9,788,051
Apartments Low Rise	2,335	2,597	2,003	848,645	28,814	32,042	24,720	10,471,884
Apartments Mid Rise	2,154	1,944	1,620	747,478	26,582	23,993	19,986	9,223,536
Research & Development	3,378	570	333	927,778	30,248	5,104	2,982	8,307,725
Strip Mall	10,637	10,090	4,903	3,554,933	95,247	90,347	43,905	31,832,412
City Park	8.67	21.8	24.4	4,668	77.7	195	218	41,796

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	35
Gas Fireplaces	117
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	82

Conventional Wood Stoves	12
Catalytic Wood Stoves	12
Non-Catalytic Wood Stoves	12
Pellet Wood Stoves	0
Apartments Low Rise	—
Wood Fireplaces	0
Gas Fireplaces	96
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	223
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	119
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	277
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
—	—	—	—	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	2,044,433	341	0.0330	0.0040	3,937,935
Apartments Low Rise	1,453,151	341	0.0330	0.0040	5,019,686
Apartments Mid Rise	1,909,154	341	0.0330	0.0040	5,097,561
Research & Development	6,115,796	341	0.0330	0.0040	9,504,400
Strip Mall	2,147,764	341	0.0330	0.0040	2,011,518
City Park	0.00	341	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	7,657,877	38,376,406
Apartments Low Rise	10,484,390	14.1

Apartments Mid Rise	13,015,104	14.1
Research & Development	147,508,184	11.5
Strip Mall	17,777,405	11.5
City Park	0.00	25.6

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	135	—
Apartments Low Rise	236	—
Apartments Mid Rise	293	—
Research & Development	22.8	—
Strip Mall	252	—
City Park	0.96	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Research & Development	Household refrigerators and/or freezers	R-134a	1,430	0.45	0.60	0.00	1.00
Research & Development	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

8. User Changes to Default Data

Screen	Justification
Land Use	Acres, SF and du from Table 5-1 CO Master Plan (last amended May 2020)

COMP with amendments Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	COMP with amendments
Operational Year	2028
Lead Agency	City of Roseville
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	7.80
Location	38.79005794450529, -121.3222527472185
County	Placer-Sacramento
City	Roseville
Air District	Placer County APCD
Air Basin	Sacramento Valley
TAZ	428
EDFZ	15
Electric Utility	Roseville Electric
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.16

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	233	Dwelling Unit	42.6	454,350	2,729,096	—	608	—

Apartments Low Rise	319	Dwelling Unit	36.0	338,140	1.00	—	833	—
Apartments Mid Rise	681	Dwelling Unit	35.5	653,760	1.00	—	1,777	—
Research & Development	150	1000sqft	15.2	150,000	1.00	—	—	—
Strip Mall	240	1000sqft	29.7	240,000	1.00	—	—	—
City Park	11.1	Acre	11.1	0.00	1.00	1.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	305	84.4	1,116	2.38	38.9	154	193	38.3	39.3	77.5	4,997	205,698	210,695	108	8.32	515	216,382
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	286	95.8	905	2.22	38.8	154	193	38.2	39.3	77.5	4,997	189,644	194,641	109	8.96	28.6	200,054
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	158	84.0	710	1.77	10.2	148	158	9.95	37.5	47.5	1,795	184,236	186,031	98.2	8.18	223	191,147
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	28.7	15.3	130	0.32	1.85	26.9	28.8	1.82	6.85	8.66	297	30,502	30,800	16.3	1.35	36.9	31,647

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	89.2	72.2	757	1.80	1.38	154	156	1.30	39.3	40.6	—	183,506	183,506	6.18	7.35	499	186,350
Area	216	5.90	356	0.54	37.0	—	37.0	36.5	—	36.5	4,130	2,710	6,840	12.4	0.20	—	7,211
Energy	0.36	6.29	3.43	0.04	0.50	—	0.50	0.50	—	0.50	—	19,038	19,038	1.78	0.15	—	19,126
Water	—	—	—	—	—	—	—	—	—	—	253	444	697	26.0	0.62	—	1,532
Waste	—	—	—	—	—	—	—	—	—	—	614	0.00	614	61.4	0.00	—	2,148
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.7	15.7
Total	305	84.4	1,116	2.38	38.9	154	193	38.3	39.3	77.5	4,997	205,698	210,695	108	8.32	515	216,382
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	78.9	84.4	633	1.65	1.38	154	156	1.30	39.3	40.6	—	167,709	167,709	7.02	7.99	13.0	170,279
Area	207	5.10	269	0.53	36.9	—	36.9	36.4	—	36.4	4,130	2,453	6,583	12.4	0.20	—	6,953
Energy	0.36	6.29	3.43	0.04	0.50	—	0.50	0.50	—	0.50	—	19,038	19,038	1.78	0.15	—	19,126
Water	—	—	—	—	—	—	—	—	—	—	253	444	697	26.0	0.62	—	1,532
Waste	—	—	—	—	—	—	—	—	—	—	614	0.00	614	61.4	0.00	—	2,148
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.7	15.7
Total	286	95.8	905	2.22	38.8	154	193	38.2	39.3	77.5	4,997	189,644	194,641	109	8.96	28.6	200,054
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	75.9	76.2	603	1.61	1.33	148	149	1.25	37.5	38.8	—	164,076	164,076	6.28	7.37	207	166,637
Area	81.3	1.54	103	0.12	8.33	—	8.33	8.20	—	8.20	928	678	1,606	2.79	0.05	—	1,689
Energy	0.36	6.29	3.43	0.04	0.50	—	0.50	0.50	—	0.50	—	19,038	19,038	1.78	0.15	—	19,126
Water	—	—	—	—	—	—	—	—	—	—	253	444	697	26.0	0.62	—	1,532

Waste	—	—	—	—	—	—	—	—	—	—	614	0.00	614	61.4	0.00	—	2,148
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.7	15.7
Total	158	84.0	710	1.77	10.2	148	158	9.95	37.5	47.5	1,795	184,236	186,031	98.2	8.18	223	191,147
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	13.8	13.9	110	0.29	0.24	26.9	27.2	0.23	6.85	7.07	—	27,165	27,165	1.04	1.22	34.3	27,589
Area	14.8	0.28	18.8	0.02	1.52	—	1.52	1.50	—	1.50	154	112	266	0.46	0.01	—	280
Energy	0.07	1.15	0.63	0.01	0.09	—	0.09	0.09	—	0.09	—	3,152	3,152	0.29	0.02	—	3,167
Water	—	—	—	—	—	—	—	—	—	—	41.9	73.5	115	4.30	0.10	—	254
Waste	—	—	—	—	—	—	—	—	—	—	102	0.00	102	10.2	0.00	—	356
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.60	2.60
Total	28.7	15.3	130	0.32	1.85	26.9	28.8	1.82	6.85	8.66	297	30,502	30,800	16.3	1.35	36.9	31,647

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	9.92	8.81	93.3	0.23	0.17	19.5	19.7	0.16	4.96	5.12	—	23,101	23,101	0.73	0.90	63.1	23,450
Apartments Low Rise	9.25	8.22	87.1	0.21	0.16	18.2	18.4	0.15	4.63	4.78	—	21,549	21,549	0.68	0.84	58.8	21,875

Apartments Mid Rise	19.7	17.6	186	0.45	0.34	38.8	39.2	0.32	9.88	10.2	—	46,003	46,003	1.46	1.79	126	46,699
Research & Development	6.48	4.84	50.2	0.12	0.09	10.0	10.1	0.09	2.55	2.64	—	11,952	11,952	0.43	0.49	32.4	12,141
Strip Mall	43.8	32.7	339	0.79	0.61	67.7	68.3	0.58	17.2	17.8	—	80,717	80,717	2.88	3.32	219	81,996
City Park	0.10	0.07	0.78	< 0.005	< 0.005	0.16	0.16	< 0.005	0.04	0.04	—	185	185	0.01	0.01	0.50	188
Total	89.2	72.2	757	1.80	1.38	154	156	1.30	39.3	40.6	—	183,506	183,506	6.18	7.35	499	186,350
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	8.82	10.3	76.7	0.21	0.17	19.5	19.7	0.16	4.96	5.12	—	21,104	21,104	0.82	0.98	1.64	21,418
Apartments Low Rise	8.23	9.62	71.6	0.19	0.16	18.2	18.4	0.15	4.63	4.78	—	19,686	19,686	0.76	0.91	1.53	19,979
Apartments Mid Rise	17.6	20.5	153	0.41	0.34	38.8	39.2	0.32	9.88	10.2	—	42,026	42,026	1.63	1.95	3.26	42,651
Research & Development	5.69	5.66	42.8	0.11	0.09	10.0	10.1	0.09	2.55	2.64	—	10,927	10,927	0.49	0.53	0.84	11,100
Strip Mall	38.5	38.2	289	0.72	0.61	67.7	68.3	0.58	17.2	17.8	—	73,797	73,797	3.31	3.61	5.68	74,961
City Park	0.09	0.09	0.66	< 0.005	< 0.005	0.16	0.16	< 0.005	0.04	0.04	—	169	169	0.01	0.01	0.01	172
Total	78.9	84.4	633	1.65	1.38	154	156	1.30	39.3	40.6	—	167,709	167,709	7.02	7.99	13.0	170,279
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.58	1.73	13.7	0.04	0.03	3.46	3.49	0.03	0.88	0.91	—	3,483	3,483	0.12	0.15	4.41	3,536
Apartments Low Rise	1.51	1.65	13.1	0.04	0.03	3.30	3.33	0.03	0.84	0.87	—	3,323	3,323	0.12	0.15	4.21	3,374

Apartment Mid Rise	3.22	3.53	27.9	0.08	0.06	7.05	7.12	0.06	1.79	1.85	—	7,095	7,095	0.25	0.31	8.98	7,203
Research & Development	1.05	0.97	7.70	0.02	0.02	1.82	1.84	0.02	0.46	0.48	—	1,844	1,844	0.08	0.09	2.32	1,874
Strip Mall	6.47	6.00	47.6	0.12	0.10	11.3	11.4	0.10	2.86	2.96	—	11,404	11,404	0.47	0.53	14.3	11,587
City Park	0.01	0.01	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	15.0	15.0	< 0.005	< 0.005	0.02	15.2
Total	13.8	13.9	110	0.29	0.24	26.9	27.2	0.23	6.85	7.07	—	27,165	27,165	1.04	1.22	34.3	27,589

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,909	1,909	0.18	0.02	—	1,920
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	1,357	1,357	0.13	0.02	—	1,365
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	3,065	3,065	0.30	0.04	—	3,083
Research & Development	—	—	—	—	—	—	—	—	—	—	—	2,855	2,855	0.28	0.03	—	2,872
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2,005	2,005	0.19	0.02	—	2,017
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	11,190	11,190	1.08	0.13	—	11,257

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,909	1,909	0.18	0.02	—	1,920
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	1,357	1,357	0.13	0.02	—	1,365
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	3,065	3,065	0.30	0.04	—	3,083
Research & Development	—	—	—	—	—	—	—	—	—	—	—	2,855	2,855	0.28	0.03	—	2,872
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2,005	2,005	0.19	0.02	—	2,017
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	11,190	11,190	1.08	0.13	—	11,257
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	316	316	0.03	< 0.005	—	318
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	225	225	0.02	< 0.005	—	226
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	507	507	0.05	0.01	—	510
Research & Development	—	—	—	—	—	—	—	—	—	—	—	473	473	0.05	0.01	—	475
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	332	332	0.03	< 0.005	—	334
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1,853	1,853	0.18	0.02	—	1,864

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.06	0.99	0.42	0.01	0.08	—	0.08	0.08	—	0.08	—	1,262	1,262	0.11	< 0.005	—	1,266
Apartments Low Rise	0.07	1.27	0.54	0.01	0.10	—	0.10	0.10	—	0.10	—	1,609	1,609	0.14	< 0.005	—	1,613
Apartments Mid Rise	0.13	2.21	0.94	0.01	0.18	—	0.18	0.18	—	0.18	—	2,809	2,809	0.25	0.01	—	2,817
Research & Development	0.07	1.28	1.07	0.01	0.10	—	0.10	0.10	—	0.10	—	1,523	1,523	0.13	< 0.005	—	1,527
Strip Mall	0.03	0.54	0.45	< 0.005	0.04	—	0.04	0.04	—	0.04	—	645	645	0.06	< 0.005	—	646
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.36	6.29	3.43	0.04	0.50	—	0.50	0.50	—	0.50	—	7,848	7,848	0.69	0.01	—	7,870
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.06	0.99	0.42	0.01	0.08	—	0.08	0.08	—	0.08	—	1,262	1,262	0.11	< 0.005	—	1,266
Apartments Low Rise	0.07	1.27	0.54	0.01	0.10	—	0.10	0.10	—	0.10	—	1,609	1,609	0.14	< 0.005	—	1,613
Apartments Mid Rise	0.13	2.21	0.94	0.01	0.18	—	0.18	0.18	—	0.18	—	2,809	2,809	0.25	0.01	—	2,817

Research & Development	0.07	1.28	1.07	0.01	0.10	—	0.10	0.10	—	0.10	—	1,523	1,523	0.13	< 0.005	—	1,527
Strip Mall	0.03	0.54	0.45	< 0.005	0.04	—	0.04	0.04	—	0.04	—	645	645	0.06	< 0.005	—	646
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.36	6.29	3.43	0.04	0.50	—	0.50	0.50	—	0.50	—	7,848	7,848	0.69	0.01	—	7,870
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.01	0.18	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	209	209	0.02	< 0.005	—	210
Apartments Low Rise	0.01	0.23	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	266	266	0.02	< 0.005	—	267
Apartments Mid Rise	0.02	0.40	0.17	< 0.005	0.03	—	0.03	0.03	—	0.03	—	465	465	0.04	< 0.005	—	466
Research & Development	0.01	0.23	0.20	< 0.005	0.02	—	0.02	0.02	—	0.02	—	252	252	0.02	< 0.005	—	253
Strip Mall	0.01	0.10	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	107	107	0.01	< 0.005	—	107
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.07	1.15	0.63	0.01	0.09	—	0.09	0.09	—	0.09	—	1,299	1,299	0.11	< 0.005	—	1,303

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	168	5.10	269	0.53	36.9	—	36.9	36.4	—	36.4	4,130	2,453	6,583	12.4	0.20	—	6,953

Consumer Products	39.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	8.88	0.81	87.0	< 0.005	0.06	—	0.06	0.05	—	0.05	—	257	257	0.01	< 0.005	—	258
Total	216	5.90	356	0.54	37.0	—	37.0	36.5	—	36.5	4,130	2,710	6,840	12.4	0.20	—	7,211
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	168	5.10	269	0.53	36.9	—	36.9	36.4	—	36.4	4,130	2,453	6,583	12.4	0.20	—	6,953
Consumer Products	39.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	207	5.10	269	0.53	36.9	—	36.9	36.4	—	36.4	4,130	2,453	6,583	12.4	0.20	—	6,953
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	6.87	0.21	11.0	0.02	1.51	—	1.51	1.49	—	1.49	154	91.2	245	0.46	0.01	—	259
Consumer Products	7.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.80	0.07	7.83	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	21.0	21.0	< 0.005	< 0.005	—	21.0
Total	14.8	0.28	18.8	0.02	1.52	—	1.52	1.50	—	1.50	154	112	266	0.46	0.01	—	280

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	14.7	80.2	94.8	1.51	0.04	—	144
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	20.1	30.7	50.7	2.06	0.05	—	117
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	42.9	65.4	108	4.40	0.11	—	250
Research & Development	—	—	—	—	—	—	—	—	—	—	141	216	357	14.5	0.35	—	823
Strip Mall	—	—	—	—	—	—	—	—	—	—	34.1	52.0	86.0	3.50	0.08	—	198
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	253	444	697	26.0	0.62	—	1,532
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	14.7	80.2	94.8	1.51	0.04	—	144
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	20.1	30.7	50.7	2.06	0.05	—	117
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	42.9	65.4	108	4.40	0.11	—	250
Research & Development	—	—	—	—	—	—	—	—	—	—	141	216	357	14.5	0.35	—	823
Strip Mall	—	—	—	—	—	—	—	—	—	—	34.1	52.0	86.0	3.50	0.08	—	198
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005

Total	—	—	—	—	—	—	—	—	—	—	253	444	697	26.0	0.62	—	1,532
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	2.43	13.3	15.7	0.25	0.01	—	23.8
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	3.33	5.08	8.40	0.34	0.01	—	19.4
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	7.10	10.8	17.9	0.73	0.02	—	41.4
Research & Development	—	—	—	—	—	—	—	—	—	—	23.4	35.7	59.1	2.40	0.06	—	136
Strip Mall	—	—	—	—	—	—	—	—	—	—	5.64	8.61	14.2	0.58	0.01	—	32.8
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	41.9	73.5	115	4.30	0.10	—	254

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	72.9	0.00	72.9	7.28	0.00	—	255
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	127	0.00	127	12.7	0.00	—	445

Apartments	—	—	—	—	—	—	—	—	—	—	271	0.00	271	27.1	0.00	—	949
Research & Development	—	—	—	—	—	—	—	—	—	—	6.14	0.00	6.14	0.61	0.00	—	21.5
Strip Mall	—	—	—	—	—	—	—	—	—	—	136	0.00	136	13.6	0.00	—	475
City Park	—	—	—	—	—	—	—	—	—	—	0.52	0.00	0.52	0.05	0.00	—	1.80
Total	—	—	—	—	—	—	—	—	—	—	614	0.00	614	61.4	0.00	—	2,148
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	72.9	0.00	72.9	7.28	0.00	—	255
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	127	0.00	127	12.7	0.00	—	445
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	271	0.00	271	27.1	0.00	—	949
Research & Development	—	—	—	—	—	—	—	—	—	—	6.14	0.00	6.14	0.61	0.00	—	21.5
Strip Mall	—	—	—	—	—	—	—	—	—	—	136	0.00	136	13.6	0.00	—	475
City Park	—	—	—	—	—	—	—	—	—	—	0.52	0.00	0.52	0.05	0.00	—	1.80
Total	—	—	—	—	—	—	—	—	—	—	614	0.00	614	61.4	0.00	—	2,148
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	12.1	0.00	12.1	1.21	0.00	—	42.2
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	21.1	0.00	21.1	2.10	0.00	—	73.7

Apartments	—	—	—	—	—	—	—	—	—	—	44.9	0.00	44.9	4.49	0.00	—	157
Research & Development	—	—	—	—	—	—	—	—	—	—	1.02	0.00	1.02	0.10	0.00	—	3.56
Strip Mall	—	—	—	—	—	—	—	—	—	—	22.5	0.00	22.5	2.25	0.00	—	78.7
City Park	—	—	—	—	—	—	—	—	—	—	0.09	0.00	0.09	0.01	0.00	—	0.30
Total	—	—	—	—	—	—	—	—	—	—	102	0.00	102	10.2	0.00	—	356

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.25	3.25
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.42	2.42
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.68	4.68
Research & Development	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.83	3.83
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.49	1.49
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.7	15.7

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.25	3.25
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.42	2.42
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.68	4.68
Research & Development	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.83	3.83
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.49	1.49
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.7	15.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.54	0.54
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.40	0.40
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.78	0.78
Research & Development	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.63	0.63
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.60	2.60

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	2,200	2,223	1,992	793,227	27,141	27,429	24,582	9,788,051
Apartments Low Rise	2,074	2,074	2,074	756,828	25,586	25,586	25,586	9,338,900
Apartments Mid Rise	4,427	4,427	4,427	1,615,673	54,621	54,621	54,621	19,936,650
Research & Development	1,575	1,575	1,575	574,875	14,103	14,103	14,103	5,147,680
Strip Mall	10,637	10,090	4,903	3,554,933	95,247	90,347	43,905	31,832,412
City Park	8.67	21.8	24.4	4,668	77.7	195	218	41,796

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	35
Gas Fireplaces	117
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	82

Conventional Wood Stoves	12
Catalytic Wood Stoves	12
Non-Catalytic Wood Stoves	12
Pellet Wood Stoves	0
Apartments Low Rise	—
Wood Fireplaces	0
Gas Fireplaces	96
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	223
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	204
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	477
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
—	—	—	—	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	2,044,433	341	0.0330	0.0040	3,937,935
Apartments Low Rise	1,453,151	341	0.0330	0.0040	5,019,686
Apartments Mid Rise	3,283,166	341	0.0330	0.0040	8,766,259
Research & Development	3,057,898	341	0.0330	0.0040	4,752,200
Strip Mall	2,147,764	341	0.0330	0.0040	2,011,518
City Park	0.00	341	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	7,657,877	38,376,406
Apartments Low Rise	10,484,390	14.1

Apartments Mid Rise	22,382,035	14.1
Research & Development	73,754,092	11.5
Strip Mall	17,777,405	11.5
City Park	0.00	25.6

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	135	—
Apartments Low Rise	236	—
Apartments Mid Rise	503	—
Research & Development	11.4	—
Strip Mall	252	—
City Park	0.96	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Research & Development	Household refrigerators and/or freezers	R-134a	1,430	0.45	0.60	0.00	1.00
Research & Development	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

8. User Changes to Default Data

Screen	Justification
Land Use	Acres, SF and du from Table 5-1 CO Master Plan (last amended May 2020). Amendments reduce R&D by 150 ksf and include 285 medium density residences. Reduced R&D by 17.65 acres. Increased HDR du by 17.65 acres.
Operations: Vehicle Data	Using F&P transportation analysis for trip generation rates on MFdu and R&D uses.

