Initial Study -
Attachment 1

Air Quality and Greenhouse Gas Impact Analysis

Eureka Road Medical Office Building Project

Prepared for:

Pappas Gateway, LP

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Introduction

This Air Quality and Greenhouse Gas Impact Analysis identifies and analyzes the potential environmental impacts from the Eureka Road Medical Office Building Project (proposed project) related to air quality and greenhouse gas (GHG) emissions. The information and analysis in this document is organized in accordance with the checklist in Appendix G of the California Environmental Quality Act (CEQA) Guidelines. If the analysis provided in this document identifies potentially significant environmental effects of the project, mitigation measures that should be applied to the project are prescribed. All modeling results are included as Appendix A of this document.

Project Summary

The proposed project would include the construction of a new medical office building and associated parking lot located near the southeastern corner of the Eureka Road and Rocky Ridge Drive intersection in the City of Roseville, California. The project site consists of a total of 5.7 acres of currently vacant land. The total building square footage would be up to 75,000. A total of 467 parking spaces would be provided, including handicapped, standard, and compact parking. In addition, 24 bike parking spaces would be provided on-site. Access to the site would be provided from Rocky Ridge Drive and Eureka Road. Figure 1 presents the Site Plan for the proposed project. For the purposes of this analysis, operation of the proposed project was assumed to require the use of an emergency diesel generator on-site in order to provide continuous power operation during utility power outages, as required by the California Building Code.

Buildout of the project site would be considered infill development, as existing commercial developments generally surround the project site (see Figure 2, Project Vicinity Map). An existing Chevron gas station is located immediately adjacent to the site at the southeastern corner of the Eureka Road and Rocky Ridge Drive intersection. Existing commercial uses and associated parking areas are located immediately southeast of the project site, including an office building, retail, and a movie theatre. A parking lot associated with Sullivan Automotive Group is located along the northeastern border of the site. Opposite Rocky Ridge Drive and Eureka Road from the site are predominantly additional commercial uses. The nearest residential area to the project site would be the Rosemeade at Olympus Pointe apartment complex located opposite the Sullivan Automotive Group parking lot to the northeast.

Construction of the proposed project has been assumed to commence in June of 2017 and would be fully operational by December of 2018. Construction would not require the import or export of soil, as the site is anticipated to be balanced. The project applicant intends to incorporate a variety of sustainable design features into the proposed project, which would include, but not necessarily be limited to, the following:

- Compliance with the City's Water Efficient Landscape Ordinance and the California Green Building Code requirements regarding water conservation;
- Short- and long-term bicycle parking facilities;
- Designated car/vanpool and Clean Air vehicle parking spaces;

Figure 1
Proposed Project Site Plan

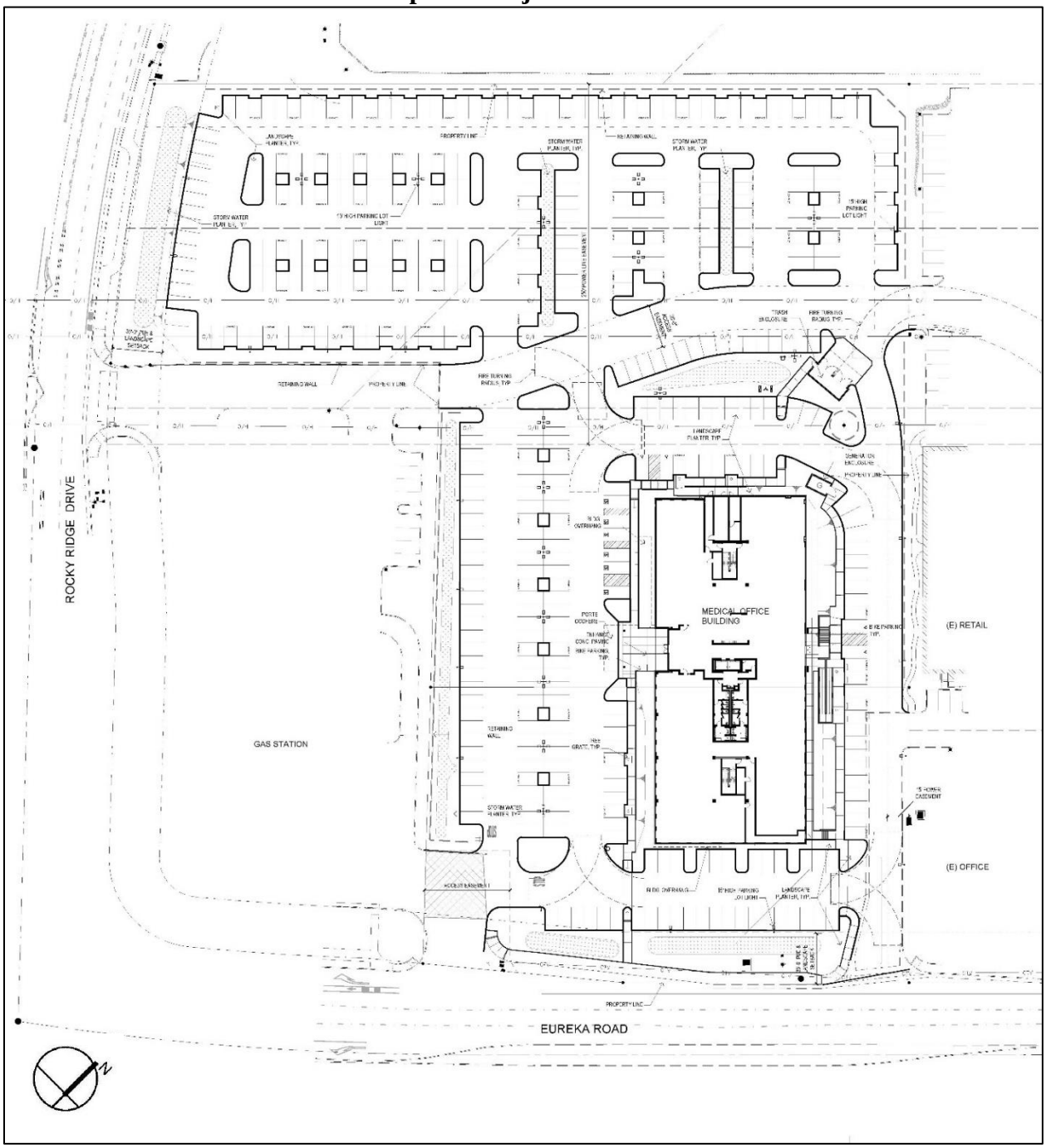

Figure 2
Project Vicinity Map

- Seating area at main entrance of building for dial-a-ride and other ride share services;
- Electric vehicle charging station;
- Pedestrian connectivity from the street and designated path along landscaped areas;
- High efficacy glazing on building;
- Cool roof; and
- Low-flow toilets, urinals, and faucets.

In addition, due to the project location, the following site features are inherent in the proposed project design:

- Within walking distance to public transportation (two existing bus stops are located approximately 0.25 mile from the project site – one near the intersection of North Sunrise Avenue and Eureka Road to the northwest and one at Lead Hill Boulevard and Rocky Ridge Road to the southwest);
- Existing network of pedestrian and bicycle connections in vicinity (bike lanes and sidewalks provided along nearby roadways and access to Miner's Ravine Trail is located approximately 0.36 mile northeast of the project site);
- Near major transportation routes (i.e., Interstate 80 [I-80] is less than a mile from the site and Highway 65 is less than two miles from the site);
- Near existing residential developments; and
- Near existing commercial uses, including retail and restaurants.

Sources

1. California Air Pollution Control Officers Association. *Quantifying Greenhouse Gas Mitigation Measures*. August 2010.
2.
3. California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.
4. California Air Resources Board. *Ambient Air Quality Standards*. Available at: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf. May 04, 2016.
5. California Air Resources Board. *First Update to the Climate Change Scoping Plan*. May 15, 2014.
6. California Air Resources Board. *Final Supplement to the AB 32 Scoping Plan Functional Equivalent Documen*t. August 19, 2011.
7. California Department of Transportation. *Transportation Project-Level Carbon Monoxide Protocol*. December 1997.
8. ENVIRON International Corporation and the California Air Districts. *California Emissions Estimator Model User's Guide Version 2016.3.1*. September 2016.
9. KD Anderson & Associates, Inc. *Eureka Gateway Medical Office Building Project Trip Generation Study*. January 27, 2017.
10. Kimley-Horn. *Traffic Evaluation, Eureka Road Medical Office Buildings (PL16-0169).* November 2, 2016.
11. Placer County Air Pollution Control District. *CEQA Air Quality Handbook*. October 11, 2012.

12. Placer County Air Pollution Control District. *Placer County Air Pollution Control District Policy. Review of Land Use Projects Under CEQA.* October 13, 2016
13. Sacramento Metropolitan Air Quality Management District. *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2013 SIP Revisions).* September 26, 2013.
14. Shijo, Wayne, Project Manager, KD Anderson and Associates, Inc. Personal communication [email] with Rod Stinson, Division Manager/Air Quality Specialist, Raney Planning and Management. February 8, 2017. Appendix B.