SVSP approved (baseline) Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	SVSP approved (baseline)
Operational Year	2028
Lead Agency	City of Roseville
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	7.80
Location	38.764551917638784, -121.37971553454238
County	Placer-Sacramento
City	Roseville
Air District	Placer County APCD
Air Basin	Sacramento Valley
TAZ	432
EDFZ	4
Electric Utility	Roseville Electric
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.16

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	3,212	Dwelling Unit	596	6,263,400	37,621,697	—	8,383	—

Retirement Community	493	Dwelling Unit	94.3	522,580	1.00	—	1,287	—
Apartments Low Rise	2,451	Dwelling Unit	351	2,598,060	1.00	—	6,397	—
Apartments Mid Rise	2,576	Dwelling Unit	92.0	2,472,960	1.00	—	6,723	—
Strip Mall	3,100	1000sqft	71.2	3,100,000	1.00	—	—	—
General Office Building	716	1000sqft	16.4	716,000	1.00	—	—	—
City Park	105	Acre	105	0.00	1.00	1.00	—	—
Elementary School	1,568	1000sqft	36.0	1,568,160	1.00	1.00	—	—
Junior High School	523	1000sqft	12.0	522,720	1.00	1.00	—	—
Place of Worship	183	1000sqft	4.20	182,950	1.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4,297	2,031	24,960	60.5	556	4,559	5,115	546	1,159	1,705	66,071	5,593,904	5,659,976	1,248	201	14,860	5,765,905
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4,089	2,348	19,669	55.8	555	4,559	5,114	545	1,159	1,705	66,071	5,123,427	5,189,498	1,256	217	500	5,286,195

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2,168	1,905	15,458	44.8	155	3,948	4,103	152	1,004	1,156	21,929	4,549,713	4,571,643	1,100	182	5,657	4,658,977
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	396	348	2,821	8.17	28.4	720	749	27.7	183	211	3,631	753,257	756,888	182	30.1	937	771,347

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1,478	1,871	20,444	52.6	39.3	4,559	4,598	37.0	1,159	1,196	—	5,354,000	5,354,000	141	193	14,742	5,429,914
Area	2,815	77.2	4,464	7.37	510	—	510	502	—	502	56,932	36,229	93,162	171	2.80	—	98,271
Energy	4.71	82.9	51.5	0.51	6.51	—	6.51	6.51	—	6.51	—	200,814	200,814	18.6	1.35	—	201,681
Water	—	—	—	—	—	—	—	—	—	—	1,353	2,860	4,213	139	3.33	—	8,679
Waste	—	—	—	—	—	—	—	—	—	—	7,786	0.00	7,786	778	0.00	—	27,242
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	118	118
Total	4,297	2,031	24,960	60.5	556	4,559	5,115	546	1,159	1,705	66,071	5,593,904	5,659,976	1,248	201	14,860	5,765,905
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1,356	2,194	15,914	48.0	39.3	4,559	4,598	37.1	1,159	1,196	—	4,885,936	4,885,936	150	210	382	4,952,625
Area	2,728	70.3	3,703	7.34	509	—	509	502	—	502	56,932	33,816	90,748	171	2.78	—	95,849
Energy	4.71	82.9	51.5	0.51	6.51	—	6.51	6.51	—	6.51	—	200,814	200,814	18.6	1.35	—	201,681
Water	—	—	—	—	—	—	—	—	—	—	1,353	2,860	4,213	139	3.33	—	8,679
Waste	—	—	—	—	—	—	—	—	—	—	7,786	0.00	7,786	778	0.00	—	27,242
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	118	118

Total	4,089	2,348	19,669	55.8	555	4,559	5,114	545	1,159	1,705	66,071	5,123,427	5,189,498	1,256	217	500	5,286,195
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1,183	1,803	14,199	42.6	34.2	3,948	3,982	32.2	1,004	1,036	—	4,337,251	4,337,251	126	176	5,540	4,398,529
Area	981	19.2	1,207	1.67	115	—	115	113	—	113	12,790	8,787	21,578	38.5	0.63	—	22,728
Energy	4.71	82.9	51.5	0.51	6.51	—	6.51	6.51	—	6.51	—	200,814	200,814	18.6	1.35	—	201,681
Water	—	—	—	—	—	—	—	—	—	—	1,353	2,860	4,213	139	3.33	—	8,679
Waste	—	—	—	—	—	—	—	—	—	—	7,786	0.00	7,786	778	0.00	—	27,242
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	118	118
Total	2,168	1,905	15,458	44.8	155	3,948	4,103	152	1,004	1,156	21,929	4,549,713	4,571,643	1,100	182	5,657	4,658,977
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	216	329	2,591	7.77	6.25	720	727	5.88	183	189	—	718,081	718,081	20.8	29.2	917	728,227
Area	179	3.50	220	0.30	20.9	—	20.9	20.6	—	20.6	2,118	1,455	3,572	6.37	0.10	—	3,763
Energy	0.86	15.1	9.39	0.09	1.19	—	1.19	1.19	—	1.19	—	33,247	33,247	3.08	0.22	—	33,391
Water	—	—	—	—	—	—	—	—	—	—	224	474	697	23.0	0.55	—	1,437
Waste	—	—	—	—	—	—	—	—	—	—	1,289	0.00	1,289	129	0.00	—	4,510
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.5	19.5
Total	396	348	2,821	8.17	28.4	720	749	27.7	183	211	3,631	753,257	756,888	182	30.1	937	771,347

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	160	180	1,950	4.94	3.71	427	431	3.49	109	112	—	502,755	502,755	14.0	18.6	1,381	510,014
Retirement Community	6.16	6.95	75.3	0.19	0.14	16.5	16.6	0.13	4.19	4.33	—	19,413	19,413	0.54	0.72	53.3	19,693
Apartments Low Rise	104	117	1,270	3.21	2.42	278	281	2.28	70.7	73.0	—	327,341	327,341	9.10	12.1	899	332,067
Apartments Mid Rise	73.0	82.3	892	2.26	1.70	195	197	1.60	49.7	51.3	—	229,920	229,920	6.39	8.48	632	233,240
Strip Mall	817	1,069	11,707	30.2	22.6	2,622	2,645	21.3	667	688	—	3,077,991	3,077,991	80.1	111	8,480	3,121,433
General Office Building	41.5	54.3	594	1.53	1.15	133	134	1.08	33.8	34.9	—	156,235	156,235	4.06	5.61	430	158,440
City Park	1.36	1.78	19.5	0.05	0.04	4.37	4.41	0.04	1.11	1.15	—	5,132	5,132	0.13	0.18	14.1	5,204
Elementary School	182	238	2,608	6.74	5.03	584	589	4.74	149	153	—	685,766	685,766	17.8	24.6	1,889	695,445
Junior High School	62.7	82.0	898	2.32	1.73	201	203	1.63	51.2	52.8	—	236,201	236,201	6.14	8.49	651	239,534
Place of Worship	30.1	39.3	431	1.11	0.83	96.5	97.3	0.78	24.5	25.3	—	113,245	113,245	2.95	4.07	312	114,843
Total	1,478	1,871	20,444	52.6	39.3	4,559	4,598	37.0	1,159	1,196	—	5,354,000	5,354,000	141	193	14,742	5,429,914
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	145	211	1,542	4.50	3.71	427	431	3.50	109	112	—	458,935	458,935	15.1	20.1	35.8	465,351

Retirement Community	5.59	8.15	59.5	0.17	0.14	16.5	16.6	0.13	4.19	4.33	—	17,721	17,721	0.58	0.78	1.38	17,969
Apartments Low Rise	94.2	137	1,004	2.93	2.42	278	281	2.28	70.7	73.0	—	298,810	298,810	9.80	13.1	23.3	302,987
Apartments Mid Rise	66.2	96.5	705	2.06	1.70	195	197	1.60	49.7	51.3	—	209,880	209,880	6.89	9.21	16.4	212,814
Strip Mall	752	1,254	9,076	27.6	22.6	2,622	2,645	21.3	667	688	—	2,808,700	2,808,700	84.4	120	220	2,846,802
General Office Building	38.2	63.6	461	1.40	1.15	133	134	1.08	33.8	34.9	—	142,566	142,566	4.28	6.09	11.2	144,500
City Park	1.25	2.09	15.1	0.05	0.04	4.37	4.41	0.04	1.11	1.15	—	4,683	4,683	0.14	0.20	0.37	4,746
Elementary School	168	279	2,022	6.14	5.03	584	589	4.74	149	153	—	625,769	625,769	18.8	26.7	49.0	634,258
Junior High School	57.7	96.2	696	2.12	1.73	201	203	1.63	51.2	52.8	—	215,536	215,536	6.48	9.21	16.9	218,459
Place of Worship	27.7	46.1	334	1.01	0.83	96.5	97.3	0.78	24.5	25.3	—	103,337	103,337	3.10	4.42	8.09	104,739
Total	1,356	2,194	15,914	48.0	39.3	4,559	4,598	37.1	1,159	1,196	—	4,885,936	4,885,936	150	210	382	4,952,625
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	25.9	35.5	280	0.82	0.66	75.8	76.5	0.62	19.3	19.9	—	75,765	75,765	2.33	3.15	96.5	76,857
Retirement Community	0.97	1.33	10.5	0.03	0.02	2.85	2.87	0.02	0.72	0.75	—	2,846	2,846	0.09	0.12	3.63	2,887
Apartments Low Rise	15.4	21.2	167	0.49	0.39	45.2	45.6	0.37	11.5	11.9	—	45,178	45,178	1.39	1.88	57.6	45,830

Apartment Mid Rise	11.5	15.8	124	0.36	0.29	33.7	34.0	0.28	8.57	8.85	—	33,690	33,690	1.04	1.40	42.9	34,176
Strip Mall	126	198	1,557	4.70	3.77	436	440	3.55	111	114	—	434,310	434,310	12.4	17.6	555	440,411
General Office Building	5.27	8.30	65.3	0.20	0.16	18.3	18.5	0.15	4.65	4.80	—	18,225	18,225	0.52	0.74	23.3	18,481
City Park	0.12	0.19	1.49	< 0.005	< 0.005	0.42	0.42	< 0.005	0.11	0.11	—	415	415	0.01	0.02	0.53	421
Elementary School	21.8	34.4	271	0.82	0.66	75.8	76.4	0.62	19.3	19.9	—	75,484	75,484	2.15	3.05	96.5	76,544
Junior High School	7.52	11.8	93.2	0.28	0.23	26.1	26.3	0.21	6.64	6.85	—	25,999	25,999	0.74	1.05	33.2	26,364
Place of Worship	1.78	2.81	22.1	0.07	0.05	6.19	6.25	0.05	1.57	1.63	—	6,169	6,169	0.18	0.25	7.88	6,256
Total	216	329	2,591	7.77	6.25	720	727	5.88	183	189	—	718,081	718,081	20.8	29.2	917	728,227

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	25,566	25,566	2.48	0.30	—	25,718
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	2,046	2,046	0.20	0.02	—	2,058

Apartments	—	—	—	—	—	—	—	—	—	—	—	10,171	10,171	0.98	0.12	—	10,231
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	10,865	10,865	1.05	0.13	—	10,929
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	25,214	25,214	2.44	0.30	—	25,363
General Office Building	—	—	—	—	—	—	—	—	—	—	—	13,990	13,990	1.35	0.16	—	14,073
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Elementary School	—	—	—	—	—	—	—	—	—	—	—	6,710	6,710	0.65	0.08	—	6,750
Junior High School	—	—	—	—	—	—	—	—	—	—	—	2,237	2,237	0.22	0.03	—	2,250
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	1,764	1,764	0.17	0.02	—	1,775
Total	—	—	—	—	—	—	—	—	—	—	—	98,563	98,563	9.55	1.16	—	99,147
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	25,566	25,566	2.48	0.30	—	25,718
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	2,046	2,046	0.20	0.02	—	2,058
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	10,171	10,171	0.98	0.12	—	10,231
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	10,865	10,865	1.05	0.13	—	10,929

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	25,214	25,214	2.44	0.30	—	25,363
General Office Building	—	—	—	—	—	—	—	—	—	—	—	13,990	13,990	1.35	0.16	—	14,073
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Elementary School	—	—	—	—	—	—	—	—	—	—	—	6,710	6,710	0.65	0.08	—	6,750
Junior High School	—	—	—	—	—	—	—	—	—	—	—	2,237	2,237	0.22	0.03	—	2,250
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	1,764	1,764	0.17	0.02	—	1,775
Total	—	—	—	—	—	—	—	—	—	—	—	98,563	98,563	9.55	1.16	—	99,147
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	4,233	4,233	0.41	0.05	—	4,258
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	339	339	0.03	< 0.005	—	341
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	1,684	1,684	0.16	0.02	—	1,694
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,799	1,799	0.17	0.02	—	1,809
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	4,174	4,174	0.40	0.05	—	4,199
General Office Building	—	—	—	—	—	—	—	—	—	—	—	2,316	2,316	0.22	0.03	—	2,330
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Elementary School	—	—	—	—	—	—	—	—	—	—	—	1,111	1,111	0.11	0.01	—	1,117
Junior High School	—	—	—	—	—	—	—	—	—	—	—	370	370	0.04	< 0.005	—	372
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	292	292	0.03	< 0.005	—	294
Total	—	—	—	—	—	—	—	—	—	—	—	16,318	16,318	1.58	0.19	—	16,415

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.38	23.6	10.0	0.15	1.91	—	1.91	1.91	—	1.91	—	29,945	29,945	2.65	0.06	—	30,028
Retirement Community	0.11	1.89	0.81	0.01	0.15	—	0.15	0.15	—	0.15	—	2,401	2,401	0.21	< 0.005	—	2,408
Apartments Low Rise	0.55	9.41	4.00	0.06	0.76	—	0.76	0.76	—	0.76	—	11,939	11,939	1.06	0.02	—	11,972
Apartments Mid Rise	0.52	8.97	3.82	0.06	0.73	—	0.73	0.73	—	0.73	—	11,387	11,387	1.01	0.02	—	11,418
Strip Mall	0.40	7.18	6.03	0.04	0.55	—	0.55	0.55	—	0.55	—	8,570	8,570	0.76	0.02	—	8,593
General Office Building	0.31	5.55	4.66	0.03	0.42	—	0.42	0.42	—	0.42	—	6,625	6,625	0.59	0.01	—	6,643
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Elementa School	1.00	18.2	15.3	0.11	1.38	—	1.38	1.38	—	1.38	—	21,715	21,715	1.92	0.04	—	21,775
Junior High School	0.33	6.07	5.10	0.04	0.46	—	0.46	0.46	—	0.46	—	7,238	7,238	0.64	0.01	—	7,258
Place of Worship	0.11	2.04	1.71	0.01	0.15	—	0.15	0.15	—	0.15	—	2,431	2,431	0.22	< 0.005	—	2,438
Total	4.71	82.9	51.5	0.51	6.51	—	6.51	6.51	—	6.51	—	102,251	102,251	9.05	0.19	—	102,535
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.38	23.6	10.0	0.15	1.91	—	1.91	1.91	—	1.91	—	29,945	29,945	2.65	0.06	—	30,028
Retirement Community	0.11	1.89	0.81	0.01	0.15	—	0.15	0.15	—	0.15	—	2,401	2,401	0.21	< 0.005	—	2,408
Apartments Low Rise	0.55	9.41	4.00	0.06	0.76	—	0.76	0.76	—	0.76	—	11,939	11,939	1.06	0.02	—	11,972
Apartments Mid Rise	0.52	8.97	3.82	0.06	0.73	—	0.73	0.73	—	0.73	—	11,387	11,387	1.01	0.02	—	11,418
Strip Mall	0.40	7.18	6.03	0.04	0.55	—	0.55	0.55	—	0.55	—	8,570	8,570	0.76	0.02	—	8,593
General Office Building	0.31	5.55	4.66	0.03	0.42	—	0.42	0.42	—	0.42	—	6,625	6,625	0.59	0.01	—	6,643
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Elementary School	1.00	18.2	15.3	0.11	1.38	—	1.38	1.38	—	1.38	—	21,715	21,715	1.92	0.04	—	21,775
Junior High School	0.33	6.07	5.10	0.04	0.46	—	0.46	0.46	—	0.46	—	7,238	7,238	0.64	0.01	—	7,258

Place of Worship	0.11	2.04	1.71	0.01	0.15	—	0.15	0.15	—	0.15	—	2,431	2,431	0.22	< 0.005	—	2,438
Total	4.71	82.9	51.5	0.51	6.51	—	6.51	6.51	—	6.51	—	102,251	102,251	9.05	0.19	—	102,535
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.25	4.31	1.83	0.03	0.35	—	0.35	0.35	—	0.35	—	4,958	4,958	0.44	0.01	—	4,972
Retirement Community	0.02	0.35	0.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	398	398	0.04	< 0.005	—	399
Apartments Low Rise	0.10	1.72	0.73	0.01	0.14	—	0.14	0.14	—	0.14	—	1,977	1,977	0.17	< 0.005	—	1,982
Apartments Mid Rise	0.10	1.64	0.70	0.01	0.13	—	0.13	0.13	—	0.13	—	1,885	1,885	0.17	< 0.005	—	1,890
Strip Mall	0.07	1.31	1.10	0.01	0.10	—	0.10	0.10	—	0.10	—	1,419	1,419	0.13	< 0.005	—	1,423
General Office Building	0.06	1.01	0.85	0.01	0.08	—	0.08	0.08	—	0.08	—	1,097	1,097	0.10	< 0.005	—	1,100
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Elementary School	0.18	3.32	2.79	0.02	0.25	—	0.25	0.25	—	0.25	—	3,595	3,595	0.32	0.01	—	3,605
Junior High School	0.06	1.11	0.93	0.01	0.08	—	0.08	0.08	—	0.08	—	1,198	1,198	0.11	< 0.005	—	1,202
Place of Worship	0.02	0.37	0.31	< 0.005	0.03	—	0.03	0.03	—	0.03	—	402	402	0.04	< 0.005	—	404
Total	0.86	15.1	9.39	0.09	1.19	—	1.19	1.19	—	1.19	—	16,929	16,929	1.50	0.03	—	16,976

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	2,309	70.3	3,703	7.34	509	—	509	502	—	502	56,932	33,816	90,748	171	2.78	—	95,849
Consumer Products	384	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	35.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	86.7	6.92	761	0.04	0.70	—	0.70	0.53	—	0.53	—	2,414	2,414	0.10	0.02	—	2,422
Total	2,815	77.2	4,464	7.37	510	—	510	502	—	502	56,932	36,229	93,162	171	2.80	—	98,271
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	2,309	70.3	3,703	7.34	509	—	509	502	—	502	56,932	33,816	90,748	171	2.78	—	95,849
Consumer Products	384	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	35.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	2,728	70.3	3,703	7.34	509	—	509	502	—	502	56,932	33,816	90,748	171	2.78	—	95,849
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	94.7	2.88	152	0.30	20.9	—	20.9	20.6	—	20.6	2,118	1,258	3,375	6.36	0.10	—	3,565

Consumer Products	70.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	6.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	7.80	0.62	68.5	< 0.005	0.06	—	0.06	0.05	—	0.05	—	197	197	0.01	< 0.005	—	198
Total	179	3.50	220	0.30	20.9	—	20.9	20.6	—	20.6	2,118	1,455	3,572	6.37	0.10	—	3,763

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	202	1,105	1,307	20.8	0.51	—	1,979
Retirement Community	—	—	—	—	—	—	—	—	—	—	31.0	47.4	78.4	3.19	0.08	—	181
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	154	236	390	15.9	0.38	—	899
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	162	248	410	16.7	0.40	—	945
Strip Mall	—	—	—	—	—	—	—	—	—	—	440	671	1,111	45.2	1.08	—	2,563

General Office Building	—	—	—	—	—	—	—	—	—	—	244	372	616	25.0	0.60	—	1,420
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Elementary School	—	—	—	—	—	—	—	—	—	—	87.1	133	220	8.95	0.21	—	508
Junior High School	—	—	—	—	—	—	—	—	—	—	20.7	31.5	52.2	2.12	0.05	—	120
Place of Worship	—	—	—	—	—	—	—	—	—	—	11.0	16.7	27.7	1.13	0.03	—	63.9
Total	—	—	—	—	—	—	—	—	—	—	1,353	2,860	4,213	139	3.33	—	8,679
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	202	1,105	1,307	20.8	0.51	—	1,979
Retirement Community	—	—	—	—	—	—	—	—	—	—	31.0	47.4	78.4	3.19	0.08	—	181
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	154	236	390	15.9	0.38	—	899
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	162	248	410	16.7	0.40	—	945
Strip Mall	—	—	—	—	—	—	—	—	—	—	440	671	1,111	45.2	1.08	—	2,563
General Office Building	—	—	—	—	—	—	—	—	—	—	244	372	616	25.0	0.60	—	1,420
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005

Elementary	—	—	—	—	—	—	—	—	—	—	87.1	133	220	8.95	0.21	—	508
Junior High School	—	—	—	—	—	—	—	—	—	—	20.7	31.5	52.2	2.12	0.05	—	120
Place of Worship	—	—	—	—	—	—	—	—	—	—	11.0	16.7	27.7	1.13	0.03	—	63.9
Total	—	—	—	—	—	—	—	—	—	—	1,353	2,860	4,213	139	3.33	—	8,679
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	33.5	183	216	3.45	0.08	—	328
Retirement Community	—	—	—	—	—	—	—	—	—	—	5.14	7.84	13.0	0.53	0.01	—	29.9
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	25.6	39.0	64.6	2.62	0.06	—	149
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	26.9	41.0	67.8	2.76	0.07	—	156
Strip Mall	—	—	—	—	—	—	—	—	—	—	72.8	111	184	7.48	0.18	—	424
General Office Building	—	—	—	—	—	—	—	—	—	—	40.4	61.6	102	4.15	0.10	—	235
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Elementary School	—	—	—	—	—	—	—	—	—	—	14.4	22.0	36.4	1.48	0.04	—	84.0
Junior High School	—	—	—	—	—	—	—	—	—	—	3.42	5.22	8.64	0.35	0.01	—	19.9
Place of Worship	—	—	—	—	—	—	—	—	—	—	1.82	2.77	4.59	0.19	< 0.005	—	10.6

Total	—	—	—	—	—	—	—	—	—	—	224	474	697	23.0	0.55	—	1,437

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	1,005	0.00	1,005	100	0.00	—	3,516
Retirement Community	—	—	—	—	—	—	—	—	—	—	633	0.00	633	63.3	0.00	—	2,216
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	977	0.00	977	97.6	0.00	—	3,417
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	1,027	0.00	1,027	103	0.00	—	3,592
Strip Mall	—	—	—	—	—	—	—	—	—	—	1,754	0.00	1,754	175	0.00	—	6,138
General Office Building	—	—	—	—	—	—	—	—	—	—	359	0.00	359	35.9	0.00	—	1,256
City Park	—	—	—	—	—	—	—	—	—	—	4.85	0.00	4.85	0.48	0.00	—	17.0
Elementary School	—	—	—	—	—	—	—	—	—	—	1,099	0.00	1,099	110	0.00	—	3,844
Junior High School	—	—	—	—	—	—	—	—	—	—	366	0.00	366	36.6	0.00	—	1,281

Place of Worship	—	—	—	—	—	—	—	—	—	—	562	0.00	562	56.2	0.00	—	1,966
Total	—	—	—	—	—	—	—	—	—	—	7,786	0.00	7,786	778	0.00	—	27,242
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	1,005	0.00	1,005	100	0.00	—	3,516
Retirement Community	—	—	—	—	—	—	—	—	—	—	633	0.00	633	63.3	0.00	—	2,216
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	977	0.00	977	97.6	0.00	—	3,417
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	1,027	0.00	1,027	103	0.00	—	3,592
Strip Mall	—	—	—	—	—	—	—	—	—	—	1,754	0.00	1,754	175	0.00	—	6,138
General Office Building	—	—	—	—	—	—	—	—	—	—	359	0.00	359	35.9	0.00	—	1,256
City Park	—	—	—	—	—	—	—	—	—	—	4.85	0.00	4.85	0.48	0.00	—	17.0
Elementary School	—	—	—	—	—	—	—	—	—	—	1,099	0.00	1,099	110	0.00	—	3,844
Junior High School	—	—	—	—	—	—	—	—	—	—	366	0.00	366	36.6	0.00	—	1,281
Place of Worship	—	—	—	—	—	—	—	—	—	—	562	0.00	562	56.2	0.00	—	1,966
Total	—	—	—	—	—	—	—	—	—	—	7,786	0.00	7,786	778	0.00	—	27,242
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	166	0.00	166	16.6	0.00	—	582
Retirement Community	—	—	—	—	—	—	—	—	—	—	105	0.00	105	10.5	0.00	—	367
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	162	0.00	162	16.2	0.00	—	566
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	170	0.00	170	17.0	0.00	—	595
Strip Mall	—	—	—	—	—	—	—	—	—	—	290	0.00	290	29.0	0.00	—	1,016
General Office Building	—	—	—	—	—	—	—	—	—	—	59.4	0.00	59.4	5.94	0.00	—	208
City Park	—	—	—	—	—	—	—	—	—	—	0.80	0.00	0.80	0.08	0.00	—	2.81
Elementary School	—	—	—	—	—	—	—	—	—	—	182	0.00	182	18.2	0.00	—	636
Junior High School	—	—	—	—	—	—	—	—	—	—	60.6	0.00	60.6	6.06	0.00	—	212
Place of Worship	—	—	—	—	—	—	—	—	—	—	93.0	0.00	93.0	9.30	0.00	—	326
Total	—	—	—	—	—	—	—	—	—	—	1,289	0.00	1,289	129	0.00	—	4,510

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	44.9	44.9
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.64	6.64
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.6	18.6
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.7	17.7
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.3	19.3
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.74	1.74
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.06	6.06
Junior High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.02	2.02
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.71	0.71
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	118	118
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	44.9	44.9

Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.64	6.64
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.6	18.6
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.7	17.7
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.3	19.3
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.74	1.74
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.06	6.06
Junior High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.02	2.02
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.71	0.71
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	118	118
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.43	7.43
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.10	1.10
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.08	3.08

Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.93	2.93
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.20	3.20
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.29	0.29
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.00	1.00
Junior High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.33	0.33
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.5	19.5

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	30,321	30,642	27,463	10,934,955	594,314	600,610	538,282	214,331,157
Retirement Community	1,183	1,001	961	410,789	23,191	19,616	18,843	8,051,686
Apartments Low Rise	17,941	19,951	15,392	6,520,466	351,660	391,053	301,697	127,804,720
Apartments Mid Rise	14,013	12,648	10,536	4,862,384	274,671	247,911	206,508	95,305,409
Strip Mall	137,392	130,324	63,333	45,917,886	3,687,453	3,497,755	1,699,789	1,232,386,387

General Office Building	6,974	1,582	501	1,926,822	187,170	42,469	13,452	51,713,830
City Park	81.6	205	229	43,906	2,190	5,502	6,148	1,178,386
Elementary School	30,610	0.00	0.00	7,980,590	821,552	0.00	0.00	214,190,413
Junior High School	10,543	0.00	0.00	2,748,779	282,970	0.00	0.00	73,774,258
Place of Worship	1,272	1,096	5,055	652,218	34,126	29,412	135,668	17,504,826

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	482
Gas Fireplaces	1606
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1124
Conventional Wood Stoves	161
Catalytic Wood Stoves	161
Non-Catalytic Wood Stoves	161
Pellet Wood Stoves	0
Retirement Community	—
Wood Fireplaces	0
Gas Fireplaces	148
Propane Fireplaces	0
Electric Fireplaces	0

No Fireplaces	345
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Apartments Low Rise	—
Wood Fireplaces	0
Gas Fireplaces	735
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1716
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	773
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1803
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
24010425	8,003,475	9,134,745	3,044,915	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	27,384,578	341	0.0330	0.0040	93,437,162
Retirement Community	2,191,320	341	0.0330	0.0040	7,493,172
Apartments Low Rise	10,894,373	341	0.0330	0.0040	37,253,072
Apartments Mid Rise	11,637,881	341	0.0330	0.0040	35,529,460
Strip Mall	27,007,431	341	0.0330	0.0040	26,739,362
General Office Building	14,985,405	341	0.0330	0.0040	20,670,219
City Park	0.00	341	0.0330	0.0040	0.00
Elementary School	7,187,183	341	0.0330	0.0040	67,757,353
Junior High School	2,395,728	341	0.0330	0.0040	22,585,784
Place of Worship	1,889,866	341	0.0330	0.0040	7,584,852

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	105,566,957	529,034,343
Retirement Community	16,203,148	14.1
Apartments Low Rise	80,555,608	14.1
Apartments Mid Rise	84,663,911	14.1
Strip Mall	229,624,817	11.5
General Office Building	127,257,364	11.5
City Park	0.00	25.6
Elementary School	45,471,806	25.6
Junior High School	10,779,011	25.6
Place of Worship	5,724,306	11.5

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	1,864	—
Retirement Community	1,175	—
Apartments Low Rise	1,812	—
Apartments Mid Rise	1,905	—
Strip Mall	3,255	—
General Office Building	666	—
City Park	9.00	—
Elementary School	2,039	—
Junior High School	680	—
Place of Worship	1,043	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Retirement Community	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Retirement Community	Household refrigerators and/or freezers	R-134a	1,430	0.22	0.60	0.00	1.00
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00

General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Elementary School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Elementary School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Junior High School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Junior High School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Junior High School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Junior High School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Place of Worship	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Place of Worship	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Place of Worship	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Place of Worship	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

8. User Changes to Default Data

Screen	Justification
Land Use	Adding acreage from SP and LU types. Excluded fire station and also kept non-land uses generic.

SVSP with amendments Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	SVSP with amendments
Operational Year	2028
Lead Agency	City of Roseville
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	7.80
Location	38.764551917638784, -121.37971553454238
County	Placer-Sacramento
City	Roseville
Air District	Placer County APCD
Air Basin	Sacramento Valley
TAZ	432
EDFZ	4
Electric Utility	Roseville Electric
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.16

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	3,212	Dwelling Unit	596	6,263,400	37,621,697	—	8,383	—

Retirement Community	493	Dwelling Unit	94.3	522,580	1.00	—	1,287	—
Apartments Low Rise	2,451	Dwelling Unit	351	2,598,060	1.00	—	6,397	—
Apartments Mid Rise	2,842	Dwelling Unit	92.0	2,728,320	1.00	—	7,418	—
Strip Mall	3,100	1000sqft	71.2	3,100,000	1.00	—	—	—
General Office Building	716	1000sqft	16.4	716,000	1.00	—	—	—
City Park	105	Acre	105	0.00	1.00	1.00	—	—
Elementary School	1,568	1000sqft	36.0	1,568,160	1.00	1.00	—	—
Junior High School	523	1000sqft	12.0	522,720	1.00	1.00	—	—
Place of Worship	183	1000sqft	4.20	182,950	1.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4,309	2,038	25,032	60.6	556	4,571	5,127	546	1,162	1,709	66,194	5,610,766	5,676,960	1,261	201	14,901	5,783,431
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4,099	2,355	19,713	55.9	555	4,571	5,126	546	1,162	1,708	66,194	5,138,984	5,205,178	1,269	218	503	5,302,392

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2,193	1,930	15,656	45.3	156	3,999	4,155	152	1,017	1,169	22,052	4,608,881	4,630,933	1,114	184	5,731	4,719,419
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	400	352	2,857	8.27	28.5	730	758	27.8	186	213	3,651	763,053	766,704	184	30.5	949	781,354

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1,482	1,876	20,501	52.7	39.4	4,571	4,611	37.1	1,162	1,199	—	5,368,498	5,368,498	142	194	14,782	5,444,621
Area	2,822	77.3	4,479	7.37	510	—	510	502	—	502	56,932	36,270	93,202	171	2.80	—	98,312
Energy	4.77	83.8	51.8	0.52	6.59	—	6.59	6.59	—	6.59	—	203,112	203,112	18.8	1.36	—	203,989
Water	—	—	—	—	—	—	—	—	—	—	1,369	2,886	4,255	141	3.37	—	8,777
Waste	—	—	—	—	—	—	—	—	—	—	7,893	0.00	7,893	789	0.00	—	27,613
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	119	119
Total	4,309	2,038	25,032	60.6	556	4,571	5,127	546	1,162	1,709	66,194	5,610,766	5,676,960	1,261	201	14,901	5,783,431
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1,360	2,201	15,958	48.1	39.5	4,571	4,611	37.2	1,162	1,199	—	4,899,170	4,899,170	150	211	383	4,966,045
Area	2,734	70.3	3,703	7.34	509	—	509	502	—	502	56,932	33,816	90,748	171	2.78	—	95,849
Energy	4.77	83.8	51.8	0.52	6.59	—	6.59	6.59	—	6.59	—	203,112	203,112	18.8	1.36	—	203,989
Water	—	—	—	—	—	—	—	—	—	—	1,369	2,886	4,255	141	3.37	—	8,777
Waste	—	—	—	—	—	—	—	—	—	—	7,893	0.00	7,893	789	0.00	—	27,613
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	119	119

Total	4,099	2,355	19,713	55.9	555	4,571	5,126	546	1,162	1,708	66,194	5,138,984	5,205,178	1,269	218	503	5,302,392
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1,201	1,827	14,390	43.1	34.7	3,999	4,034	32.7	1,017	1,050	—	4,394,076	4,394,076	127	179	5,612	4,456,173
Area	987	19.3	1,215	1.67	115	—	115	113	—	113	12,790	8,807	21,597	38.5	0.63	—	22,748
Energy	4.77	83.8	51.8	0.52	6.59	—	6.59	6.59	—	6.59	—	203,112	203,112	18.8	1.36	—	203,989
Water	—	—	—	—	—	—	—	—	—	—	1,369	2,886	4,255	141	3.37	—	8,777
Waste	—	—	—	—	—	—	—	—	—	—	7,893	0.00	7,893	789	0.00	—	27,613
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	119	119
Total	2,193	1,930	15,656	45.3	156	3,999	4,155	152	1,017	1,169	22,052	4,608,881	4,630,933	1,114	184	5,731	4,719,419
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	219	333	2,626	7.87	6.33	730	736	5.96	186	192	—	727,489	727,489	21.1	29.6	929	737,770
Area	180	3.52	222	0.30	20.9	—	20.9	20.6	—	20.6	2,118	1,458	3,576	6.37	0.10	—	3,766
Energy	0.87	15.3	9.46	0.09	1.20	—	1.20	1.20	—	1.20	—	33,628	33,628	3.11	0.23	—	33,773
Water	—	—	—	—	—	—	—	—	—	—	227	478	704	23.3	0.56	—	1,453
Waste	—	—	—	—	—	—	—	—	—	—	1,307	0.00	1,307	131	0.00	—	4,572
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.8	19.8
Total	400	352	2,857	8.27	28.5	730	758	27.8	186	213	3,651	763,053	766,704	184	30.5	949	781,354

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	160	180	1,950	4.94	3.71	427	431	3.49	109	112	—	502,755	502,755	14.0	18.6	1,381	510,014
Retirement Community	8.47	9.56	104	0.26	0.20	22.7	22.9	0.19	5.77	5.95	—	26,693	26,693	0.74	0.98	73.3	27,078
Apartments Low Rise	82.9	93.6	1,014	2.57	1.93	222	224	1.82	56.5	58.3	—	261,390	261,390	7.27	9.64	718	265,164
Apartments Mid Rise	96.2	109	1,175	2.98	2.24	258	260	2.11	65.5	67.6	—	303,089	303,089	8.43	11.2	833	307,465
Strip Mall	817	1,069	11,707	30.2	22.6	2,622	2,645	21.3	667	688	—	3,077,991	3,077,991	80.1	111	8,480	3,121,433
General Office Building	41.5	54.3	594	1.53	1.15	133	134	1.08	33.8	34.9	—	156,235	156,235	4.06	5.61	430	158,440
City Park	1.36	1.78	19.5	0.05	0.04	4.37	4.41	0.04	1.11	1.15	—	5,132	5,132	0.13	0.18	14.1	5,204
Elementary School	182	238	2,608	6.74	5.03	584	589	4.74	149	153	—	685,766	685,766	17.8	24.6	1,889	695,445
Junior High School	62.7	82.0	898	2.32	1.73	201	203	1.63	51.2	52.8	—	236,201	236,201	6.14	8.49	651	239,534
Place of Worship	30.1	39.3	431	1.11	0.83	96.5	97.3	0.78	24.5	25.3	—	113,245	113,245	2.95	4.07	312	114,843
Total	1,482	1,876	20,501	52.7	39.4	4,571	4,611	37.1	1,162	1,199	—	5,368,498	5,368,498	142	194	14,782	5,444,621
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	145	211	1,542	4.50	3.71	427	431	3.50	109	112	—	458,935	458,935	15.1	20.1	35.8	465,351

Retirement Community	7.68	11.2	81.9	0.24	0.20	22.7	22.9	0.19	5.77	5.95	—	24,366	24,366	0.80	1.07	1.90	24,707
Apartments Low Rise	75.2	110	802	2.34	1.93	222	224	1.82	56.5	58.3	—	238,607	238,607	7.83	10.5	18.6	241,943
Apartments Mid Rise	87.3	127	929	2.72	2.24	258	260	2.11	65.5	67.6	—	276,672	276,672	9.08	12.1	21.6	280,539
Strip Mall	752	1,254	9,076	27.6	22.6	2,622	2,645	21.3	667	688	—	2,808,700	2,808,700	84.4	120	220	2,846,802
General Office Building	38.2	63.6	461	1.40	1.15	133	134	1.08	33.8	34.9	—	142,566	142,566	4.28	6.09	11.2	144,500
City Park	1.25	2.09	15.1	0.05	0.04	4.37	4.41	0.04	1.11	1.15	—	4,683	4,683	0.14	0.20	0.37	4,746
Elementary School	168	279	2,022	6.14	5.03	584	589	4.74	149	153	—	625,769	625,769	18.8	26.7	49.0	634,258
Junior High School	57.7	96.2	696	2.12	1.73	201	203	1.63	51.2	52.8	—	215,536	215,536	6.48	9.21	16.9	218,459
Place of Worship	27.7	46.1	334	1.01	0.83	96.5	97.3	0.78	24.5	25.3	—	103,337	103,337	3.10	4.42	8.09	104,739
Total	1,360	2,201	15,958	48.1	39.5	4,571	4,611	37.2	1,162	1,199	—	4,899,170	4,899,170	150	211	383	4,966,045
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	25.9	35.5	280	0.82	0.66	75.8	76.5	0.62	19.3	19.9	—	75,765	75,765	2.33	3.15	96.5	76,857
Retirement Community	1.40	1.93	15.2	0.04	0.04	4.12	4.15	0.03	1.05	1.08	—	4,114	4,114	0.13	0.17	5.24	4,174
Apartments Low Rise	13.8	18.9	149	0.44	0.35	40.3	40.7	0.33	10.3	10.6	—	40,290	40,290	1.24	1.67	51.3	40,871

Apartment Mid Rise	16.0	21.9	173	0.51	0.41	46.8	47.2	0.38	11.9	12.3	—	46,718	46,718	1.44	1.94	59.5	47,391
Strip Mall	126	198	1,557	4.70	3.77	436	440	3.55	111	114	—	434,310	434,310	12.4	17.6	555	440,411
General Office Building	5.27	8.30	65.3	0.20	0.16	18.3	18.5	0.15	4.65	4.80	—	18,225	18,225	0.52	0.74	23.3	18,481
City Park	0.12	0.19	1.49	< 0.005	< 0.005	0.42	0.42	< 0.005	0.11	0.11	—	415	415	0.01	0.02	0.53	421
Elementary School	21.8	34.4	271	0.82	0.66	75.8	76.4	0.62	19.3	19.9	—	75,484	75,484	2.15	3.05	96.5	76,544
Junior High School	7.52	11.8	93.2	0.28	0.23	26.1	26.3	0.21	6.64	6.85	—	25,999	25,999	0.74	1.05	33.2	26,364
Place of Worship	1.78	2.81	22.1	0.07	0.05	6.19	6.25	0.05	1.57	1.63	—	6,169	6,169	0.18	0.25	7.88	6,256
Total	219	333	2,626	7.87	6.33	730	736	5.96	186	192	—	727,489	727,489	21.1	29.6	929	737,770

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	25,566	25,566	2.48	0.30	—	25,718
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	2,046	2,046	0.20	0.02	—	2,058

Apartments	—	—	—	—	—	—	—	—	—	—	—	10,171	10,171	0.98	0.12	—	10,231
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	11,987	11,987	1.16	0.14	—	12,058
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	25,214	25,214	2.44	0.30	—	25,363
General Office Building	—	—	—	—	—	—	—	—	—	—	—	13,990	13,990	1.35	0.16	—	14,073
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Elementary School	—	—	—	—	—	—	—	—	—	—	—	6,710	6,710	0.65	0.08	—	6,750
Junior High School	—	—	—	—	—	—	—	—	—	—	—	2,237	2,237	0.22	0.03	—	2,250
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	1,764	1,764	0.17	0.02	—	1,775
Total	—	—	—	—	—	—	—	—	—	—	—	99,685	99,685	9.65	1.17	—	100,275
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	25,566	25,566	2.48	0.30	—	25,718
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	2,046	2,046	0.20	0.02	—	2,058
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	10,171	10,171	0.98	0.12	—	10,231
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	11,987	11,987	1.16	0.14	—	12,058

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	25,214	25,214	2.44	0.30	—	25,363
General Office Building	—	—	—	—	—	—	—	—	—	—	—	13,990	13,990	1.35	0.16	—	14,073
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Elementary School	—	—	—	—	—	—	—	—	—	—	—	6,710	6,710	0.65	0.08	—	6,750
Junior High School	—	—	—	—	—	—	—	—	—	—	—	2,237	2,237	0.22	0.03	—	2,250
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	1,764	1,764	0.17	0.02	—	1,775
Total	—	—	—	—	—	—	—	—	—	—	—	99,685	99,685	9.65	1.17	—	100,275
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	4,233	4,233	0.41	0.05	—	4,258
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	339	339	0.03	< 0.005	—	341
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	1,684	1,684	0.16	0.02	—	1,694
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,985	1,985	0.19	0.02	—	1,996
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	4,174	4,174	0.40	0.05	—	4,199
General Office Building	—	—	—	—	—	—	—	—	—	—	—	2,316	2,316	0.22	0.03	—	2,330
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Elementary School	—	—	—	—	—	—	—	—	—	—	—	1,111	1,111	0.11	0.01	—	1,117
Junior High School	—	—	—	—	—	—	—	—	—	—	—	370	370	0.04	< 0.005	—	372
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	292	292	0.03	< 0.005	—	294
Total	—	—	—	—	—	—	—	—	—	—	—	16,504	16,504	1.60	0.19	—	16,602

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.38	23.6	10.0	0.15	1.91	—	1.91	1.91	—	1.91	—	29,945	29,945	2.65	0.06	—	30,028
Retirement Community	0.11	1.89	0.81	0.01	0.15	—	0.15	0.15	—	0.15	—	2,401	2,401	0.21	< 0.005	—	2,408
Apartments Low Rise	0.55	9.41	4.00	0.06	0.76	—	0.76	0.76	—	0.76	—	11,939	11,939	1.06	0.02	—	11,972
Apartments Mid Rise	0.58	9.90	4.21	0.06	0.80	—	0.80	0.80	—	0.80	—	12,562	12,562	1.11	0.02	—	12,597
Strip Mall	0.40	7.18	6.03	0.04	0.55	—	0.55	0.55	—	0.55	—	8,570	8,570	0.76	0.02	—	8,593
General Office Building	0.31	5.55	4.66	0.03	0.42	—	0.42	0.42	—	0.42	—	6,625	6,625	0.59	0.01	—	6,643
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Elementa School	1.00	18.2	15.3	0.11	1.38	—	1.38	1.38	—	1.38	—	21,715	21,715	1.92	0.04	—	21,775
Junior High School	0.33	6.07	5.10	0.04	0.46	—	0.46	0.46	—	0.46	—	7,238	7,238	0.64	0.01	—	7,258
Place of Worship	0.11	2.04	1.71	0.01	0.15	—	0.15	0.15	—	0.15	—	2,431	2,431	0.22	< 0.005	—	2,438
Total	4.77	83.8	51.8	0.52	6.59	—	6.59	6.59	—	6.59	—	103,427	103,427	9.15	0.19	—	103,714
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.38	23.6	10.0	0.15	1.91	—	1.91	1.91	—	1.91	—	29,945	29,945	2.65	0.06	—	30,028
Retirement Community	0.11	1.89	0.81	0.01	0.15	—	0.15	0.15	—	0.15	—	2,401	2,401	0.21	< 0.005	—	2,408
Apartments Low Rise	0.55	9.41	4.00	0.06	0.76	—	0.76	0.76	—	0.76	—	11,939	11,939	1.06	0.02	—	11,972
Apartments Mid Rise	0.58	9.90	4.21	0.06	0.80	—	0.80	0.80	—	0.80	—	12,562	12,562	1.11	0.02	—	12,597
Strip Mall	0.40	7.18	6.03	0.04	0.55	—	0.55	0.55	—	0.55	—	8,570	8,570	0.76	0.02	—	8,593
General Office Building	0.31	5.55	4.66	0.03	0.42	—	0.42	0.42	—	0.42	—	6,625	6,625	0.59	0.01	—	6,643
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Elementary School	1.00	18.2	15.3	0.11	1.38	—	1.38	1.38	—	1.38	—	21,715	21,715	1.92	0.04	—	21,775
Junior High School	0.33	6.07	5.10	0.04	0.46	—	0.46	0.46	—	0.46	—	7,238	7,238	0.64	0.01	—	7,258

Place of Worship	0.11	2.04	1.71	0.01	0.15	—	0.15	0.15	—	0.15	—	2,431	2,431	0.22	< 0.005	—	2,438
Total	4.77	83.8	51.8	0.52	6.59	—	6.59	6.59	—	6.59	—	103,427	103,427	9.15	0.19	—	103,714
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.25	4.31	1.83	0.03	0.35	—	0.35	0.35	—	0.35	—	4,958	4,958	0.44	0.01	—	4,972
Retirement Community	0.02	0.35	0.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	398	398	0.04	< 0.005	—	399
Apartments Low Rise	0.10	1.72	0.73	0.01	0.14	—	0.14	0.14	—	0.14	—	1,977	1,977	0.17	< 0.005	—	1,982
Apartments Mid Rise	0.11	1.81	0.77	0.01	0.15	—	0.15	0.15	—	0.15	—	2,080	2,080	0.18	< 0.005	—	2,086
Strip Mall	0.07	1.31	1.10	0.01	0.10	—	0.10	0.10	—	0.10	—	1,419	1,419	0.13	< 0.005	—	1,423
General Office Building	0.06	1.01	0.85	0.01	0.08	—	0.08	0.08	—	0.08	—	1,097	1,097	0.10	< 0.005	—	1,100
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Elementary School	0.18	3.32	2.79	0.02	0.25	—	0.25	0.25	—	0.25	—	3,595	3,595	0.32	0.01	—	3,605
Junior High School	0.06	1.11	0.93	0.01	0.08	—	0.08	0.08	—	0.08	—	1,198	1,198	0.11	< 0.005	—	1,202
Place of Worship	0.02	0.37	0.31	< 0.005	0.03	—	0.03	0.03	—	0.03	—	402	402	0.04	< 0.005	—	404
Total	0.87	15.3	9.46	0.09	1.20	—	1.20	1.20	—	1.20	—	17,123	17,123	1.52	0.03	—	17,171

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	2,309	70.3	3,703	7.34	509	—	509	502	—	502	56,932	33,816	90,748	171	2.78	—	95,849
Consumer Products	390	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	35.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	88.0	7.06	776	0.04	0.71	—	0.71	0.54	—	0.54	—	2,454	2,454	0.10	0.02	—	2,463
Total	2,822	77.3	4,479	7.37	510	—	510	502	—	502	56,932	36,270	93,202	171	2.80	—	98,312
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	2,309	70.3	3,703	7.34	509	—	509	502	—	502	56,932	33,816	90,748	171	2.78	—	95,849
Consumer Products	390	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	35.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	2,734	70.3	3,703	7.34	509	—	509	502	—	502	56,932	33,816	90,748	171	2.78	—	95,849
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	94.7	2.88	152	0.30	20.9	—	20.9	20.6	—	20.6	2,118	1,258	3,375	6.36	0.10	—	3,565

Consumer Products	71.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	6.50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	7.92	0.64	69.9	< 0.005	0.06	—	0.06	0.05	—	0.05	—	200	200	0.01	< 0.005	—	201
Total	180	3.52	222	0.30	20.9	—	20.9	20.6	—	20.6	2,118	1,458	3,576	6.37	0.10	—	3,766

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	202	1,105	1,307	20.8	0.51	—	1,979
Retirement Community	—	—	—	—	—	—	—	—	—	—	31.0	47.4	78.4	3.19	0.08	—	181
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	154	236	390	15.9	0.38	—	899
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	179	273	452	18.4	0.44	—	1,042
Strip Mall	—	—	—	—	—	—	—	—	—	—	440	671	1,111	45.2	1.08	—	2,563

General Office Building	—	—	—	—	—	—	—	—	—	—	244	372	616	25.0	0.60	—	1,420
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Elementary School	—	—	—	—	—	—	—	—	—	—	87.1	133	220	8.95	0.21	—	508
Junior High School	—	—	—	—	—	—	—	—	—	—	20.7	31.5	52.2	2.12	0.05	—	120
Place of Worship	—	—	—	—	—	—	—	—	—	—	11.0	16.7	27.7	1.13	0.03	—	63.9
Total	—	—	—	—	—	—	—	—	—	—	1,369	2,886	4,255	141	3.37	—	8,777
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	202	1,105	1,307	20.8	0.51	—	1,979
Retirement Community	—	—	—	—	—	—	—	—	—	—	31.0	47.4	78.4	3.19	0.08	—	181
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	154	236	390	15.9	0.38	—	899
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	179	273	452	18.4	0.44	—	1,042
Strip Mall	—	—	—	—	—	—	—	—	—	—	440	671	1,111	45.2	1.08	—	2,563
General Office Building	—	—	—	—	—	—	—	—	—	—	244	372	616	25.0	0.60	—	1,420
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005