III. AIR QUALITY. *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	✖	☐
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	✖	☐
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	✖	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	✖	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	✖	☐

Discussion

a,b. The City of Roseville is located within the boundaries of the Sacramento Valley Air Basin (SVAB) and under the jurisdiction of the Placer County Air Pollution Control District (PCAPCD). The federal Clean Air Act (CAA) and the California Clean Air Act (CCAA) require that federal and State ambient air quality standards (AAQS) be established, respectively, for six common air pollutants, known as criteria pollutants. 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, the SVAB area is designated as nonattainment for the 8-hour ozone and the 24-hour particulate matter 2.5 microns in diameter ($PM_{2.5}$) AAQS, and attainment or unclassified for all other federal criteria pollutant AAQS. At the State level, the SVAB area is designated as nonattainment for the 1-hour ozone, 8-hour ozone, particulate matter 10 microns in diameter (PM_{10}), and $PM_{2.5}$ AAQS, and attainment or unclassified for all other State AAQS.

The CAA requires each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The SIPs are modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins, as reported by their jurisdictional agencies. Due to the nonattainment designations, PCAPCD, along with the other air districts in the SVAB region, periodically prepares and updates air quality plans that provide emission reduction strategies to achieve attainment of the NAAQS, including control strategies to reduce air pollutant emissions via regulations, incentive programs, public education, and partnerships with other agencies. The current applicable air quality plan for the proposed project area is the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (Ozone Attainment Plan), adopted by the PCAPCD on February 19, 2009, which was approved on March 26, 2009 as a revision to the SIP. Revisions to the Placer County portion of the SIP or Ozone Attainment Plan were made and adopted on August 11, 2011. The U.S. Environmental

Protection Agency (USEPA) approved an update to the plan, 2013 Revisions to the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2013 Ozone Attainment Plan) on January 9, 2015.

General conformity requirements of the regional air quality plan include whether a project would cause or contribute to new violations of any NAAQS, increase the frequency or severity of an existing violation of any NAAQS, or delay timely attainment of any NAAQS. In order to evaluate ozone and other criteria air pollutant emissions and support attainment goals for those pollutants that the area is designated nonattainment, the PCAPCD recommends significance thresholds for emissions of PM_{10} and ozone precursors – reactive organic gases (ROG) and oxides of nitrogen (NO_X). On October 13, 2016, the PCAPCD adopted updated significance thresholds for the aforementioned pollutants.

The significance thresholds, expressed in pounds per day (lbs/day), listed in Table 1 are the PCAPCD's recommended thresholds of significance for use in the evaluation of air quality impacts associated with proposed development projects. The City of Roseville, as lead agency, utilizes the PCAPCD's recommended thresholds of significance for CEQA evaluation purposes. Thus, if the proposed project's emissions exceed the pollutant thresholds presented in Table 1, the project could have a significant effect on air quality, the attainment of federal and State AAQS, and could conflict with or obstruct implementation of the applicable air quality plan.

Table 1
PCAPCD Thresholds of Significance

Pollutant	Construction Threshold (lbs/day)	Operational Threshold (lbs/day)
ROG	82	55
NO_X	82	55
PM_{10}	82	82

Source: Placer County Air Pollution Control District. Placer County Air Pollution Control District Policy. Review of Land Use Projects Under CEQA. October 13, 2016.

Implementation of the proposed project would contribute local emissions in the area during construction and operation of the proposed project. The proposed project's short-term construction-related and long-term operational emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.1 software (CalEEMod) – a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including trip generation rates based on the Institute of Transportation Engineers (ITE) Manual, vehicle mix, trip length, average speed, etc. However, where project-specific data is available, such data should be input into the model. As such, the proposed project's modeling assumed the following:

- Construction was assumed to commence in June 2017 and would occur over an approximately one-year period;
- Approximately 5.7 acres would be disturbed during grading of the site;

- An average daily trip rate of 31.44 was assumed, based on trip generation information provided by KD Anderson & Associates, Inc.;
- Operations of the proposed project would involve use of an on-site generator to provide emergency power only; and
- Compliance with the 2016 California Building Energy Efficiency Standards Code.

The proposed project's estimated emissions associated with construction and operations are presented and discussed in further detail below.

Construction Emissions

During construction of the project, various types of equipment and vehicles would temporarily operate on the project site. Construction exhaust emissions would be generated from construction equipment, vegetation clearing and earth movement activities, construction worker commutes, and construction material hauling for the entire construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Project construction activities also represent sources of fugitive dust, which includes PM emissions. As construction of the proposed project would generate air pollutant emissions intermittently within the site, and the vicinity of the site, until all construction has been completed, construction is a potential concern because the proposed project is in a non-attainment area for ozone and PM.