Elementary	—	—	—	—	—	—	—	—	—	—	87.1	133	220	8.95	0.21	—	508
Junior High School	—	—	—	—	—	—	—	—	—	—	20.7	31.5	52.2	2.12	0.05	—	120
Place of Worship	—	—	—	—	—	—	—	—	—	—	11.0	16.7	27.7	1.13	0.03	—	63.9
Total	—	—	—	—	—	—	—	—	—	—	1,369	2,886	4,255	141	3.37	—	8,777
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	33.5	183	216	3.45	0.08	—	328
Retirement Community	—	—	—	—	—	—	—	—	—	—	5.14	7.84	13.0	0.53	0.01	—	29.9
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	25.6	39.0	64.6	2.62	0.06	—	149
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	29.6	45.2	74.8	3.04	0.07	—	173
Strip Mall	—	—	—	—	—	—	—	—	—	—	72.8	111	184	7.48	0.18	—	424
General Office Building	—	—	—	—	—	—	—	—	—	—	40.4	61.6	102	4.15	0.10	—	235
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Elementary School	—	—	—	—	—	—	—	—	—	—	14.4	22.0	36.4	1.48	0.04	—	84.0
Junior High School	—	—	—	—	—	—	—	—	—	—	3.42	5.22	8.64	0.35	0.01	—	19.9
Place of Worship	—	—	—	—	—	—	—	—	—	—	1.82	2.77	4.59	0.19	< 0.005	—	10.6

Total	—	—	—	—	—	—	—	—	—	—	227	478	704	23.3	0.56	—	1,453

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	1,005	0.00	1,005	100	0.00	—	3,516
Retirement Community	—	—	—	—	—	—	—	—	—	—	633	0.00	633	63.3	0.00	—	2,216
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	977	0.00	977	97.6	0.00	—	3,417
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	1,133	0.00	1,133	113	0.00	—	3,963
Strip Mall	—	—	—	—	—	—	—	—	—	—	1,754	0.00	1,754	175	0.00	—	6,138
General Office Building	—	—	—	—	—	—	—	—	—	—	359	0.00	359	35.9	0.00	—	1,256
City Park	—	—	—	—	—	—	—	—	—	—	4.85	0.00	4.85	0.48	0.00	—	17.0
Elementary School	—	—	—	—	—	—	—	—	—	—	1,099	0.00	1,099	110	0.00	—	3,844
Junior High School	—	—	—	—	—	—	—	—	—	—	366	0.00	366	36.6	0.00	—	1,281

Place of Worship	—	—	—	—	—	—	—	—	—	—	562	0.00	562	56.2	0.00	—	1,966
Total	—	—	—	—	—	—	—	—	—	—	7,893	0.00	7,893	789	0.00	—	27,613
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	1,005	0.00	1,005	100	0.00	—	3,516
Retirement Community	—	—	—	—	—	—	—	—	—	—	633	0.00	633	63.3	0.00	—	2,216
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	977	0.00	977	97.6	0.00	—	3,417
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	1,133	0.00	1,133	113	0.00	—	3,963
Strip Mall	—	—	—	—	—	—	—	—	—	—	1,754	0.00	1,754	175	0.00	—	6,138
General Office Building	—	—	—	—	—	—	—	—	—	—	359	0.00	359	35.9	0.00	—	1,256
City Park	—	—	—	—	—	—	—	—	—	—	4.85	0.00	4.85	0.48	0.00	—	17.0
Elementary School	—	—	—	—	—	—	—	—	—	—	1,099	0.00	1,099	110	0.00	—	3,844
Junior High School	—	—	—	—	—	—	—	—	—	—	366	0.00	366	36.6	0.00	—	1,281
Place of Worship	—	—	—	—	—	—	—	—	—	—	562	0.00	562	56.2	0.00	—	1,966
Total	—	—	—	—	—	—	—	—	—	—	7,893	0.00	7,893	789	0.00	—	27,613
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	166	0.00	166	16.6	0.00	—	582
Retirement Community	—	—	—	—	—	—	—	—	—	—	105	0.00	105	10.5	0.00	—	367
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	162	0.00	162	16.2	0.00	—	566
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	188	0.00	188	18.7	0.00	—	656
Strip Mall	—	—	—	—	—	—	—	—	—	—	290	0.00	290	29.0	0.00	—	1,016
General Office Building	—	—	—	—	—	—	—	—	—	—	59.4	0.00	59.4	5.94	0.00	—	208
City Park	—	—	—	—	—	—	—	—	—	—	0.80	0.00	0.80	0.08	0.00	—	2.81
Elementary School	—	—	—	—	—	—	—	—	—	—	182	0.00	182	18.2	0.00	—	636
Junior High School	—	—	—	—	—	—	—	—	—	—	60.6	0.00	60.6	6.06	0.00	—	212
Place of Worship	—	—	—	—	—	—	—	—	—	—	93.0	0.00	93.0	9.30	0.00	—	326
Total	—	—	—	—	—	—	—	—	—	—	1,307	0.00	1,307	131	0.00	—	4,572

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	44.9	44.9
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.64	6.64
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.6	18.6
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.5	19.5
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.3	19.3
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.74	1.74
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.06	6.06
Junior High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.02	2.02
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.71	0.71
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	119	119
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	44.9	44.9

Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.64	6.64
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.6	18.6
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.5	19.5
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.3	19.3
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.74	1.74
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.06	6.06
Junior High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.02	2.02
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.71	0.71
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	119	119
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.43	7.43
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.10	1.10
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.08	3.08

Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.24	3.24
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.20	3.20
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.29	0.29
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.00	1.00
Junior High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.33	0.33
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.8	19.8

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	30,321	30,642	27,463	10,934,955	594,314	600,610	538,282	214,331,157
Retirement Community	1,627	1,627	1,627	593,818	31,888	31,888	31,888	11,639,170
Apartments Low Rise	15,931	15,931	15,931	5,814,998	312,266	312,266	312,266	113,977,158
Apartments Mid Rise	18,473	18,473	18,473	6,742,645	362,081	362,081	362,081	132,159,560
Strip Mall	137,392	130,324	63,333	45,917,886	3,687,453	3,497,755	1,699,789	1,232,386,387

General Office Building	6,974	1,582	501	1,926,822	187,170	42,469	13,452	51,713,830
City Park	81.6	205	229	43,906	2,190	5,502	6,148	1,178,386
Elementary School	30,610	0.00	0.00	7,980,590	821,552	0.00	0.00	214,190,413
Junior High School	10,543	0.00	0.00	2,748,779	282,970	0.00	0.00	73,774,258
Place of Worship	1,272	1,096	5,055	652,218	34,126	29,412	135,668	17,504,826

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	482
Gas Fireplaces	1606
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1124
Conventional Wood Stoves	161
Catalytic Wood Stoves	161
Non-Catalytic Wood Stoves	161
Pellet Wood Stoves	0
Retirement Community	—
Wood Fireplaces	0
Gas Fireplaces	148
Propane Fireplaces	0
Electric Fireplaces	0

No Fireplaces	345
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Apartments Low Rise	—
Wood Fireplaces	0
Gas Fireplaces	735
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1716
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	853
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1989
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
24527529	8,175,843	9,134,745	3,044,915	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	27,384,578	341	0.0330	0.0040	93,437,162
Retirement Community	2,191,320	341	0.0330	0.0040	7,493,172
Apartments Low Rise	10,894,373	341	0.0330	0.0040	37,253,072
Apartments Mid Rise	12,839,619	341	0.0330	0.0040	39,198,263
Strip Mall	27,007,431	341	0.0330	0.0040	26,739,362
General Office Building	14,985,405	341	0.0330	0.0040	20,670,219
City Park	0.00	341	0.0330	0.0040	0.00
Elementary School	7,187,183	341	0.0330	0.0040	67,757,353
Junior High School	2,395,728	341	0.0330	0.0040	22,585,784
Place of Worship	1,889,866	341	0.0330	0.0040	7,584,852

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	105,566,957	529,034,343
Retirement Community	16,203,148	14.1
Apartments Low Rise	80,555,608	14.1
Apartments Mid Rise	93,406,380	14.1
Strip Mall	229,624,817	11.5
General Office Building	127,257,364	11.5
City Park	0.00	25.6
Elementary School	45,471,806	25.6
Junior High School	10,779,011	25.6
Place of Worship	5,724,306	11.5

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	1,864	—
Retirement Community	1,175	—
Apartments Low Rise	1,812	—
Apartments Mid Rise	2,102	—
Strip Mall	3,255	—
General Office Building	666	—
City Park	9.00	—
Elementary School	2,039	—
Junior High School	680	—
Place of Worship	1,043	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Retirement Community	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Retirement Community	Household refrigerators and/or freezers	R-134a	1,430	0.22	0.60	0.00	1.00
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00

General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Elementary School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Elementary School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Junior High School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Junior High School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Junior High School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Junior High School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Place of Worship	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Place of Worship	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Place of Worship	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Place of Worship	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

8. User Changes to Default Data

Screen	Justification
Land Use	Adding acreage from SP and LU types. Excluded fire station and also kept non-land uses generic. Added 266 HD units as proposed project.
Operations: Vehicle Data	Using 3.3 trips/du age restricted uses and 6.5 trips/du for MF uses per transportation analysis.

Attachment B

(*Combined CEQA Document*)— Transportation Impact Analysis for Rezoning of Various Parcels in the Campus Oaks Master Plan and Sierra Vista Specific Plan (Fehr & Peers, August 7, 2023)

FEHR PEERS

Technical Memorandum

Date:	August 7, 2023
To:	Scott Canel, Pine Island Apartments LLC, FD34 Development LLC
From:	John Gard, PE & Adrita Islam, Fehr & Peers
Subject:	**Transportation Impact Analysis for Rezoning of Various Parcels in the Campus Oaks Master Plan and Sierra Vista Specific Plan**

RS23-4280

This technical memorandum documents the trip generation and vehicle miles traveled (VMT) estimates for the existing and proposed land uses for the following parcels in the Campus Oaks Master Plan and Sierra Vista Specific Plan within the City of Roseville:

- Campus Oaks Master Plan (COMP) Parcel CO-52
- Sierra Vista Specific Plan (SVSP) Parcels WB-30, WB-32, WB-52, and FD-34

This analysis has been prepared in accordance with current California Environmental Quality Act (CEQA) guidelines and specific methods related to VMT analysis utilized by the City of Roseville.

Project Description

According to the *Campus Oaks and Sierra Vista Amendments Project Scope of Work for Preparation of CEQA Documentation* (Remy Moose Manley, June 13, 2023), the proposed project would result in rezonings, unit transfers, and/or density bonuses to 5 distinct parcels in these two plan areas. These changes are described below:

COMP Parcel CO-52: The proposed project would rezone this parcel from MP/SA (Industrial/Business Park/Special Area) to R3 (Multi-Family Housing). It would also redesignate the land use from T/BP LI (Tech Park/Business Professional – Light Industrial) to HDR (High-Density Residential in both the General Plan and Master Plan). Within the City's travel demand model, it would replace 150,000 square feet of high-tech industrial space with 285 multi-family dwelling units. This 17.65-acre parcel is situated on the east side of Roseville Parkway south of Blue Oaks Boulevard.

SVSP Parcel WB-30: The proposed project would increase the number of multi-family units on this parcel from 237 to 355. All units would be affordable and intended for senior citizens. This 8.06-acre parcel is situated in the northeast quadrant of the Pleasant Grove Boulevard/Santucci Boulevard intersection.

SVSP Parcel WB-32: The proposed project would increase the number of multi-family dwelling units on this parcel from 128 to 192. This 5.11-acre parcel is situated on the west side of Santucci Boulevard opposite Solaire Drive.

SVSP Parcel WB-52: The proposed project would rezone and redesignate (in the General Plan and Specific Plan) this parcel from Park uses (PR) to High-Density Residential (HDR). Parcel WB-52 would be developed for private recreational facilities to serve current and future residents of Parcels WB-30, WB-31, and W-16 and not with housing. This 1.5-acre parcel is situated between SVSP Parcels WB-30 and WB-31.

SVSP Parcel FD-34: The proposed project would increase the number of multi-family dwelling units on this parcel from 172 to 256. This 7.04-acre parcel is situated in the southeast quadrant of the Westbrook Boulevard/Federico Drive intersection.

The above explanation intentionally does not describe whether unit transfers, rezonings, or density bonuses are being applied for specific parcels. See the Combined CEQA Document project description for those details. Instead, the net change in land use to be made within the City's travel demand model for "No Project" and "Plus Project" is described.

Table 1 summarizes the land use changes associated with the proposed project. The proposed project would replace 150,000 square feet of high tech industrial space in the Campus Oaks Master Plan with 285 multi-family dwelling units. It would result in a net increase of 266 multi-family dwelling units within the Sierra Vista Specific Plan.

The City of Roseville travel demand model includes single-family, multi-family, and single-family age-restricted land use categories. But like most travel demand models, it does not differentiate between market-rate and affordable units, and it also does not have a land use category for affordable, attached, senior housing. Hence, Table 1 does not differentiate between affordable versus market and traditional versus age-restricted units.

Table 1: Existing Zoning and Proposed Project Land Use

Parcel	Existing Zoning			Proposed Amendment		
	Land Use Designation	Residential (DU)	Non-Residential (KSF)	Land Use Designation	Residential (DU)	Non-Residential (KSF)
CO-52	T/BP LI (MP/SA)	0	150	HDR (R3)	285	0
Campus Oaks MP Total	-	**0**	**150**	-	**285**	**0**
Campus Oaks MP Change	-	-	-	-	**+285**	**-150**
WB-30	HDR (R3)	237	-	HDR (R3)	355	-
WB-32	HDR (R3)	128	-	HDR (R3)	192	-
WB-52	PR	-	-	HDR (R3)	0	-
FD-34	HDR (R3)	172	-	HDR (R3)	256	-
Sierra Vista SP Total	-	**537**	**0**	-	**803**	**0**
Sierra Vista SP Change	-	-	-	-	**+266**	**0**
Both Plan Total	-	**537**	**150**		**1,088**	**0**
Both Plans Change					**+551**	**-150**

Notes:
Land Use Designation
T/BP LI (MP/SA) – Tech Park/Business Professional – Light Industrial (Industrial/Business Park/Special Area)
HDR (R3) – High-Density Residential (Multi-Family Housing)
PR – Park/ Open Space
Source:
Campus Oaks and Sierra Vista Amendments Project– Scope of Work for Preparation of CEQA Documentation (Remy Moose Manley, June 13, 2023)

Project Travel Characteristics – Trip Generation

Table 2 shows the trip generation comparison for daily, AM peak hour, and PM peak hour conditions between the "No Project" and "Plus Project" scenarios. The comparison was performed using trip rates from the City of Roseville travel demand model. This model was calibrated to 2019/2020 conditions and found to meet all applicable Caltrans standards for model validation. The use of City of Roseville model trip rates is appropriate (versus other data sources) because the subsequent VMT calculations using the City's travel demand model rely on those same trip rates.

Table 2: Proposed Project Trip Generation

Parcel	Existing Zoning Trip Generation				Proposed Amendment Trip Generation			
	Model Land Use	Daily	AM Peak Hour	PM Peak Hour	Model Land Use	Daily	AM Peak Hour	PM Peak Hour
CO-52	HTI	1,575	108	183	MFDU	1,853	126	165
Campus Oaks MP Total	-	**1,575**	**108**	**183**	-	**1,853**	**126**	**165**
Campus Oaks MP Change	-	-	-	-	-	**+278**	**+18**	**-18**
WB-30	MFDU	1,541	104	137	ARDU [1]	1,172	53	85
WB-32	MFDU	832	56	74	MFDU	1,248	84	111
WB-52	MFDU	0	0	0	MFDU	0	0	0
FD-34	MFDU	1,118	76	100	MFDU	1,664	113	148
Sierra Vista SP Total	-	**3,491**	**238**	**311**	-	**4,084**	**250**	**345**
Sierra Vista SP Change	-	-	-	-	-	**+593**	**+12**	**+34**
Both Plans Total	-	**5,066**	**346**	**494**	**-**	**5,937**	**376**	**510**
Both Plans Change	-					**+871**	**+30**	**+16**

Notes:
[1] These trip rates represent detached, market-rate, single-family, active-adult (55+) units. They were nonetheless used here to represent the affordable, senior housing proposed on this parcel because the resulting trip generation estimates are more reasonable than applying standard multi-family which is nearly twice as high. The ARDU trip estimates shown are still an overestimate because they do not consider that these units are attached and affordable.
Model Land Use and Trip Generation Rates:
HTI – High-Tech Industrial (Daily 10.5/KSF, AM Peak Hour 0.72/KSF, PM Peak Hour 1.22/KSF)
MFDU – Multi-Family Residential (Daily 6.5/DU, AM Peak Hour 0.44/DU, PM Peak Hour 0.58/DU)
ARDU – Age-Restricted Residential (Daily 3.3/DU, AM Peak Hour 0.15/DU, PM Peak Hour 0.24/DU).
Source:
City of Roseville Travel Demand Model Development Report (Fehr & Peers, 2021)
Fehr & Peers, 2023

Table 2 shows that for Campus Oaks MP, the proposed project would cause a net increase of 278 daily trips generated by Parcel CO-52 and a net increase of 593 daily trips in the Sierra Vista SP. Overall, a net increase of 871 daily trips is expected.[1]

[1] These calculations focus solely on the net change in trips generated by each parcel. Results could differ if the trip generation comparison instead focused on the entire specific or master plan. However, that metric is also addressed to some degree by the VMT calculations the follow.

Vehicle Miles Traveled (VMT)

Regulatory Background

Senate Bill 743

Senate Bill (SB) 743, passed in 2013, required the California Governor's Office of Planning and Research (OPR) to develop new CEQA guidelines that address traffic metrics under CEQA. As stated in the legislation, upon adoption of the new guidelines, "automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any." In December 2018, OPR published *Technical Advisory on Evaluating Transportation Impacts in CEQA ("Technical Advisory")*, which provided guidance for implementing SB 743. On December 28, 2018, the Resources Agency adopted CEQA Guidelines Section 15064.3. Under this guideline, VMT is the primary metric used to identify transportation impacts. On July 1, 2020, the provisions of Section 15064.3 became effective statewide.

VMT is now utilized in CEQA to analyze a proposed project's impacts to the roadway system (in lieu of intersection Level of Service). Since the prior CEQA analyses performed for the study areas did not consider VMT in their traffic impact assessments, it is not necessarily required here. Nevertheless, they were performed here to provide a complete understanding of the project's transportation effects on VMT.

City of Roseville 2035 General Plan

- **Policy CIRC4.3:** Specific Plan Amendments and land use development projects not included in a Specific Plan shall be evaluated for consistency with the City's VMT Impact Standards.
- **Policy CIRC4.4:** If the evaluation required by CIRC4.3 finds a Specific Plan Amendment or land use development project not included in an adopted Specific Plan is inconsistent with thresholds established within the City's VMT Impact Standards, on-site land use, transportation, and urban design-related VMT-reducing features should be prioritized to demonstrate consistency. If feasible on-site features cannot achieve the VMT threshold, Specific Plan Amendments and land use development projects outside Specific Plan Areas may demonstrate equivalent consistency through off-site actions or fair-share fee contributions, or if consistency cannot be achieved, shall implement all feasible measures.

City of Roseville Design Standards (2023)

Section 4 of the *City of Roseville Design Standards (2023)* contains helpful guidance on how to calculate VMT, how to set VMT significance of impact thresholds. Specific language is as follows:

- VMT estimates are to be produced using the City of Roseville travel demand model.
- A land use amendment or rezone which only slightly increases trip generation may not require extensive modeling in order to demonstrate the VMT increase is minor or absent.
- If a proposed project can be shown to result in a net overall decrease in total City VMT when compared to baseline VMT, the project would lead to a less-than-significant VMT impact.

While Table 2 shows a modest 871 daily trip increase associated with the proposed project[2], a VMT analysis was nonetheless performed because there would be a net increase in units within the SVSP, which is in the most westerly part of the City (i.e., further from downtown, SR 65, etc. than most other planning areas). Because VMT is the product of trip rate and trip length, it made sense to further explore this topic given this geographic consideration.

VMT Analysis

By definition, one vehicle mile traveled (VMT) occurs when one vehicle is driven on a roadway for one mile. Regardless of how many people are traveling in the vehicle, each vehicle traveling on a roadway generates one VMT for each mile it travels.

For the purposes of this study, the total VMT generated by the SVSP and North Industrial Area (for which the Campus Oaks Master Plan belongs) was calculated in a manner consistent with City suggested practices. Per the *City of Roseville Design Standards (2023)*, VMT is calculated for a typical weekday and represents the full length of a given trip (i.e., are not truncated at jurisdiction boundaries). The VMT values are for trips beginning or ending in the City. Trips passing through the City without stopping are not included in these VMT estimates.

The VMT calculations were performed for each specific plan or planning area for the following scenarios:

- Existing Zoning (i.e., "No Project")
- Proposed Land Use Amendments ("Proposed Project")

The results are shown in **Table 3**. Refer to **Appendix A** for calculations.

Table 3: Total Weekday VMT Generated by the Plan Areas

Specific Plan	Total Weekday VMT for Existing Zoning/Use	Total Weekday VMT for Proposed Amendment Zoning/Use	Change in VMT
Campus Oaks (North Industrial)	1,278,346	1,273,457	**-4,889 (-0.4%)**
Sierra Vista	863,187	865,700	**+2,513(+0.3%)**
		Combined Change	**-2,376**

Notes:
Total VMT is calculated using City of Roseville Cumulative (2035) Travel Demand Model
Source:
Fehr & Peers, 2023.

[2] 'Modest' is used in this context because the corresponding increase during the PM peak hour (16 trips per Table 2) is considerably less than the minimum 50 peak hour trip threshold the City of Roseville utilizes to determine whether a transportation impact study is needed.

Table 3 indicates that the proposed project would result in a net combined decrease of 2,376 VMT in the Campus Oaks North Industrial Planning Area and Sierra Vista Specific Plan area. Accordingly, VMT impacts associated with the proposed project would be considered less-than-significant and no mitigation is recommended.[3]

We decided to further explore why a net decrease in VMT is projected despite the net increase in daily trips. SVSP Parcel WB-30 is one of the drivers of this finding. The 237 multi-family units permitted under the existing zoning would have an average trip rate of 6.5 trips per day averaging 6.7 miles in length. This results in 10,321 VMT. In contrast, the proposed age-restricted uses (355 units) would have an average trip rate of 3.3 trips per day averaging 5.6 miles in length. This results in 6,560 VMT or a 3,700 VMT savings (despite adding 118 units). Additionally, for Campus Oaks Parcel CO-52, the average trip length with multi-family zoning is 5.0 miles, whereas the average trip length of the existing industrial/business land use type is 7.6 miles, a 52% increase. This more than offsets the 18% increase in daily trips generated with the rezone, resulting in a net decrease of 2,700 VMT generated by that parcel.

General Plan LOS Policy Consistency Evaluation

Although LOS is no longer used to analyze a proposed project's impacts to the roadway system under CEQA, it was assessed in a limited capacity for the City's use to consider the proposed project's consistency with the City of Roseville General Plan LOS policy. This policy requires that at least 70% of signalized intersections operate at LOS C or better during peak hours. Under cumulative PM peak hour conditions, about 72% are projected to operate at LOS C.

Parcels WB-30 and WB-32 are situated less than one mile to the west of the signalized Pleasant Grove Boulevard/Westbrook Boulevard intersection, which operates near the cusp of LOS C/D under cumulative PM peak hour conditions. Thus, the City would be interested in knowing whether the proposed land use amendments would cause this intersection to worsen from LOS C to D, which would be one degraded intersection closer to not meeting the applicable General Plan LOS policy standard.

The City of Roseville travel demand model was used to develop cumulative PM peak hour forecasts at this intersection assuming the proposed land use amendments. Traffic operations were then analyzed at this intersection using the same analysis methodology (i.e., Synchro) as was used in the General Plan analysis. **Table 4** presents the results. See **Appendix B** for technical calculations.

[3] As a check, we also calculated the net change in citywide VMT between the No Project and Proposed Project scenarios. A net decrease of 8,565 VMT is expected. This value is only slightly different than the decrease shown in Table 3, with the change attributable to 'noise' in the model (i.e., changes in travel behaviors from adjacent plan areas due to the rezonings).

Table 4: PM Peak Hour Intersection Operations – Cumulative Conditions

Intersection	Traffic Control	Existing Zoning		Proposed Amendment	
		Delay	LOS	Delay	LOS
Westbrook Boulevard / Pleasant Grove Boulevard	Signal	34.2	C	34.4	C

Note:
Average intersection delay is reported in seconds per vehicle. The cusp between LOS C and D is 35 seconds.
Cumulative results for Existing Zoning are from cumulative plus project analysis for *Roseville Soccer Complex TIS* (Fehr & Peers, 2022).
Source:
Fehr & Peers, 2023.

According to Table 4, the Westbrook Boulevard/Pleasant Grove Boulevard intersection would continue to operate at a cumulative LOS C during the PM peak hour with the proposed land use amendments. Thus, the proposed land use amendments would not contribute to further declines in the proportion of signalized intersections that would cumulatively operate at LOS C or better during the PM peak hour[4].

[4] As Table 2 shows, the proposed project would result in a net increase of 16 PM peak hour trips. Thus, it is highly unlikely that a signalized intersection elsewhere in the city would degrade from LOS C to D due to the project.

Appendix A – VMT Calculations

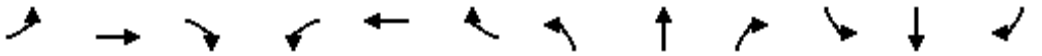
Total VMT by Plan Area - Existing Zoning

AREA	VOL_II	VOL_IX	VOL_XI	VOL_TOT	VMT_II	VMT_IX	VMT_XI	VMT_TOT	Subarea
2	430,978.40	448,357.34	448,357.34	1,327,693.08	**1,229,129.40**	**4,428,697.75**	**4,437,028.79**	**10,094,855.90**	**City of Roseville**
3	35,059.59	155,043.75	155,043.75	345,147.09	63,136.46	1,175,866.46	1,182,457.46	2,421,460.38	Infill
4	1,174.39	19,031.17	19,031.17	39,236.73	432.55	130,288.67	131,497.06	262,218.28	Downtown
5	98.18	4,874.90	4,874.90	9,847.98	9.82	33,468.79	33,407.69	66,886.30	Riverside Gateway
6	11,980.72	85,815.36	85,815.36	183,611.44	9,725.01	685,825.34	687,028.06	1,382,578.41	Northeast Roseville
7	6,726.87	47,653.27	47,653.27	102,033.41	8,276.33	298,934.11	298,955.55	606,165.99	Northwest Roseville
8	326.01	8,017.73	8,017.73	16,361.47	332.78	49,552.99	49,498.86	99,384.63	Del Webb
9	10,808.45	77,960.03	77,960.03	166,728.51	**12,312.07**	**636,369.03**	**629,664.65**	**1,278,345.75**	**North Industrial**
10	20,139.07	104,743.78	104,743.78	229,626.63	21,550.00	813,289.80	819,015.80	1,653,855.60	North Central Roseville
11	2,397.64	30,728.34	30,728.34	63,854.32	1,574.39	206,341.80	206,598.14	414,514.33	Highland Reserve North
12	914.77	17,290.44	17,290.44	35,495.65	898.08	110,637.94	111,165.35	222,701.37	Stoneridge
13	3,320.16	32,667.79	32,667.79	68,655.74	3,078.42	234,072.28	235,546.07	472,696.77	Southeast Roseville
14	2,029.77	29,525.94	29,525.94	61,081.65	2,534.42	173,743.62	173,160.19	349,438.23	North Roseville
15	9,454.21	51,344.24	51,344.24	112,142.69	12,916.92	335,938.33	335,027.50	683,882.75	West Roseville
16	18,158.10	59,101.70	59,101.70	136,361.50	**20,959.66**	**421,142.29**	**421,084.76**	**863,186.71**	**Sierra Vista**
17	3,399.22	17,357.28	17,357.28	38,113.78	1,825.57	121,151.48	121,135.80	244,112.85	Amoruso Ranch
18	761.19	11,431.68	11,431.68	23,624.55	429.03	71,212.71	70,923.74	142,565.48	Creekview

Total VMT by Plan Area - Proposed Project Amendment

AREA	VOL_II	VOL_IX	VOL_XI	VOL_TOT	VMT_II	VMT_IX	VMT_XI	VMT_TOT	Subarea
2	431,663.39	448,352.33	448,352.33	1,328,368.05	**1,231,524.01**	**4,419,159.25**	**4,432,368.45**	**10,083,051.70**	**City of Roseville**
3	35,070.58	155,064.26	155,064.26	345,199.10	63,267.88	1,174,309.33	1,182,572.68	2,420,149.89	Infill
4	1,174.70	19,034.55	19,034.55	39,243.80	432.63	130,215.33	131,497.25	262,145.21	Downtown
5	98.21	4,875.97	4,875.97	9,850.15	9.82	33,461.64	33,429.67	66,901.13	Riverside Gateway
6	11,983.58	85,837.34	85,837.34	183,658.26	9,727.71	683,858.37	686,737.38	1,380,323.46	Northeast Roseville
7	6,721.66	47,662.96	47,662.96	102,047.58	8,268.68	299,215.80	299,199.92	606,684.40	Northwest Roseville
8	325.74	8,018.65	8,018.65	16,363.04	332.49	49,589.74	49,499.93	99,422.16	Del Webb
9	11,012.68	78,024.80	78,024.80	167,062.28	**12,565.68**	**633,016.89**	**627,874.45**	**1,273,457.02**	**North Industrial**
10	20,142.77	104,769.73	104,769.73	229,682.23	21,554.66	810,933.60	816,821.36	1,649,309.62	North Central Roseville
11	2,397.31	30,734.78	30,734.78	63,866.87	1,574.12	205,688.18	206,093.25	413,355.55	Highland Reserve North
12	914.88	17,291.99	17,291.99	35,498.86	898.16	110,607.76	111,159.62	222,665.54	Stoneridge
13	3,321.48	32,673.14	32,673.14	68,667.76	3,081.31	233,609.03	235,581.23	472,271.57	Southeast Roseville
14	2,024.10	29,534.24	29,534.24	61,092.58	2,527.06	173,870.59	173,329.47	349,727.12	North Roseville
15	9,446.24	51,354.69	51,354.69	112,155.62	12,905.28	336,419.11	335,477.54	684,801.93	West Roseville
16	18,314.12	59,239.35	59,239.35	136,792.82	**21,167.34**	**422,688.14**	**421,844.78**	**865,700.26**	**Sierra Vista**
17	3,399.12	17,358.64	17,358.64	38,116.40	1,825.49	121,191.75	121,207.75	244,224.99	Amoruso Ranch
18	760.70	11,432.76	11,432.76	23,626.22	428.73	71,440.96	70,999.14	142,868.83	Creekview

Appendix B – Intersection LOS Calculations



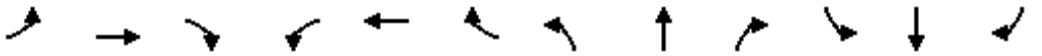
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	360	40	60	520	524	20	1020	80	502	1427	103
Future Volume (veh/h)	85	360	40	60	520	524	20	1020	80	502	1427	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	360	40	60	520	524	20	1020	80	502	1427	103
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	280	734	327	251	704	791	53	1111	345	536	2547	791
Arrive On Green	0.08	0.21	0.21	0.07	0.20	0.20	0.03	0.22	0.22	0.30	0.50	0.50
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	85	360	40	60	520	524	20	1020	80	502	1427	103
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	2.3	9.0	2.1	1.7	13.9	20.0	1.1	19.7	4.2	27.7	19.6	3.5
Cycle Q Clear(g_c), s	2.3	9.0	2.1	1.7	13.9	20.0	1.1	19.7	4.2	27.7	19.6	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	280	734	327	251	704	791	53	1111	345	536	2547	791
V/C Ratio(X)	0.30	0.49	0.12	0.24	0.74	0.66	0.38	0.92	0.23	0.94	0.56	0.13
Avail Cap(c_a), veh/h	685	734	327	685	704	791	353	1113	346	759	2547	791
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	35.3	32.6	44.2	38.0	18.9	48.0	38.6	32.5	34.3	17.6	13.6
Incr Delay (d2), s/veh	0.2	1.3	0.4	0.2	5.2	3.0	1.6	12.5	0.8	12.8	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.0	0.8	0.7	6.5	9.4	0.5	9.4	1.7	13.6	7.6	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.9	36.6	33.0	44.3	43.2	21.9	49.7	51.1	33.4	47.1	18.5	13.9
LnGrp LOS	D	D	C	D	D	C	D	D	C	D	B	B
Approach Vol, veh/h		485			1104			1120			2032	
Approach Delay, s/veh		37.6			33.2			49.8			25.3	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.4	27.7	11.3	26.5	7.0	56.0	12.2	25.7
Change Period (Y+Rc), s	5.0	5.7	4.0	5.7	4.0	5.7	4.0	5.7
Max Green Setting (Gmax), s	43.0	22.0	20.0	20.0	20.0	20.0	20.0	20.0
Max Q Clear Time (g_c+I1), s	29.7	21.7	3.7	11.0	3.1	21.6	4.3	22.0
Green Ext Time (p_c), s	0.7	0.2	0.1	2.8	0.0	0.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	360	40	60	510	525	20	1025	80	505	1425	95
Future Volume (veh/h)	85	360	40	60	510	525	20	1025	80	505	1425	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	360	40	60	510	525	20	1025	80	505	1425	95
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	279	732	326	250	702	793	53	1109	344	539	2554	793
Arrive On Green	0.08	0.21	0.21	0.07	0.20	0.20	0.03	0.22	0.22	0.30	0.50	0.50
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	85	360	40	60	510	525	20	1025	80	505	1425	95
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	2.3	9.1	2.1	1.7	13.6	20.0	1.1	19.9	4.2	27.9	19.6	3.2
Cycle Q Clear(g_c), s	2.3	9.1	2.1	1.7	13.6	20.0	1.1	19.9	4.2	27.9	19.6	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	279	732	326	250	702	793	53	1109	344	539	2554	793
V/C Ratio(X)	0.30	0.49	0.12	0.24	0.73	0.66	0.38	0.92	0.23	0.94	0.56	0.12
Avail Cap(c_a), veh/h	683	732	326	683	702	793	352	1110	345	757	2554	793
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	35.5	32.7	44.3	38.0	18.9	48.2	38.8	32.6	34.3	17.5	13.4
Incr Delay (d2), s/veh	0.2	1.3	0.4	0.2	4.9	3.0	1.6	13.2	0.8	13.1	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.0	0.8	0.7	6.3	9.4	0.5	9.5	1.7	13.7	7.6	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.1	36.8	33.1	44.5	42.9	21.9	49.8	52.0	33.5	47.4	18.4	13.8
LnGrp LOS	D	D	C	D	D	C	D	D	C	D	B	B
Approach Vol, veh/h		485			1095			1125			2025	
Approach Delay, s/veh		37.7			32.9			50.6			25.4	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.6	27.7	11.3	26.5	7.0	56.3	12.2	25.7
Change Period (Y+Rc), s	5.0	5.7	4.0	5.7	4.0	5.7	4.0	5.7
Max Green Setting (Gmax), s	43.0	22.0	20.0	20.0	20.0	20.0	20.0	20.0
Max Q Clear Time (g_c+I1), s	29.9	21.9	3.7	11.1	3.1	21.6	4.3	22.0
Green Ext Time (p_c), s	0.7	0.1	0.1	2.8	0.0	0.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Attachment C

(*Combined CEQA Document*)—General Plan Amendment Water, Sewer and Drainage Demands (MortonPitalo, May 2023)

mortonpitalo

600 Coolidge Drive, Suite 140
Folsom, CA 95630
Telephone: (916) 927-2400
Fax: (916) 357-7888

Memorandum

Date: May 8, 2023

To: City of Roseville, Planning Department

Cc: Scott Canel

From: Greg Bardini, P.E.

RE: HPCO Master Plan – General Plan Amendment Water, Sewer and Drainage Demands

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PROJECT DESCRIPTION

In 1996, after preparing a project-level Environmental Impact Report (EIR), the City of Roseville approved the Hewlett-Packard Master Plan (1996 HPMP) to guide light industrial development on the approximately 500-acre site. A small amount of land was designated for commercial/retail at the intersections of Blue Oaks Blvd./Woodcreek Oaks Blvd. and Blue Oaks Blvd./Foothills Blvd. At that time, Hewlett-Packard's existing facilities occupied approximately 200 acres of the project site. Since 1996, additional light industrial/office buildings have been constructed on the eastern half of the project site subject to the 1996 HPMP. In 2001, the City approved a redesignation and rezoning of the commercial/retail parcels to light industrial use.

The proposed changes to the 1996 HPMP as updated in 2001 take the form of the 2015 Hewlett-Packard/Campus Oaks Master Plan (2015 HPCO), which would accommodate residential and commercial development on the western half of the project site. Uses in the 2015 HPCO Master Plan include residential of varying densities, commercial, office, tech/business park, and parks and open space. Other changes in the 2015 HPCO Master Plan include continuation of HP Way up to Blue Oaks Blvd. and extensions of Painted Desert Dr. and Crimson Ridge Dr. on to the project site.

On August 5, 2015, the Roseville City Council approved the 2015 HPCO Master Plan which would construct 948 dwelling units for an anticipated population of 2,475 new residents. The approved 2015 HPCO also included 60,000 square feet of professional office area on 5.53 acres; 170,000 square feet of commercial use on 19.33 acres; 300,000 square feet of tech/business park development on 32.82 acres; 1,200 square feet of light industrial on 129.24 acres; and 71.01 acres of parks, open space, and public

uses. These totals include the entire project site, including the existing buildings on the eastern half of the site.

Pine Island Apartments, LLC is now proposing a General Plan, Rezoning and revisions to the 2016 HPCO Master Plan for the purpose of facilitating the development of 285 high density residential units on the Campus Oaks portion of the Master Plan area. This will result in changing the land use on parcel CO-52 from Tech/Business Park – Light Industrial (T/BP-LI) to High Density Residential (HDR). A summary of the land use changes, and unit transfers are shown in Table 1.

Table 1 – HP Campus Oaks Land Use Changes

Large Lot Parcel	Existing			Proposed		
	Land Use	Area (Acres)	Dwelling Units	Land Use	Area (Acres)	Dwelling Units
CO-52	T/BP-LI	17.65	N/A	HDR	17.65	285

Water Demand

According to the City of Roseville 2022 Design Standards Section 8-6, an Average Day Unit Water Demand Factor (ADUWDF) of 2,598 gallons per day per acre (gpd/ac) is used for Business Professional and Light Industrial land uses. This demand factor assumes a floor area ratio (FAR) of 0.30.

We have reviewed the water demands for the proposed project against that of the 2016 HPCO Master Plan. Table 2 is the 2022 City of Roseville water demand rates for various land use categories. We applied the water demand rates to parcel CO-52. Table 3 summarizes the water supply in 2016 HPCO and the proposed 2022 General Plan Amendment.

Table 2 – City of Roseville Water Supply Design Standard

Land Use Category		Average Day Unit Water Demand Factors
Residential	LDR (<3.5 DU's/Ac)	*728 gpd/DU*
	LDR (3.5 to 5.0 DU's/Ac)	*600 gpd/DU*
	LMDR (>5.0 to 6.0 DU's/Ac)	*521 gpd/DU*
	LMDR (>6.0 to 8.0 DU's/Ac)	*430 gpd/DU*
	MDR (>8.0 to 12.0 DU's/Ac)	*323 gpd/DU*
	HDR (>12.0 to 16.0 DU's/Ac	*288 gpd/DU*
	HDR (>16.0 DU's/Ac)	*177 gpd/DU*
Commercial/Other	Commercial/Retail	*2,598 gpd/ac*
	Business Professional	*2,598 gpd/ac*
	Light Industrial	*2,598 gpd/ac*
	Industrial	*2,562 gpd/ac*
	Railroad Yard	*109 gpd/ac*
	Elementary Schools	*3,454 gpd/ac*
	High Schools	*4,068 gpd/ac*
	Public (Fire Station, etc)	*1,780 gpd/ac*
	Park/Recreation	*2,988 gpd/ac*
	Open Space/Major ROW	-
	Vacant/Unassigned	-

*Factors assume a 30%F.A.R.
gpd/ DU = Gallons per day per dwelling unit
gpd / AC -Gallons per day per acre

Table 3 – Water Demand Comparison for Large Lot Parcel CO-52 between 2016 HPCO Master Plan & 2023 General Plan Amendment

Water Demand Design Requirements	Land Use	Area (Acres)	Dwelling Units	Water Demand Rates	Average Daily Water Demands (gpd)	Maximum Daily Water Demands (mgd) 2x ADF	Annual Demand (AFY)
2016 HPCO	T/BP-LI	17.65	-	2,598 (gpd/ac)	45,855	0.092	51.4
2023 GPA	HDR	17.65	285	177 (gpd/DU) (1)	50,445	0.101	56.5
						Change	+5.1

(1) HDR > 16.0 DU/Acre

The required water for the CO-52 parcels under the proposed 2022 General Plan Amendment would be approximately 5 acre-feet per year greater than the 2016 HPCO projected development. The 2016 HPCO Water Supply Assessment showed that the Campus Oaks Amendment resulted in a total reduction of 196.93 AFY from the 1996

HPMP. The additional 5.1 AFY should not be a significant impact to the City Roseville Water Supply.

Sewer Demand

Based on the proposed land use changes for parcel CO-52, the average dry weather flow (ADWF) was computed based on the sewer generation rates presented in Table 4 below. Per conversations with the City of Roseville, the flow factor rate for the Business Professional land use designation is calculated at 850 gpd per acre.

Table 4 – Sewer Generation Rates

Land Use Designation	Units	Flow Factor (gpd/unit)[1]
Commercial	gpd per acre	850
Heavy Industrial	gpd per acre	850
Light Industrial	gpd per acre	850
Mixed Use	gpd per acre	2,300
Public/Quasi-Public	gpd per acre	660
Schools	gpd per acre	170
Residential 1 DU	gpd per DU	190
Residential 2 DU	gpd per DU	190
Residential 3 DU	gpd per DU	190
Residential Multiple DU[2]	gpd per acre Or gpd per DU	2,040 Or 130
Open Space	gpd per acre	0
Parks> 10 Acres	gpd per acre	10
Vacant	gpd per acre	0

1) City of Roseville Design Standards 2022-Average Dry Weather Unit Flow Factors
2) Includes allowances for dry season groundwater infiltration (GWI)
3) Future development projects should use the factor that results in the highest flow.

We have reviewed the sewer demands for the proposed 2022 General Plan Amendment against that of the 2016 HPCO Master Plan. We applied these demand rates to the 2016 HPCO parcel CO-52 in the 2016 HPCO and the proposed 2022 General Plan Amendment revised land use. The summary is shown in Table 5.

Table 5 – Sewer Demand Comparison between 2016 HPCO & 2023 General Plan Amendment

Sewer Demand Design Requirements	Land Use	Area (Acres)	Dwelling Units	Sewer Flow Factor	Average Dry Weather Flow (ADWF) (gpd)	Factored Flow (mgd) 2x ADWF	Peaking Factor (1)	Peak Wet Weather Flow (PWWF) (mgd)
2016 HPCO	T/BP-LI	17.65	-	850 (gpd/ac)	15,003	0.030	3.5	0.105
2022 GPA	HDR	17.65	285	130 (gpd/DU)	37,050	0.074	3.3	0.244
							Change	+0.139

(1) Peaking Factor per Figure SS-1 in 2022 City Sewer Design Standards

Based on the calculation, the peak wet weather flow (PWWF) increases by 0.139 mgd due to the land use change from T/BP-LI to HDR. There is an existing 42" sewer trunk line within Woodcreek Oaks Blvd that has sufficient capacity to receive additional flows. The existing Campus Oaks sewer collection system has been reviewed and there is sufficient capacity within the Painted Dessert and Crimson Ridge sewer pipelines to convey the project flows to Woodcreek Oaks Blvd. (Refer to Appendix A). All collection pipelines operate within the City of Roseville Design standards except for the 10-inch line within Painted Dessert Drive. The allowable depth of flow for a 10-inch pipe is 70% depth or 7 inches. The resulting depth of flow in this pipe segment is 7.08 inches which will not adversely affect the pipeline and within standard engineering tolerances.

Recycled Water Use

The proposed project assumes utilization of recycled water provided by the City of Roseville for irrigating non-residential landscaping, as well as publicly landscaped areas (including roadway landscape corridors and medians) (*Hewlett-Packard Campus Oaks Master Plan, Amended August 17, 2016)*. Based on Table 4 in the Hewlett-Packard/Campus Oaks Master Plan Recycled Water Systems Master Plan, completed by Municipal Consulting Group, dated January 2015, the recycled water demand (based on the use of smart timers) for High Density Residential and Business Professional land uses is as follows:

High Density Residential	1.76 AFY/acre (7.74 AFY/4.39 Irrigated Acres)
Business Professional	1.48 AFY/acre (25.56 AFY/17.30 Irrigated Acres)

The following table compares the recycled water demand from the 2016 HPCO to the 2022 GPA.

Table 6 – Recycled Water Demand Comparison between 2016 HPCO & 2023 General Plan Amendment

Recycled Water Demand Design Requirements	Land Use	Area (Acres)	Recycled Water Demand Based on Land Use (AFY/acre)	Recycled Water Demand (AFY)
2016 HPCO	T/BP-LI	17.65	1.48	26.12
2022 GPA	HDR	17.65	1.76	31.06
			Change	+4.94

Based on the calculation, the recycled water demand increases by 4.94 AFY due to the land use change from T/BP-LI to HDR.

Drainage Flows

The proposed change to the land use of CO-52 from Tech/Business Park-Light Industrial to High Density Residential should reduce the runoff generated from the project. This is because the proposed land use has a lower percent impervious than the existing land use. According to the HPCO Master Plan Drainage Report (Table 6. Summary of Percent of Pervious Area and Infiltration Rates for Land Uses), High Density Residential land uses are approximately 65% impervious, while Tech/Business Park-Light Industrial land uses are approximately 85% impervious. A 20% reduction in impervious area will reduce the design flows, therefore, by changing the land use of CO-52 from Tech/Business Park-Light Industrial to High Density Residential the Hewlett-Packard/Campus Oaks Master Plan Drainage Report, dated May 4, 2016, is still valid.

Table 7 (below) and Attachment “A”, Post-Development Site Overall Drainage Shed Map, from the Drainage Report shows the drainage flows generated from the project and that they do not exceed those shown on the North Roseville Specific Plan Area (NRSPA) Phase 1 Drainage Shed Map (December 1997) as required by the City of Roseville.

Table 7 Comparison between NRSPA and HPCO Master Plan flow rates (1)

Outfall Location	NRSPA 10-Year Flow (cfs)	HPCO Master Plan 10-Year Flow (cfs)	Difference NRSPA & HPCO Master Plan 10-Year (cfs)	NRSPA 100-Year Flow (cfs)	HPCO Master Plan 100-Year Flow (cfs)	Difference NRSPA & HPCO Master Plan 100-Year (cfs)
1	185.3	167.4	-17.9	304.7	270.7	-34.0
2	62.0	45.9	-16.1	99.3	34.3	-65.0
3	19.3	1.4	-17.9	31.0	2.0	-29.0

(1) This is Table 3b in the HPCO Master Plan Drainage Report

Solid Waste

In 2015 Municipal Consulting Group, LLP completed a Solid Waste Generation and Impact Analysis on Western Placer Waste Management Facilities as it relates to the Hewlett-Packard Campus Oaks Master Plan. The analysis found that under current conditions, the Western Regional Sanitary Landfill (WRSL) has a projected useful life of 2058 and the waste generated from the HPCO Master Plan will not reduce the life of the landfill because the Master Plan is an infill project included in the current 2025 General Plan.

The original Tech/Business Park – Light Industrial land use used in projecting build of the landfill and MRF resulted in a higher volume / tonnage for the project site. Implementation of the 2015 HPCO Master Plan will reduce the impact of the City's buildout estimate on the operation capacity of the MRF and reduce the amount disposed of at the WRSL.

On December8, 2022, the Western Placer Waste Management Authority Board of Director certified the Renewable Placer Waste Action Plan EIR and selected and approved Plan Concept 2, the implementation of which will result in the landfill capacity life being extended from 2058 to 2110. Impacts to both the WRSL and the MRF because of the proposed conversion of light industrial to high density residential land use will also not reduce the life of the landfill or operational capacity of the MRF.

Traffic

The proposed change to the land use from Tech/Business Park – Light Industrial to Hight Density Residential (Townhome) would result in a reduction of 13 AM Peak Hour Trips. Additionally, the land use change would result in 2 additional PM Peak Hour trips resulting in less than one-half of one percent of the plan area PM trips.

Table 8 Comparison between 2016 HPMP and 2023 GPA – Traffic Generation

Traffic Generation	Land Use	Area (Acres)	AM Peak Hour Trips	PM Peak Hour Trips
2016 HPCO[1]	T/BP-LI	17.65	138	146
2022 GPA	HDR	17.65	125	148
		Change	**-13**	**+2**

(1) HPCO Master Plan 2nd Addendum, Appendix A – Traffic

Electric

The proposed change to the land use from Tech/Business Park – Light Industrial to Hight Density Residential would result in a reduction of 0.39 megawatts (MW) of electrical demand.

Table 9 Comparison between 2016 HPMP and 2023 GPA – Electric Demand

Electrical Allocation	Land Use	Area (Acres)	Electric Demand (MW)
2016 HPCO[1]	T/BP-LI	17.65	1.39
2022 GPA	HDR	17.65	1.00
		Change	**-0.39**

APPENDIX ‘A’
SEWER ATTACHMENTS

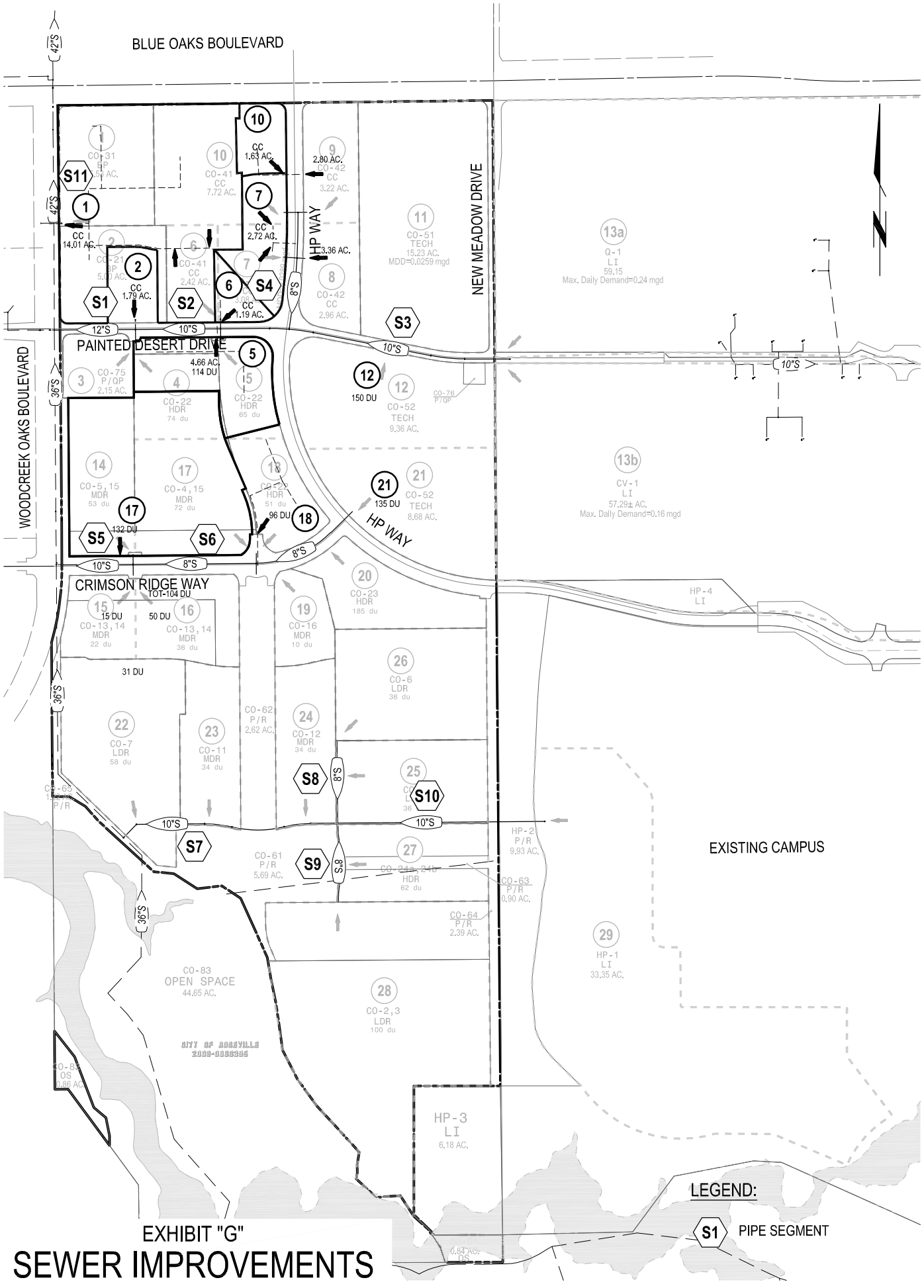

EXHIBIT "G"

SEWER IMPROVEMENTS

Dwg: Y:\2013\13-0076-00\DWG\ENGR\DESIGN\WASTEWATER SHEDS-20230508.DWG | Saved: 05-09-23 09:07am GBARDINI

SEWER DESIGN CALCULATIONS

HP - Campus Oaks

May 28, 2015, Revised May 9, 2023

Pipe Segment	Contributing Shed	Contributing Land Use												Contributing Shed Flow	Contributing Pipe Flow	ADWF	Safety Factor	Factored Flow	Peaking Factor	PWWF
		Low/Med-Density Residential			High-Density Residential			Commercial Core/Industrial			Public/Quasi-Public									
		Units	Rate	Flow	Units	Rate	Flow	Area	Rate	Flow	Area	Rate	Flow							
			(gpd/unit)	(gpd)		(gpd/unit)	(gpd)	(ac)	(gpd/ac)	(gpd)	(ac)	(gpd/ac)	(gpd)	(gpd)	(gpd)	(gpd)		(gpd)		(gpd)
S1	2,3,4		190	0	0	130	0	1.79	850	1,522	2.15	660	1,419	2,941	156,185	159,125	2.0	318,250	2.67	849,728
S2	5,6		190	0	114	130	14,820	1.19	850	1,012		660	0	15,832	140,353	156,185	2.0	312,369	2.67	834,025
S3	11,12,13a,13b		190	0	150	130	19,500	131.67	850	111,920		660	0	131,420	0	131,420	2.0	262,839	2.78	730,692
S4	7,8,9,10		190	0		130	0	10.51	850	8,934		660	0	8,934	0	8,934	2.0	17,867	3.51	62,713
S5	14,15,16	228	190	43,320		130	0		850	0		660	0	43,320	54,210	97,530	2.0	195,060	2.96	577,378
S6	17,18,19,20,21	0	190	0	417	130	54,210		850	0		660	0	54,210	0	54,210	2.0	108,420	3.25	352,365
S7	22,23,24	126	190	23,940		130	0		850	0		660	0	23,940	69,088	93,028	2.0	186,055	2.94	547,002
S8	25,26	72	190	13,680		130	0		850	0		660	0	13,680	0	13,680	2.0	27,360	3.50	95,760
S9	27,28	100	190	19,000	62	130	8,060		850	0		660	0	27,060	0	27,060	2.0	54,120	3.39	183,467
S10	29		190	0		130	0	33.35	850	28,348		661	0	28,348	0	28,348	2.0	56,695	3.39	192,196
S11	1		190	0		130	0	14.01	850	11,909		661	0	11,909	0	11,909	2.0	23,817	3.59	85,503

SEWER PIPE DESIGN PARAMETERS

HP - Campus Oaks

May 28, 2015, Revised May 9, 2023

Pipe Segment	PWWF	PWWF	Proposed Pipe		Depth Ratio	Allowable Depth of Flow	Calculated Depth of Flow	Max Capacity	Extra Capacity	Length	Invert Elevation	
			Diameter	Slope							Upstream	Downstream
	(gpd)	(cfs)	(in)	(ft/ft)		(in)	(in)	gpd	gpd	ft	ft	ft
SS-01	849,728	1.315	12	0.0020	1.00	12.00	8.40	1,029,600	179,873	370	82.76	82.02
SS-02	834,025	1.290	10	0.0050	0.70	7.00	7.08	990,155	156,130	705	86.39	82.86
SS-03	730,692	1.131	10	0.0050	0.70	7.00	6.64	990,155	259,463	1,025	91.61	86.49
SS-04	62,713	0.097	8	0.0050	0.70	5.60	1.92	559,063	496,350	535	89.16	86.49
SS-05	577,378	0.893	10	0.0025	0.70	7.00	6.96	699,960	122,582	370	94.86	87.46
SS-06	352,365	0.545	8	0.0057	0.70	5.60	4.56	493,600	141,235	1,065	101.00	94.96
SS-07	547,002	0.846	10	0.0025	0.70	7.00	6.72	592,765	45,763	1,015	87.74	85.20
SS-08	95,760	0.148	8	0.0035	0.70	5.60	2.52	386,830	291,070	380	89.23	87.90
SS-09	183,467	0.284	8	0.0035	0.70	5.60	3.60	386,830	203,363	365	89.18	87.90
SS-10	192,196	0.297	10	0.0035	0.70	7.00	3.36	995,133	802,937	950	91.07	87.74
SS-11	85,503	0.132	12	0.0021	1.00	12.00	1.56	1,055,173	969,670	14	83.55	83.52

Notes:

1. Pipe S1 is oversized to match existing 12" stubs at the connection points at Woodcreek Oaks Blvd and pipe availability.

Attachment D

(*Combined CEQA Document*)—List of Applicable Mitigation Measures

ATTACHMENT D

APPLICABLE MITIGATION MEASURES
from the HEWLETT-PACKARD CAMPUS OAKS MASTER PLAN EIR and SIERRA VISTA SPECIFIC PLAN EIR and Associated Addenda
And
New Measure(s) Included as Part of the Proposed Project

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to the City	Staff Use Only
HEWLETT-PACKARD CAMPUS OAKS MASTER PLAN EIR MITGATION MEASURES and OTHER(S) for the PROPOSED GENERAL PLAN / CAMPUS OAKS MASTER PLAN AMENDMENTS					
Aesthetics					
COMP EIR MM 4.7-3: Use building orientation and materials that minimize glare. For large buildings, building surfaces and materials, orientation, and landscaping shall be designed to ensure that roadways and walkways are not subjected to disruptive glare. The City shall review building plans to ensure that this condition is met.	Parties: Applicant Monitoring Work Program: Review building design plans, including proposed surface treatments Standards of success: Reflective portions of building (e.g. large glass or light colored surfaces) are oriented in manner to avoid glare on nearby roadways and gathering spaces.	Prior to approval of design review	Roseville Planning Division	None	
Air Quality					
COMP EIR MM 4.10-1: Provide dust controls. In order to reduce construction-generated PM10 emissions, the contractor shall comply with the dust control strategies developed by the Placer	Parties: Contractor Monitoring Work Program: The Applicant shall require its contractor to control dust	During construction	Applicant and Public Works Department	Dust Control Plan and proof of submittal to Placer County	

ATTACHMENT D

APPLICABLE MITIGATION MEASURES
from the HEWLETT-PACKARD CAMPUS OAKS MASTER PLAN EIR and SIERRA VISTA SPECIFIC PLAN EIR and Associated Addenda
And
New Measure(s) Included as Part of the Proposed Project

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to the City	Staff Use Only
County APCD. The developer shall include in construction contracts the following requirements or measures shown to be equally effective: a) The contractor shall water as indicated by City inspectors to keep all earth surfaces moist during clearing, grading, earthmoving and other site preparation activities. b) The contractor shall use tarpaulins or other effective covers for haul trucks that travel on public streets. c) The contractor shall sweep streets within and adjacent to the project as needed or as directed by City inspectors. d) The contractor shall schedule clearing, grading and earthmoving activities during periods of low wind speeds, and restrict those construction activities during high wind conditions with wind speeds greater than 20 mph average during an hour. e) The contractor shall control construction and site vehicle speed to 15 mph on unpaved roads.	watering or ceasing grading activities when wind velocity exceeds 10 miles per hour. The City through the grading permit has enforcing authority to be used in the event construction dust is not controlled. Standards of success: This measure will be deemed successful if construction-related PM10 emissions are left at a less-than-significant level.			Air Pollution Control District (PCAPCD)	

ATTACHMENT D

APPLICABLE MITIGATION MEASURES
from the HEWLETT-PACKARD CAMPUS OAKS MASTER PLAN EIR and SIERRA VISTA SPECIFIC PLAN EIR and Associated Addenda
And
New Measure(s) Included as Part of the Proposed Project

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to the City	Staff Use Only
f) The contractor shall minimize open burning of wood and vegetative waste materials from both construction and operation of the project. No open burning shall occur unless it can be demonstrated to the Placer County APCD that alternatives have been explored. These alternatives may include, but are not limited to, chipping, mulching and conversion to biomass fuel. For any open burning, an APCD permit must be obtained in conformance with APCD Regulation 3 (Open Burning), Rules 301-325.					
COMP EIR MM 4.10-2(a): Maintain construction equipment and vehicles. The developer shall reduce NOx, ROG and CO emissions by complying with the construction vehicle air pollutant control strategies developed by the Placer County APCD. The Developer shall include in construction contracts and in notes on grading plans the following requirements or measures shown to be equally effective: a) Construction equipment operators shall shut off equipment when not in use to avoid	Parties: Developer, Applicant, City Inspector Monitoring Work Program: The Developer shall provide to the City a written statement that construction equipment has been properly maintained and that construction is proceeding as specified. The City Inspector shall periodically inspect operations at the site to	Prior to the issuance of grading permits, and periodically throughout construction.	Roseville Public Works Department - Land Development and Transportation Division	None	

ATTACHMENT D

APPLICABLE MITIGATION MEASURES
from the HEWLETT-PACKARD CAMPUS OAKS MASTER PLAN EIR and SIERRA VISTA SPECIFIC PLAN EIR and Associated Addenda
And
New Measure(s) Included as Part of the Proposed Project

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to the City	Staff Use Only
unnecessary idling. As a general rule, vehicle idling should be kept below 10 minutes. b) Contractors' construction equipment shall be properly maintained and in good operating condition. c) During second stage smog alerts, the construction day shall be shortened and the number of vehicles and equipment operating at the same time shall be reduced. d) Contractors shall use new technologies to control ozone precursor emissions as they become available and feasible.	verify compliance with Mitigation Measure 4.10-2. Standards of success: When the Public Works Department receives a written statement of appropriate equipment maintenance and that construction is proceeding as specified, as verified by periodic site inspections.				
COMP EIR MM 4.10-2(b): Develop and implement a Construction Employee Trip Reduction Plan. Consistent with the City's TSM ordinance, the construction contractor shall develop and implement a trip reduction plan designed to reduce construction-phase employee vehicle trips. Elements of this plan could include the following: • Providing all construction employees with	Parties: Applicant, Contractor Monitoring Work Program: The Applicant will develop and implement a construction trip reduction plan including a method to measure its success. Standards of success: This measure will be deemed	During construction	Applicant and Applicant's contractor	None	

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information relating to public transit facilities serving the site, such as bus routes and schedules; • Carpooling incentives, including incentives for carpool participants such as preferred on-site parking; and • Carpool rider matching services.	successful if construction-related auto use is reduced so that there is no net increase in ROG, NOx and PM10 as a result of construction traffic.				
Biological Resources					
COMP EIR MM 4.5-5: Develop and implement construction protocols. The Master Plan shall include policies that require the implementation of construction protocols that include, but may not be limited to, the following: • Restrict construction activities to areas away from preserved oak and riparian habitat • Provide for construction parking away from sensitive habitat resources • Erect temporary barrier fencing to delimit protected areas.	Parties: Applicant's Biologist, Contractor Monitoring Work Program: The Developer shall incorporate restricted zones into grading/improvement plans and tree permit exhibits submitted to the Public Works Department, all workers, and CDFG. The Public Works Department should perform visual inspections	Incorporate measures into grading/ improvement plans and tree permit exhibits, and identify the extent of construction. Orient construction workers and erect temporary fencing prior to first day of construction. Visual inspections once a	Roseville Planning Division/Public Works	None	

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	periodically to: • Verify that temporary fencing and flagging, signs, and other marking devices are maintained for the duration of the construction activity. If deficiencies are noted, they must be promptly corrected, or construction activities may be halted. • Verify that construction works and equipment remain outside of restricted areas. Standards of success: Roseville Public Works Department approves plans and observes that construction and parking are not occurring in preservation areas.	week.			

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COMP EIR MM 4.5-7: Conduct pre-construction survey and implement restrictions. To ensure that fully-protected raptor species are not injured or disturbed, the developer shall implement one of the three following measures: a) All tree removal shall occur between August 30 and March 15 to avoid the breeding season of any raptor species that could be using the area. This period may be modified with the authorization of the DFG. -or- b) Prior to the beginning of construction during the period between March 15 to August 30, all trees within 350 feet of any grading or earthmoving activity shall be surveyed for active raptor nests by a qualified biologist. If active raptor nests are found, a fence shall be erected around the tree at a distance of 350 feet from the edge of the canopy to prevent construction disturbance and intrusions on the nest area. -or- c) The Applicant shall confer with CDFG and	Parties: Developer's biologist Monitoring Work Program: Either all tree removal shall be conducted between August 30 and March 15, or the Applicant shall contract with a qualified biologist to survey for raptor nests prior to each phase. Data will be recorded by survey personnel concerning: 1. date which pre-construction surveys are initiated, performed, and completed, 2. survey methods and objectives, 3. complete species list, 4. results of surveys, and 5. mitigation and timing to prevent next	Prior to issuance of tree permit, tree removal or grading permits for construction within 350 feet of trees; prior to site disturbance and during the appropriate season.	Roseville Planning Division	Surveys, if applicable	

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develop measures that satisfy the requirements of CDFG and the City. The developer shall relocate any raptor nest according to CDFG protocol, or in consultation with CDFG, to the nearest suitable nest tree.	disturbance. If nests are found, the City shall: 1. require that construction activities avoid active nests, 2. monitor nest activity, and 3. provide a buffer zone of 350' between March 15 and August 30. Standards of success: Pre-construction surveys performed prior to construction activities in each phase and, if active nest(s) are found, a qualified biologist monitors nest(s) while construction activities are in the vicinity to ensure that buffer zones are established and active nest(s) disturbance is				

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	avoided.				
Cultural Resources					
COMP EIR MM 4.6-1: Cease work and consult a qualified archaeologist. In the event of the discovery of buried archaeological deposits it is recommended that project activities in the vicinity of the find should be temporarily halted and a qualified archaeologist consulted to assess the resource and provide proper management recommendations. Possible management recommendations for important resources could include resource avoidance or data recovery excavations.	Parties: Applicant, Contractor Monitoring Work Program: The Applicant must notify the City and consult with a qualified archaeologist if archaeological deposits are discovered before construction activity in the vicinity resumes. Standards of success: This measure will be deemed successful if, in the event of an archaeological discovery, construction is temporarily halted, the Planning and Engineering Divisions are notified, a qualified archaeologist is consulted, recommendations are implemented, and purpose	During construction activities	Roseville Planning Division/Engineering Division, Applicant/ Contractor	None	

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	and standards of state statutes governing cultural resources are met.				
COMP EIR 5th Addendum Parcel CO-52 MM CUL-1 (applicable only for future development on Parcel CO-52): a) In the event a potentially significant cultural resource is encountered during subsurface earthwork activities, all construction activities within a 100-foot radius of the find shall cease and workers should avoid altering the materials until an Archaeologist who meets the Secretary of the Interior's Professional Qualification Standards for archaeology has evaluated the find. The project applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Potentially significant cultural resources consist of, but are not limited to, stone, bone, glass, ceramics, fossils, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites. The Archaeologist shall assess whether the find to determine whether it	This condition shall be reflected in all construction and building plans, and construction site workers shall be advised by the site manager of this measure.	Prior to and during construction activities	Roseville Building and Engineering Division	None	

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includes historical resources of an archaeological nature or unique archaeological resources. b) If the archaeologist determines that the find does not include cultural resources in any of one of these two categories, work may resume immediately. c) If the archaeologist determines that the find constitutes either an historical resource of an archaeological nature or a unique archaeological resource, she or he shall immediately notify the City Development Services Director (CDSD) and the landowner/applicant, and shall develop mitigation or treatment measures for consideration and approval by the CDSD. Mitigation shall be developed and implemented in accordance with Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines, with a preference for preservation in place. Consistent with Section 15126.4(b)(3), preservation in place may be accomplished through planning construction to avoid the resource; incorporating the resource within					

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open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If approved by the CDSD, such measures shall be implemented and completed prior to commencing further work for which grading or building permits were issued, unless otherwise directed by the CDSD. d) Avoidance or preservation of unique archaeological resources or historical resources of an archaeological nature shall not be required where such avoidance or preservation in place would preclude the construction of important structures or infrastructure or require exorbitant expenditures, as determined by the CDSD. Where avoidance or preservation are not appropriate for these reasons, the archaeologist, in consultation with the CDSD, shall prepare a detailed recommended a treatment plan for consideration and approval by the CDSD, which may include data recovery. If employed, data recovery strategies for unique archaeological resources that do not also qualify as historical resources of an					

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archaeological nature shall follow the applicable requirements and limitations set forth in Public Resources Code Section 21083.2. Data recovery will normally consist of (but would not be limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim of recovering important scientific data contained within the unique archaeological resource or historical resource of an archaeological nature. The data recovery plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and State repositories, libraries, and interested professionals. If data recovery is determined by the CDSD to not be appropriate, then an equally effective treatment shall be proposed and implemented. Any previously undiscovered resources found during construction within the project site shall be recorded on appropriate California Department of Parks and Recreation (DPR) 523 forms and shall					

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be submitted to the City of Roseville, the North Central Information Center (NCIC), and the California Office of Historic Preservation (OHP), as required. e) Work may not resume within the no-work radius until the CDSD, in consultation with the archaeologist, determines that the site either: 1) does not contain unique archaeological resources or historical resources of an archaeological nature; or 2) that the preservation and/or treatment measures have been completed to the satisfaction of the CDSD.					
COMP EIR 5th Addendum Parcel CO-52 MM CUL-2 (applicable only for future development on Parcel CO-52): In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5, Health and Safety Code Section 7050.5, and Public Resources Code Sections 5097.94 and Section 5097.98 shall be followed. If, during the course of project construction, there is accidental discovery or recognition of any human remains, the following	This condition shall be reflected in all construction and building plans, and construction site workers shall be advised by the site manager of this measure.	Prior to and during construction activities	Roseville Building and Engineering Division	None	

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steps shall be taken: 1. There shall be no further excavation or disturbance within 100 feet of the remains until the County Coroner is contacted to determine whether the remains are Native American and if an investigation of the cause of death is required. If the Coroner determines the remains to be Native American, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the Most Likely Descendant (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resource Code Section 5097.98. 2. Where the following conditions occur, the landowner/applicant or his or her authorized representative shall rebury the Native American human remains and associated					

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grave goods with appropriate dignity either in accordance with the recommendations of the MLD or on the project site in a location not subject to further subsurface disturbance: ▪ The NAHC is unable to identify an MLD or the MLD failed to make a recommendation within 48 hours after being notified by the commission. ▪ The descendant identified fails to make a recommendation. ▪ The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.					
Energy					
COMP EIR MM 4.10-2(a): Maintain construction equipment and vehicles.	See above.				
COMP EIR MM 4.10-2(b): Develop and implement a Construction Employee Trip Reduction Plan.	See above.				

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Geology and Soils					
COMP EIR MM 4.3-2: Site-specific geotechnical evaluation to assess development on soils characterized by slow permeability, low strength, and high shrink-swell potential. Soils shall be tested for their slow permeability, low strength and high shrink-swell, potential. Soils with low strength and/or high shrink-swell potential shall be controlled by over-excavation, or covering these soils with a sufficient amount of granular soils (as determined by the geotechnical investigation). Potentially expansive soils shall only be placed in areas determined not to consist of structural fill.	Parties: Applicant, Contractor Monitoring Work Program: The Public Works Department shall review the results of a geotechnical investigation performed by the Applicant or Applicant's consultant. The review will verify that all required components have been included, and that the findings of the investigation have been incorporated into the final plans, prior to commencement of any earthwork on the property. Standards of success: This measure will be deemed successful when an adequate geotechnical investigation, as specified, is performed and	Prior to approval of any improvement plans for the Proposed Project.	Public Works Department - Engineering Division	Results of geotechnical evaluation	

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	recommendations from the investigation are appropriately considered and incorporated in final design.				
COMP EIR MM 4.6-1: Cease work and consult a qualified archaeologist.	See above				
COMP EIR 1st Addendum MM 5-1: Paleontological mitigation program. Prior to earthmoving activities associated with mass grading, a qualified supervising paleontologist shall be contracted to conduct a field survey of the proposed construction area to identify areas of likely sensitivity for paleontological resources. The supervising paleontologist shall also conduct construction crew training in identification of paleontological resources that may be discovered during the course of excavation. The paleontologist will also conduct paleontological monitoring during ground disturbing activities in areas identified through survey and archival review as sensitive for paleontological resources. In the event of discovery of vertebrate, plant, or invertebrate	This condition shall be reflected in all construction and building plans, and construction site workers shall be advised by the site manager of this measure.	Prior to and during construction activities	Roseville Engineering Division	None	

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fossils, the paleontologist shall have the authority to halt or redirect excavation operations until the probable significance of the find can by assessed, and the resource salvaged as appropriate. Any significant fossils recovered during monitoring and salvage shall be cleaned, repaired, and hardened, and then donated to a repository institution.					
Hydrology and Water Quality					
COMP EIR MM 4.4-2(a): Identify adequate detention facilities locations. Detention basins are planned in the southwest and northeast portion of the project area. The detention basins shall be constructed to the satisfaction of the City and shall be designed to minimize potential flooding.	Parties: Applicant, Contractor Monitoring Work Program: The Public Works Department shall review the Applicant's plan for on-site detention facilities. The plan will identify the specific locations, capacity, and feasibility of the detention basins. The design of the detention basins shall meet the City's requirements and shall be designed to maintain post-development	Prior to approval of a building permit for development in the north watershed, south watershed or a grading permit and any improvement plans.	Public Works Department	None	

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	peak flows at pre-development levels. Standards of success: This measure will be deemed successful when the final location for the detention basins and their design meets the City's approval, and they are constructed.				
COMP EIR MM 4.4-2(b): Contribute fair share fees to regional flood control facilities. The Proposed Project must construct on-site drainage facilities to the City's satisfaction to limit the project's contribution to increased flows and contribute its fair share in mitigation fees to the City's regional flood control projects.	Parties: Applicant Monitoring Work Program: The fee will be collected at the time a building permit is issued within the Master Plan area. Standards of success: Applicant pays fee for regional flood control, in amount determined by the City.	The Applicant must agree to pay the fees prior to approval of Development Agreement. Fees must be paid concurrent with issuance of building permits.	Public Works - Engineering	None	
COMP EIR MM 4.4-4: Implement erosion control plan.	Parties: Applicant, Contractor	Prior to issuance of a grading permit, or approval of	Public Works - Engineering	Erosion and sedimentation	

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The City of Roseville Department of Public Works Improvement Standards require that a grading permit be obtained from the City prior to beginning any grading work. As part of the permit process the Applicant must submit, for review and approval, improvement and/or grading plans along with a site-specific erosion and sedimentation control plan.	Monitoring Work Program: The Public Works Department shall review the Grading Plan developed by the Applicant or Applicant's consultant and pursuant to the Improvement Standards. The review will verify that all required components have been included and that the findings of the plan have been incorporated into the final plans prior to commencement of any earth work on the property. Standards of success: The measure will be deemed successful when the Improvement Standards have been met as determined by the City and runoff from the site into natural drainage is not significant.	improvement plans.		control plan	

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Noise					
COMP EIR 1st Addendum MM 12-1(a): Limit construction activities to daytime hours. Construction contractors shall be required to limit construction activities to daytime hours from 7:00 a.m. to 7:00 p.m., Monday through Friday, and 8:00 a.m. to 8:00 p.m. on Saturday and Sunday.	Discuss during pre-construction meeting and comply with the measure.	During construction activities	Roseville Engineering Division	None	
COMP EIR 1st Addendum MM 12-1(b): Provide information at construction sites. Construction contractors shall post signs at construction sites that include information on permitted construction days and hours, a day and evening contact number for the job site, and a contact number in the event of problems. An onsite complaint and enforcement manager shall respond to and track complaints and questions related to noise.	Discuss during pre-construction meeting and comply with the measure.	During construction activities	Roseville Engineering Division	None	
COMP EIR 1st Addendum MM 12-1(c): Measures for construction within 800 feet of a residence.	Discuss during pre-construction meeting and comply with the measure.	During construction activities	Roseville Engineering Division	None	

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The applicant shall require construction contractors working within 800 feet of an occupied residence to implement the following measures: • Equipment and trucks used for proposed project construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds, wherever feasible). • Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for proposed Project construction shall be hydraulically or electrically powered where feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible; this could achieve a reduction of 5 dBA. Quieter procedures,					

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such as use of drills rather than impact tools, shall be used whenever feasible. • Stationary construction noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or other measures to the extent this does not interfere with construction purposes.					
COMP EIR 1st Addendum MM 12-2(a): Acoustical review of rooftop mechanical equipment near residential uses. Prior to issuance of a building permit for uses within 300 feet of existing or planned residential uses, a qualified acoustical consultant shall review the final specifications of proposed rooftop mechanical equipment to confirm that operational noise levels would not exceed 60 dBA Ldn/CNEL at exterior project residential uses and would not exceed 45 dBA Ldn/CNEL inside the residences.	Project plans will be reviewed for compliance.	Prior to issuance of building permits	Roseville Building Division	An acoustical study	

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Tribal Cultural Resources					
Parcel CO-52 MM TCR-1: Unanticipated discoveries. The following mitigation measure is intended to address the evaluation and treatment of inadvertent/unanticipated discoveries of potential Tribal Cultural Resources (TCRs) during a project's ground disturbing activities. a) If any suspected TCRs are discovered during ground disturbing construction activities, all work shall cease within 100 feet of the find, or an agreed upon distance based on the project area and nature of the find. A Tribal Representative from a California Native American tribe that is traditionally and culturally affiliated with a geographic area shall be immediately notified and shall determine if the find is a TCR (PRC §21074). The Tribal Representative will make written recommendations for further evaluation and treatment as necessary. b) When avoidance is infeasible, preservation	This condition shall be reflected in all construction and building plans, and construction site workers shall be advised by the site manager of this measure.	Prior to and during construction activities	Roseville Building and Engineering Division	None	

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in place is the preferred option for mitigation of TCRs under CEQA and UAIC protocols, and every effort shall be made to preserve the resources in place, including through project redesign, if feasible. Culturally appropriate treatment may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, or returning objects to a location within the project area where they will not be subject to future impacts. Permanent curation of TCRs will not take place unless approved in writing by UAIC or by the California Native American Tribe that is traditionally and culturally affiliated with the project area. c) The contractor shall implement any measures deemed by the CEQA lead agency to be necessary and feasible to preserve in place, avoid, or minimize impacts to the resource, including, but not limited to, facilitating the appropriate tribal treatment of the find, as necessary. The City will consult with the tribe(s) and implement appropriate treatment measures. Preservation in place is the preferred treatment, if feasible. Work					

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shall not resume within the no-work radius until the City, through consultation, determines that the treatment measures have been completed to its satisfaction, consistent with the requirements of CEQA and the Public Resources Code. d) Work at the discovery location cannot resume until all necessary investigation and evaluation of the discovery under the requirements of the CEQA, including AB52, have been satisfied.					
Utilities and Service Systems					
COMP EIR MM 4.4-2(a): Identify adequate detention facilities locations.	See above				
SIERRA VISTA SPECIFIC PLAN EIR MITGATION MEASURES and OTHER(S) for the PROPOSED GENERAL PLAN / SIERRA VISTA SPECIFIC PLAN AMENDMENTS					
Aesthetics					
SVSP EIR MM 4.14-1(a): Site lighting to minimize nuisance. Light producing uses, such as for ball field within	The City shall implement policies to reduce the nuisance effects of	Prior to issuance of building permits	The Parks and Recreation Director shall review the	None	

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the SVSP Area shall be located and oriented to minimize visual impacts on adjacent residential areas. Lighting should be shielded and designed to distribute light in the most effective and efficient manner, using the minimum amount of light to achieve the necessary illumination for the use, as defined by suggested lighting standards for competitive play.	nighttime/daytime and/or high-intensity illumination from the project.		proposed park plans and ensure that nighttime lighting is directed away from residences and open space corridors.		
Air Quality					
SVSP EIR MM 4.4-1: Dust and construction control measures. In accordance with the PCAPCD, the applicant shall comply with all applicable rules and regulations (e.g., Rule 202, 218 and 228). In addition, at the time of tentative map the applicant(s) shall implement a minimum of five (5) of the following measures unless superseded by state or other more stringent standards: The following mitigation measures shall be implemented to reduce short-term construction-related air quality impacts. In addition, dust control measures are required to be implemented by all projects in accordance with	The applicants shall submit construction management plans as part of the Grading Permit application. The Public Works Director shall review grading plans for inclusion of these measures prior to issuance of grading permits. The City Code Enforcement Officer shall respond to complaints.	Prior to issuance of grading permits	Director of Public Works shall ensure that dust control measures are implemented	Dust Control Plan and proof of submittal to PCAPCD	

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the City of Roseville Grading Ordinance, and the PCAPCD Fugitive Dust Rule 228. • Applicant shall submit to PCAPCD a Construction Emission/Dust Control Plan within 30 days prior to groundbreaking. If the PCAPCD does not respond within 20 days, the plan shall be considered approved. The plan must address the minimum requirements found in section 300 and 400 of District Rule 228, Fugitive Dust (www.placer.ca.gov/airpollution/airpolut.htm). The applicant shall keep a hard or electronic copy of Rule 228, Fugitive Dust on-site for reference. • The Construction Emission/Dust Control Plan shall include a comprehensive inventory (i.e. make, model, year, emission rating) of all heavy-duty off-road equipment (50 horsepower (HP) of greater) that will be used an aggregate of 40 or more hours for the construction project. The project representative shall provide PCAPCD with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site					

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foreman. The plan shall demonstrate that the heavy-duty (> 50 HP) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20% NOX reduction and 45% particulate reduction compared to the most recent ARB fleet average. PCAPCD shall be contacted for average fleet emission data. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. Contractors can access the Sacramento Metropolitan Air Quality Management District's web site to determine if their off-road fleet meets the requirements listed in this measure (http://www.airquality.org/ceqa/ Construction_Mitigation_Calculator.xls). The following measures are also included to reduce construction-related ROG, Nox, PM10 and PM2.5 emissions: • All construction equipment shall be					

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maintained in good operating condition. Contractor shall ensure that all construction equipment is being properly serviced and maintained as per the manufacturer's specifications. Maintenance records shall be available at the construction site for verification. This measure will reduce combustion emissions of all criteria air pollutants. • Prior to the issuance of any grading permits, all applicants shall submit construction plans denoting the proposed schedule and projected equipment use. Construction contractors shall provide evidence that low emission mobile construction will be used, or that their use was investigated and found to be infeasible for the project. Low emission equipment is defined as meeting the California Air Resources Board's Tier III standards. Contractors shall also conform to any construction measures imposed by the PCAPCD as well as City Planning Staff. This measure will primarily reduce ROG, Nox, PM10, and PM2.5 exhaust emissions. • Paints and coating shall be applied either by					

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hand or by high volume, low-pressure spray. This measure will reduce evaporative ROG emissions. • All construction shall comply with the following measures to reduce fugitive dust related emissions of PM10 and PM2.5: o Maintain a minimum 24-inch freeboard on soil haul trucks or cover payloads using tarps or other suitable means. o Suspend grading operations during high winds (greater than 15 mph). o Sweep streets as necessary if silt is carried off-site to adjacent public thoroughfares or occurs as a result of hauling. o Dispose of surplus excavated material in accordance with local ordinances and use sound engineering practices. o Schedule activities to minimize the amounts of exposed excavated soil during and after the end of work periods. o Phase grading into smaller areas to prevent the susceptibility of larger areas to					

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erosion over extended periods of time. ○ Pave or apply gravel to any on-site haul roads. ○ Reestablish ground cover on the construction site through seeding and water. ○ Clean earth moving construction equipment with water or sweep clean, once per day, or as necessary (e.g., when moving onsite), consistent with National Pollutant Discharge Elimination System Best Management Practices and the Roseville Grading Ordinance. Water shall be applied to control dust as needed to prevent dust impacts offsite. Operational water truck(s), shall be on-site, as required, to control fugitive dust. Construction vehicles leaving the site shall be cleaned, as needed, to prevent dust, silt, mud, and dirt from being released or tracked off-site. ○ Spread soil binders on unpaved roads and employee/equipment parking areas. Soil binders shall be non-toxic in accordance					

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with state and local regulations. Apply approved chemical soil stabilizers, or vegetated mats, etc. according to manufacturers' specifications, to all-inactive construction areas (previously graded areas which remain inactive for 96 hours). o Minimize diesel idling time to a maximum of five minutes. o Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary diesel power generators, if feasible. o An applicant representative, ARB-certified to perform Visible Emissions Evaluations (VEE), shall routinely (i.e., once per week) evaluate project related off-road and heavy-duty on-road equipment emissions for compliance with this requirement for projects grading more than 20 acres in size, regardless of how many acres are to be disturbed daily. o Construction equipment exhaust emissions shall not exceed the PCAPCD					

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Visible Emissions Rule 202. Fugitive dust is not to exceed 40% opacity and not go beyond property boundary at any time. Operators of vehicles and equipment found to exceed opacity limits are to be immediately notified and the equipment must be repaired within 72 hours. The City of Roseville is currently working with the Placer County Pollution Control District to update the standard mitigation measures. The following measures will likely be required at the time specific development is proposed. 1a. Prior to approval of Grading/ plans the applicant shall submit a Construction Emission/Dust Control Plan to the Placer County APCD. The plan must be submitted by certified mail, or receive a date stamp or other submittal proof. This plan must address the minimum Administrative Requirements found in section 300 and 400 of APCD Rule 228, Fugitive Dust. The applicant shall not break ground prior to receiving APCD approval of the Construction Emission/Dust Control Plan. If the applicant has submittal proof of submittal and no					

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response is received from the District within 20 working days the plan shall be deemed complete, and construction may begin. 1b. Include the following standard note on the Improvement/Grading Plan: The prime contractor shall submit to the District a comprehensive inventory (i.e. make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower of greater) that will be used an aggregate of 40 or more hours for the construction project. If any new equipment is added after submission of the inventory, the prime contractor shall the prime contractor shall contact the APCD prior to the new equipment being utilized. At least three business days prior to the use of subject heavy-duty off-road equipment, the project representative shall provide the District with the anticipated construction timeline including start date, and name and phone number of the property owner, project manager, and on-site foreman. 1c. Prior to approval of Grading/Improvement Plans, the applicant shall provide a plan to					

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the Placer County APCD for approval by the District demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent Nox reduction and 45 percent particulate reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. 2. Include the following standard note on the Improvement/Grading Plan: If required by the Public Works Department, the contractor shall hold a pre-construction meeting prior to grading activities. The contractor shall invite the Placer County APCD to the pre-construction meeting in order to discuss the construction emission/dust control plan with employees and/or contractors. 3. Prior to building permit approval, the					

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applicant shall show, on the plans submitted to the Building Department, that electrical outlets shall be installed on the exterior walls of both the front and back of all residences or all commercial buildings to promote the use of electric landscape maintenance equipment. 4. Prior to building permit approval, the applicant shall show, on the plans submitted to the Building Department, provisions for construction of new residences, and where natural gas is available, the installation of a gas outlet for use with outdoor cooking appliances, such as a gas barbecue or outdoor recreational fire pits. 5. Prior to building permit approval, in accordance with District Rule 225, only U.S. EPA Phase II certified wood burning devices shall be allowed in single-family residences. The emission potential from each residence shall not exceed a cumulative total of 7.5 grams per hour for all devices. Masonry fireplaces shall have either an EPA certified Phase II wood burning device or shall be a U.L. Listed Decorative Gas Appliance. (Rule					

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225) 6. Wood burning or Pellet appliances shall not be permitted in multi-family developments. Only natural gas or propane fired fireplace appliances are permitted. These appliances shall be clearly delineated on the Floor Plans submitted in conjunction with the Building Permit application. (Rule 225/section 302.2) 7. Prior to the issuance of a Building Permit, the applicant shall show that all flat roofs with parapets shall include a white or silver cap sheet to reduce energy demands. 8. Diesel trucks shall be prohibited from idling more than five minutes. Prior to the issuance of a Building Permit, the applicant shall show that all truck loading and unloading docks shall be equipped with one 110/208 volt power outlet for every two dock doors. Diesel Trucks idling for more than five minutes shall be required to connect to the 110/208 volt power to run any auxiliary equipment. 2'x3' signage which indicates "Diesel engine Idling Limited to a Maximum of 5 Minutes" shall be shown on the building elevations and shall be submitted to the					

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Placer County APCD prior to the issuance of Building Permits for the project. 9. Prior to approval of Improvement Plans, an enforcement plan shall be established, and submitted to the APCD for review, in order to evaluate project-related on-and-off- road heavy-duty vehicle engine emission opacities on a weekly basis, using standards as defined in California Code of Regulations, Title 13, Sections 2180 – 2194. An Environmental Coordinator, hired by the prime contractor or property owner, and who is CARB-certified to perform Visible Emissions Evaluations (VEE), shall routinely evaluate project related off-road and heavy duty on-road equipment emissions for compliance with this requirement. Operators of vehicles and equipment found to exceed opacity limits will be notified by APCD and the equipment must be repaired within 72 hours. (California Code of Regulations, Title 13, Sections 2180 – 2194) PCAPCD Rules (Existing District requirements to be added as construction notes or referenced in conditions of approval)					

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New Standard Condition of Approval (for all projects): The project shall comply with all applicable Placer County Air Pollution Control District rules and regulations, and shall obtain applicable permits and/or clearances from the District prior to the start of construction. The following air quality notes shall be added to the grading and/or improvement plans: • The contractor shall use CARB ultra low sulfur diesel fuel for all diesel–powered equipment. In addition, low sulfur fuel shall be utilized for all stationary equipment. (California Standards for Motor Vehicle Diesel Fuel, title 13, article 4.8, chapter 9, California Code of Regulations). • Processes that discharge 2 pounds per day or more of air contaminants, as defined by Health and Safety Code Section 39013, to the atmosphere may require a permit. Permits are required for both construction and operation. Developers/contractors should contact the District prior to construction and obtain any necessary permits prior to the issuance of a Building					

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Permit. (Rule 501) • Pursuant to the Placer County Air Pollution Control District Rule 501, General Permit Requirements, the proposed project may need a permit from the District prior to construction. In general, any engine greater than 50 brake horsepower or any boiler with heat greater than 1,000,000 Btu per hour shall require a permit issued by the District. (Rule 501) • All on-site stationary equipment which is classified as 50 hp or greater shall either obtain a state issued portable equipment permit or a Placer County APCD issued portable equipment permit. (California Portable Equipment Registration Program, Section 2452). • The contractor shall utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary diesel power generators if feasible. • During construction, the contractor shall minimize idling time to a maximum of 5					

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minutes for all diesel powered equipment. • During construction, traffic speeds on all unpaved surfaces shall be limited to 15 miles per hour or less. (Rule 228/section 401.2)					
SVSP EIR WMM 4.4-3: Measures to reduce operational emissions. Following receipt of an application for a Tentative Maps (excluding the large lot subdivision map) or Design Review Permit for individual projects with the Specific Plan, the City will forward an early consultation notice to the Placer County Air Pollution Control District (PCAPCD). Where the PCAPCD provides comments on a specific development proposal, the City shall consult with PCAPCD and the developer to incorporate measures recommended by the PCAPCD and City into the project. Where the PCAPCD does not provide comment on a specific development proposal, the City shall incorporate measures that reduce vehicle emissions and operation emissions from the proposed development. This measure will be implemented through project design, conditions of approval, noticing and disclosure statements,	The Applicants shall provide this information as general notes on the grading plans. The Public Works Director shall review plans for inclusion of this measure prior to issuance of building permits. The City Code Enforcement Officer shall respond to complaints.	Prior to issuance of grading permits	The Public Works Director and Code Enforcement Officer shall ensure that the dust control measures are implemented.	Required plans and proof of submittal to PCAPCD	

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or through the City's plan check and inspection processes. This process is intended to ensure that best available and practical approaches are used to reduce operational emissions in specific tentative map and design review permit applications. The following is a listing of the types of potential measures that could be implemented for the purpose of further reducing vehicle and operational emissions. • Provide tree plantings that meet or exceed the requirements of the City's Community Design Guidelines to provide shading of buildings and parking lots. • Landscape with native drought-resistant plants (ground covers, shrubs and trees) with particular consideration of plantings that are not reliant on gas-powered landscape maintenance equipment. • Require all flat roofs on non-residential structures to have a white or silver cap sheet to reduce energy demand. • Provide conductive/inductive electric vehicle charging station and signage prohibiting parking for non-electric vehicles within					

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designated spaces within non-residential developments. • Provide vanpool parking only spaces and preferential parking for carpools to accommodate carpools and vanpools in employment areas (e.g. community commercial, business-professional uses) • All truck loading and unloading docks shall be equipped with one 110/208 volt power outlet for every two-dock doors. Signs shall be posted stating “Diesel trucks are prohibited from idling more than five minutes and trucks requiring auxiliary power shall connect to the 110/208-volt outlets to run auxiliary equipment”. • Design streets to maximize pedestrian access to transit stops. • Require site design to maximize access to transit lines, to accommodate bus travel, and to provide lighted shelters at transit access points. • Develop the plan consistent with the higher residential densities (within approved					

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residential density ranges of zone) provided around the village nodes and transit corridors. • Include photovoltaic systems in project design and/or participate in Roseville Electric incentive programs for energy-efficient development. Measures for Detached Single-Family Residences: • Require electrical outlets be installed on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment. • Require installation of a gas outlet in the rear of residential buildings for use of outdoor cooking appliances, such as gas burning barbeques. • Require installation of low nitrogen oxide (NOx) hot water heaters (beyond District Rule 246 requirements) • Provide notice to homebuyers of incentive and rebate programs available through Roseville Electric or other providers that					

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encourage the purchase of electric landscape maintenance equipment. • Only gas fireplaces should be permitted. Where propane or natural gas service is not available, only EPA Phase II certified wood-burning devices shall be allowed in single-family residences. The emission potential from each residence shall not exceed 7.5 grams per hour. Wood-burning or Pellet appliances shall not be permitted in multi-family developments.					
SVSP EIR WMM 4.4-7: Risk assessment and site specific measures. Users that could generate toxic air contaminants will be required to submit a Permit to Operate to the PCAPCD. The District will review the use and if a proposed project would cause the combined emissions of TACs to exceed the risk standard of ten in one million at residences or public uses (schools, parks, etc.), additional modeling and/or environmental review would be required to demonstrate emissions from that use or other uses would be reduced so that the standard is not exceeded. For example, an	The applicant shall submit a Permit to Operate to the Placer County Air Pollution Control District during the design review process.	Applicants shall obtain a permit to operate from the PCAPCD, as needed, prior to issuance of a certificate of occupancy.	The Placer County Air Pollution Control District shall review proposals and notify the Planning Director should a proposed use exceed the TAC threshold. The Planning Director and Environmental Coordinator shall determine if additional environmental review is required prior to	Copy of Permit to Operate, if applicable	

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applicant could proposed to retrofit an existing operation in order to lower the total TAC emissions in the SVSP area.			approval of the use and ensure that measures are implemented to reduce exposure to TACs.		
Biological Resources					
SVSP EIR MM 4.8-2: Relocate western spadefoots. The location of pools that are occupied by western spadefoot shall be determined through surveys conducted during the appropriate season (generally February), by a qualified biologist. Those pools that are found to support western spadefoot shall be avoided if feasible. If avoidance is not feasible, then the CDFG shall be consulted for its recommendation with respect to an adult or larval or egg masses capture and relocation plan. Although there is no set protocol for this type of activity, the capture and relocation of reptile and amphibian species from areas that will be destroyed to areas of unoccupied suitable habitat is a fairly standard part of both USFWS and CDFG procedures and	The applicants shall obtain appropriate permits from the Corps and USFWS to ensure that there is no net loss of wetlands. The Applicants shall prepare annual reports on the status and success of mitigation and shall submit these responses to USFWS. The Applicants shall coordinate with USFWS to modify as necessary any mitigation plans in an effort to attain mitigation success.	Prior to issuance of grading permit	The City's Environmental Coordinator shall ensure that onsite wetlands are preserved and maintained consistent with the Operations and Maintenance Plan.	Results of surveys and copy of permits from the Corps and USFWS	

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recommendations for mitigating impacts. When done in combination with habitat restoration and preservation, the procedure is known to be successful in preserving displaced populations. These measures would mandate that, where habitat avoidance is infeasible, western spadefoots displaced from pools that are destroyed during construction shall be relocated to protected areas of suitable habitat.					
SVSP EIR MM 4.8-3: Avoid nesting sites. To ensure that fully protected bird and raptor species are not injured or disturbed by construction in the vicinity of nesting habitat, the project applicant shall implement the following measures: *Raptors* a) When feasible, all tree removal shall occur between August 30th and February 15th to avoid the breeding season of any raptor species that could be using the area, and to discourage hawks from nesting in the vicinity of an upcoming construction area. b) For Swainson's hawk, if avoidance of tree	Results of preconstruction surveys shall be submitted to the Chief Building Inspector prior to the issuance of a grading permit. Applicable construction restrictions shall be reflected within building plans. The applicants shall prepare annual reports on the status and success of mitigation and shall submit these reports to USFWS and CDFG. The applicants shall coordinate with USFWS and	Prior to approval of grading and building permits.	The Chief Building Inspector shall ensure that appropriate measures are reflected in the grading permit and/or building plans. The Building Official shall ensure that construction contractors comply with the measures. The Code Enforcement Inspector shall enforce the City's	Pre-construction surveys, if applicable	

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removal outside the breeding season is not feasible, and a nest is present, the applicants would be required to obtain a 2081 permit from CDFG to mitigate for potential "take" under CESA. If no nesting is occurring, a take permit would not be required. c) Prior to the beginning of mass grading, including grading for major infrastructure improvements, during the period between February 15th and August 30th, all trees and potential burrowing owl habitat within 350 feet of any grading or earthmoving activity shall be surveyed for active raptor nests or burrows by a qualified biologist no more than 30-days prior to disturbance. If active raptor nests or burrows are found, and the site is within 350-feet of potential construction activity, a highly visible temporary fence shall be erected around the tree or burrow(s) at a distance of up to 350-feet, depending on the species, from the edge of the canopy to prevent construction disturbance and intrusions on the nest area. d) Preconstruction and non-breeding season	CDFG to modify as necessary any mitigation plans in an effort to attain mitigation success.		regulations. The Environmental Coordinator shall oversee open space areas for compliance with the Operations and Maintenance Plan.		

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exclusion measures shall be developed in consultation with CDFG, and shall preclude burrowing owl occupation of the portions of the project site subject to disturbance such as grading. Burrowing owls may be passively excluded from burrows in construction areas by placing one-way doors in the burrows according to CDFG protocol. The one-way doors must be in place for a minimum of three days. All burrows that may be occupied by burrowing owls regardless of whether they exhibit signs of occupation must be cleared with the one way doors. Burrows that have been cleared through the use of the one-way doors shall then be closed or backfilled to prevent owls from entering the burrow. e) No construction vehicles shall be permitted within restricted areas (i.e., raptor protection zones) unless directly related to the management or protection of the legally protected species. f) If a legally protected species nest is located in a tree designated for removal, the removal shall be deferred until after August 30th or					

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until the adults and young of the year are no longer dependent on the nest site as determined by a qualified biologist. *Black Rails and Tri-colored Blackbirds* Prior to earth moving that would disturb marsh habitat, a qualified biologist shall conduct surveys to determine the presence of the California black rail. If either of these species is found, all earth moving within 250 feet shall stop and measures, including establishing nest protection buffers along both sides of Curry Creek during the nesting season (generally February 1 through August 31st) shall be implemented. *Rookeries* No heron rookeries are present within the plan area. Prior to earthmoving that would disturb marsh habitat or tree removal of the eucalyptus grove, pre-construction surveys should be conducted to verify that no rookeries have been established. If rookeries are present all earth moving within 250-feet shall stop, during the breeding season.					

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SVSP EIR MM 4.8-4: Off-site and on-site preservation of grassland habitat. *Swainson's Hawk* CDFG recommends that projects that result in the loss of potential foraging habitat for Swainson's hawk (which includes grasslands) within 10-miles of an active nest site provide mitigation for that loss. To the extent feasible, strategies for preserving on-site grasslands as raptor and migratory bird foraging habitat will be addressed in the Operations and Maintenance Plan prepared pursuant to the Section 404 Permit. Some of these strategies could include; but are not necessarily limited to, grazing for grassland management, monitoring for biological values, and adaptive management. Mitigation for Swainson's hawk foraging habitat would concurrently mitigate for loss of habitat for a number of other wildlife species in the region such as burrowing owl, red-tailed hawk, white-tailed kite, northern harrier, Ferruginous hawk, and logger-head shrike among others. Based on information obtained through consultation with CDFG and otherwise, a	Appropriate environmental review and appropriate permits shall be conducted and obtained in accordance with applicable rules and regulations governing the protection of listed species.	Prior to issuance of grading permit	The City's Environmental Coordinator shall ensure that grassland habitats are preserved and maintained consistent with the Operations and Maintenance Plan.	Operations and Maintenance Plan prepared pursuant to Section 404 permit, if applicable	

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Swainson's Hawk Grassland Habitat Mitigation Plan shall be developed to mitigate for the loss of grassland foraging habitat, consistent with the ratios set forth in Table 4.8-7 in the SVSP EIR. Areas within Placer County including the Toad Hill Mitigation Bank, the Western Placer Schools Mitigation Area and a portion of Koshman Ranch and other sites that will be located within Placer County via conservation easements or other mechanisms would provide a total of 1,036 upland/grassland acres. This would reduce the impacts to Swainson's Hawk to a less than significant level. *Long-billed Curlew, Burrowing Owls* Mitigation for the Swainson's hawk would ensure that adequate grassland is preserved at ratios identified in Table 4.8-7 in the SVSP EIR. For foraging within one mile of an active nest, mitigation would be 1:1. Greater than a mile would be at an amount of .75:1. This would set aside adequate grassland that would reduce impacts from loss of grasslands to these species to a less than significant level.					
SVSP EIR MM 4.8-7: Off-site surveys.	Appropriate biological	Prior to issuance of	The Director of Public	Biological	

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Prior to construction of any off-site infrastructure, a qualified biologist shall perform detailed, and if necessary, focused biological surveys of any undisturbed areas that would be affected by infrastructure development. Because infrastructure for the proposed project would be located in road right-of-way, or undeveloped land similar to the project site, the biological resources that would be expected to occur would not differ substantially from those identified in the SVSP EIR. If it is determined that wetland resources or sensitive species would be impacted MM 4.8-1 and MM 4.8-2 shall be implemented, as appropriate to the resource. If it is determined that active nests exist within the off-site improvement location, MM 4.8-3 shall be implemented as appropriate to the species. If it is determined the off-site improvement is located within or adjacent to a wildlife movement corridor, MM 4.8-5 shall be implemented.	surveys, environmental review, and appropriate permits shall be conducted in accordance with applicable rules and regulations governing the protection of listed species.	grading permit	Works and the Environmental Coordinator shall ensure that the appropriate environmental review and permits are obtained and measures implemented to reduce impacts associated with off-site infrastructure.	surveys, if applicable	
Cultural Resources					
SVSP EIR MM 4.9-1: Cease work and consult with a qualified archaeologist.	This condition shall be reflected in all construction	Prior to issuance of grading permit and/	The Public Works Director will ensure	None	

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Should any cultural resources, such as structural features, any amount of bone or shell, artifacts, human remains, or architectural remains, be encountered during any subsurface development activities, work shall be suspended within 100-feet of the find. The City of Roseville Planning and Public Works Staff shall be immediately notified. At that time, the City of Roseville shall coordinate any necessary investigation of the site with qualified archaeologists as needed, to assess the resource (i.e., whether it is an "historical resource" or a "unique archaeological resource") and provide proper management recommendations should potential impacts to the resources be found to be significant. Possible management recommendations for important resources could include resource avoidance or, where avoidance is infeasible in light of project design or layout or is unnecessary to avoid significant effects, data recovery excavations. The contractor shall implement any measures deemed feasible and necessary by City staff, in consultation with the archaeologists, to be to avoid or minimize significant effects to the cultural resources. In	and building plans. The Public Works Director shall review plans for inclusion and permits of specifications prior to the issuance of building permits.	or approval of improvement plans.	that appropriate measures are reflected in the grading permit and/or building improvement plans. The Building Official shall ensure that construction contractors comply with the measures. The Code Enforcement Inspector shall enforce the City's regulations.		

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addition, pursuant to Section 5097.98 or the State Public Resources Code, and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.					
SVSP EIR MM 4.9-5: Conduct appropriate off-site studies. Prior to undertaking construction of off-site infrastructure, the City shall determine whether or not cultural resource surveys have been undertaken for any areas to be disturbed during construction. If surveys were conducted, the City shall document that any identified resources were treated as recommended in the studies. If no studies or surveys were conducted, the City shall ensure that a qualified archaeologist conducts the appropriate level of study. If resources are found, recommendations shall be implemented to ensure that the resources are avoided, protected and/or recorded, as	Cultural resource surveys shall be conducted by a qualified archaeologist and any resulting recommendations to protect resources shall be reflected in all construction and building plans. The Public Works Director shall review plans for inclusion of specifications prior to the issuance of building permits.	During construction, as a condition of Grading and Building Permits.	The Public Works Director shall ensure that appropriate measures are reflected in the grading permit and/or building plans. The Building Official shall ensure that construction contractors comply with the measures. The Code Enforcement Inspector shall	None	

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determined to be feasible and appropriate by City staff.			enforce the City's regulations. The Environmental Coordinator shall oversee open space areas for compliance with the Operations and Maintenance Plan. The Parks and Recreation Director shall ensure that measures to protect and mitigate historic resources are implemented for any historic structures within parks property.		
Energy					
SVSP EIR MM 4.4-1: Dust and construction control measures.	See above.				
SVSP EIR WMM 4.4-3: Measures to reduce operational emissions.	See above.				

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SVSP EIR MM 4.5-2: Additional measures to reduce GHG emissions. For each new development within the project site requiring a discretionary approval (e.g., tentative subdivision map, conditional use permit), the City shall impose mitigation measures that reduce GHG emissions to the extent feasible and to the extent appropriate with respect to the state's progress at the time toward meeting GHG emissions reductions required by the California Global Warming Solutions Act of 2006 (AB 32). The City shall require feasible reduction measures that, in combination with existing and future regulatory measures developed under AB 32, will reduce GHG emissions associated with the operation of developments and supporting infrastructure that are part of the proposed project by 30% from business-as-usual emissions levels projected for 2025, if feasible.	The applicant shall submit construction management plans as part of the Grading Permit application. The Public Works Director shall review grading plans for inclusion of these measures prior to issuance of grading permits. The City Code Enforcement Officer shall respond to complaints. In addition, plans will be reviewed by the Placer County Air Pollution Control District for compliance with their rules and regulations.	Prior to issuance of Grading Permits.	Director of Public Works shall ensure that dust and construction-control measures are implemented.	None	
Geology and Soils					
SVSP EIR MM 4.9-3: Cease work until review is conducted by a qualified paleontologist and	This condition shall be reflected in all construction	During construction, as a condition of	The Public Works Director will ensure	None	

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recommendations are implemented. Should any evidence of paleontological resources (e.g. fossils) be encountered during grading or excavation, work shall be suspended within 100 feet of the find, and the City of Roseville shall be immediately notified. At that time, the City shall coordinate any necessary investigation of the site with a qualified paleontologist to assess the resource and provide proper management recommendations. Possible management recommendations for important resources could include resource avoidance, if feasible in light of project design or layout, or data recovery excavations. The contractor shall implement any measures deemed feasible and necessary by City staff in consultation with the paleontologist for the protection of the paleontological resources.	and building plans and permits. The Public Works Director shall review plans for inclusion of specifications prior to the issuance of building permits.	Grading and Building Permits.	that appropriate measures are reflected in the grading permit and/or building plans. The Building Official shall ensure that construction contractors comply with the measures. The Code Enforcement Inspector shall enforce the City's regulations.		
Greenhouse Gases					
SVSP EIR MM 4.4-1: Dust and construction control measures.	See above.				
SVSP EIR MM 4.5-2: Additional measures to	See above.				

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reduce GHG emissions.					
Hazards and Hazardous Materials					
SVSP EIR MM 4.10-1: Identify potential hazardous materials (soil contamination, tank or well sites, lead based paint and/or asbestos). Prior to site development in the SVSP, recommended testing and remediation, if needed shall occur. Groundwater wells shall be properly closed. If evidence of soil contamination, septic tanks, or other underground storage tanks are encountered in previously unidentified locations in the SVSP area, work shall cease until the area can be tested, and if necessary remediated and/or properly removed or closed. Remediation activities could include removal of contaminated soil, and/or onsite treatment. As part of the process, the City shall ensure that any necessary investigation and/or remediation activities are coordinated with the Roseville Fire Department, Placer County Division of Environmental Health, and if needed, other appropriate federal, state and local agencies.	The applicants shall be responsible for conducting soil testing and/or recommendation of the Phase I environmental site assessments.	Prior to issuance of building permits	The Roseville Fire Department shall oversee any activities related to hazardous materials.	Phase I environmental assessment, if conditions warrant	

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Once a site is remediated, construction can continue.					
Hydrology and Water Quality					
SVSP EIR WMM 4.12-2: Pay fair share of Roseville regional stormwater retention facility improvements. The City shall collect the Pleasant Grove Drainage fee from the applicants prior to the approval of each building permit, which would cover the cost of retention for that development's portion of the Roseville regional retention basin at Reason Farms.	The City shall collect the Pleasant Grove Drainage fee from applicants.	Prior to the issuance of Building Permits	The Public Works Director shall monitor and ensure that the Pleasant Grove drainage fee is collected.	None	
SVSP EIR MM 4.13-1: Implement construction activity stormwater protection standards. Prior to the issuance of a City grading permit and the commencement of construction activities, compliance with the State's General Construction permit, the City of Roseville's Construction Standards, and the City's Stormwater BMP Guidance Manual will be met. This includes the creation of a Storm Water Pollution Prevention Plan (SWPPP) that will	This condition shall be reflected in all construction and building plans. The Public Works Director shall review plans for inclusion of specifications prior to the issuance of building permits.	Prior to issuance of grading or building permits.	The Public Works Director shall ensure that appropriate measures are reflected in the grading permit and/or building plans. The Building Official shall ensure that construction contractors comply	Storm Water Pollution Prevention Plan (SWPPP)	

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identify the site, the location of sensitive habitats or watercourses, drainage areas, discharge locations, soil disturbance areas, and the locations of all runoff, erosion control, and sediment control Best Management Practices (BMPs). On-going monitoring and adjustments to the SWPPP will occur when needed to address changes in the field as construction activities evolve.			with the measures. The Code Enforcement Inspector shall enforce the City's regulations.		
Land Use and Planning					
SVSP EIR MM 4.6-1: Construction noise reduction. MM 4.6-1(a): Construction activities shall comply with the requirements of the City of Roseville Noise Ordinance. MM4.6-1(b): Locate fixed construction equipment such as compressors and generators as far as possible from sensitive receptors. Shroud or shield all impact tools, and muffle or shield all in-take and exhaust ports on power construction equipment. MM 4.6-1(c): Designate a construction disturbance coordinator and conspicuously post	These measures shall be included on building plans. The Chief Building Inspector shall review plans for inclusion of these measures prior to issuance of building permits. The Code Enforcement Inspector shall respond to complaints.	Prior to approval of grading permits and/or building permits.	The Chief Building Inspector shall ensure that appropriate noise control measures are reflected in the building plans. The Building Official shall ensure that construction contractors comply with the measures. The Code Enforcement Inspector shall	None	

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the Coordinator's contact information around the project site and in adjacent public spaces. The disturbance coordinator will receive all public complaints about construction noise disturbances, and will be responsible for determining the cause of the complaint, and implementing any feasible measures to be taken to alleviate the problem. MM 4.6-1(d): Well drilling shall occur prior to construction of the adjacent subdivision, to the extent feasible. If construction timing for the wells occurs after subdivision construction, then measures to reduce noise shall include; hanging flexible sound control curtains around the drilling apparatus, and the drill rig, to the degree feasible, as determined by the Environmental Utilities Director, if located within 1,000-feet of an occupied residence.			enforce the City's Noise Ordinance regulations.		
Noise					
SVSP EIR MM 4.6-1: Construction noise reduction.	See above				
SVSP EIR MM 4.6-4: Traffic noise attenuation.	Applicants shall submit site-specific acoustical analyses	Prior to issuance of	The Chief Building Inspector shall ensure	An acoustical study, if	

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MM 4.6-4(a): Masonry walls and/or landscaped berms shall be constructed along the major project-area roadways adjacent to proposed residential uses if acoustical studies warrant sound attenuation, otherwise standard wood fencing is acceptable. Draft EIR Table 4.6-10 data shall be consulted to determine appropriate barrier heights. If the assumptions shown in Table 4.6-10 vary considerably, a detailed analysis of exterior and interior mitigation measures should be conducted when tentative maps become available. MM 4.6-4(b): In areas requiring sound attenuation, noise barrier walls shall be constructed of concrete panels, concrete masonry units, earthen berms, or any combination of these materials. Wood is not recommended for construction due to eventual warping and degradation of acoustical performance. MM 4.6-4(c): Tentative map applications for residential uses located along Fiddyment Road would be required to include an analysis of interior noise levels. The report shall be conducted by a qualified acoustical engineer	to the Chief Building Inspector for review.	building permits.	that appropriate noise control measures are reflected in the building plans. The Building Official shall ensure that construction contractors comply with the measures. The Code Enforcement Inspector shall enforce the City's Noise Ordinance regulations.	conditions or plans deviate from Specific Plan or EIR.	

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and shall specify the measures required to achieve compliance with the City of Roseville 45 dB Ldn interior noise level standard.					
SVSP EIR MM 4.5-8: On-site traffic noise attenuation. The project developer shall demonstrate through an acoustical study that residences along roadways will be subject to noise levels consistent with the City's standards. The standards could be achieved through a combination of setbacks, soundwalls or other barriers, building orientation or other measures. An acoustical analysis shall be required to demonstrate that these measures will result in acceptable noise levels.	Applicants shall submit site-specific acoustical analyses to the Chief Building Inspector for review.	Prior to issuance of building permits.	The Chief Building Inspector shall ensure that appropriate noise control measures are reflected in the building plans. The Building Official shall ensure that construction contractors comply with the measures. The Code Enforcement Inspector shall enforce the City's Noise Ordinance regulations.	An acoustical study, if conditions or plans deviate from Specific Plan or EIR.	
Public Services					
SVSP EIR MM 4.11.3-2: Safe routes to school. The applicants shall work with the school	Prior to building permits being issued within the	Prior to issuance of building permits	The Planning Director and Public Works	None	

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districts to identify safe routes to school. The school district should encourage an appropriate mechanism for transporting students to schools, both within the specific plan area, as well as outside the project area. Bus programs would reduce traffic congestion and reduce potential air quality impacts.	SVSP, school transportation policies should be developed in coordination with appropriate school district.		Director shall ensure that student transportation issues are addressed in coordination with the appropriate school district.		
Tribal Cultural Resources					
SVSP EIR MM 4.9-1: Cease work and consult with a qualified archaeologist.	See above.				
SVSP EIR MM 4.9-5: Conduct appropriate off-site studies.	See above.				
Utilities and Service Systems					
SVSP EIR WMM 4.11-5: Wastewater treatment plant capacity. Prior to obtaining building permits for development that would cause total wastewater flows from SVSP to contribute to total flows at the PGWWTP exceeding 75 percent utilization of treatment plant capacity (General Plan Policy	The applicants shall demonstrate that the PGWWTP shall be expanded.	Prior to issuance of building permit that would cause total wastewater flows to exceed 75 percent utilization of treatment plant	The Environmental Utilities Director shall monitor the capacity of the PGWWTP and ensure that expansion occurs in advance of the need.	None	

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3), the City shall confirm that the PGWWTP has adequate capacity and/or will be expanded to accommodate total flow from the SVSP by the time needed to serve that development. This includes obtaining all necessary permits to discharge the treated flow. The City shall also demonstrate that the timing of the plant expansion will be adequate to serve the SVSP area without impeding other planned development within the 2005 SAB. The City shall ensure that all relevant mitigation measures identified in the Wastewater Master Plan EIR are implemented. A list of mitigation measures applicable to this project area are found in Appendix H of the SVSP EIR.		capacity.			
SVSP EIR MM 4.12.4-2: Divert construction debris. The applicants shall ensure a 50% reduction in the construction waste stream generated from development within the SVSP. In Developer contracts with construction contractors and their sub-contractors, the Developer shall require that construction waste be reduced by 50%. The Developer shall further require that contractors and sub-contractors submit records of diversion	Applicants and contractors shall keep and submit records demonstrating 50% reduction in construction waste.	At the time of construction, debris will be diverted to an appropriate recycling facility	The Environmental Utilities Director shall ensure that the Applicants are complying with the construction debris diversion requirements.	Records of diversion	

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and disposal to the City's Environmental Utilities Department in order to verify compliance with this requirement.					