All projects under the jurisdiction of PCAPCD are required to comply with all applicable PCAPCD rules and regulations. Accordingly, the proposed project would be required to comply with all applicable PCAPCD rules and regulations for construction, which would be noted on City-approved construction plans. The applicable rules and regulations for construction would include, but would not be limited to, the following:

- Rule 202 related to visible emissions;
- Rule 217 related to cutback and emulsified asphalt paving materials;
- Rule 218 related to architectural coatings;
- Rule 228 related to fugitive dust;
- Rule 401 related to general permit requirements; and
- Regulation 3 related to open burning.

According to the CalEEMod results, the proposed project would result in maximum construction criteria air pollutant emissions as shown in Table 2. Assumptions used for the modeling are presented above and in Appendix A. CalEEMod inherently accounts for applicable PCAPCD rules, with the exception of Rule 218 related to architectural coatings; accordingly, the modeling was adjusted to reflect that the project would use only low-volatile-organic-compound (VOC) paints per PCAPCD Rule 218.

Table 2 Maximum Unmitigated Construction-Related Emissions			
Pollutant	**Project Emissions (lbs/day)**	**PCAPCD Significance Threshold (lbs/day)**	**Exceeds Threshold?**
ROG	6.49	82.0	**NO**
NO_X	52.35	82.0	**NO**
PM_{10}	21.09	82.0	**NO**
Source: CalEEMod, February 2017 (see Appendix A).			

As shown in the table, the proposed project's maximum unmitigated construction-related emissions would be below the applicable thresholds of significance. Therefore, construction activities associated with development of the proposed project would not substantially contribute to the PCAPCD's nonattainment status for ozone or PM. Accordingly, construction of the proposed project would not violate any AAQS or contribute to an existing or projected air quality violation or conflict with or obstruct implementation of the applicable air quality plan, and a less-than-significant impact would occur associated with construction.

Operational Emissions

Operational emissions of ROG, NO_X, and PM_{10} would be generated by the proposed project from area, energy, and mobile sources. Area sources include hearth usage, architectural coating vapors, landscape maintenance equipment exhaust, and use of consumer products (e.g., deodorants, cleaning products, spray paint, etc.). Energy sources include electricity and natural gas consumption. Mobile-source emissions would result from the future employee and patron vehicle trips. When in use, the emergency generator would contribute emissions of NO_X, CO and PM_{10}.

As stated above, the proposed project would be required to comply with all applicable PCAPCD rules and regulations, including the following related to operations:

- Rule 205 related to nuisances; and
- Rule 246 related to water heaters.

According to the CalEEMod results, the proposed project would result in maximum unmitigated operational emissions as shown in Table 3. Assumptions used for the modeling are presented above and in Appendix A. The proposed project would include installation of an emergency generator; however, the emergency generator would only be operated in emergencies and for periodic testing and maintenance. Nevertheless, the worst-case scenario for emissions was considered to occur during full operation of the proposed medical office with simultaneous operation of the emergency generator. Therefore, Table 3 separates the emissions that would result from operation of the proposed project without the generator, operation of the generator alone, and total operational emissions including generator operations. As shown in the table, the proposed project's operational emissions would be below the applicable thresholds of significance.

Table 3 Maximum Unmitigated Operational Emissions (lbs/day)			
	ROG	**NO_X**	**PM_{10}**
Proposed Project	13.65	15.32	7.96
Emergency Generator	3.15	8.81	0.46
Total Operational Emissions	16.80	24.13	8.42
PCAPCD Thresholds	55	55	82
Exceed Thresholds?	**NO**	**NO**	**NO**
Source: CalEEMod, February 2017 (see Appendix A).			

In addition, it should be noted that a permit would be required to be obtained by the PCAPCD for operation of the emergency generator, which would ensure that the associated emissions are monitored and regulated. Therefore, the proposed project would not substantially contribute to the PCAPCD's nonattainment status for ozone or PM during operations. Accordingly, operation of the proposed project would not violate any AAQS or contribute to an existing or projected air quality violation or conflict with or obstruct implementation of the applicable air quality plan, and a less-than-significant impact would occur associated with operations.

Conclusion

The proposed project's construction and operational emissions would not exceed the applicable thresholds of significance. In addition, the project would be required to comply with all applicable PCAPCD rules and regulations. Because the project would not exceed the thresholds of significance, the proposed project would not substantially contribute to the region's nonattainment status of ozone or PM. Therefore, implementation of the proposed project would not violate an air quality standard or contribute to an existing or projected air quality violation, and a ***less-than-significant*** impact related to air quality could occur.

c. A cumulative impact analysis considers a project over time in conjunction with other past, present, and reasonably foreseeable future projects whose impacts might compound those of the project being assessed. Due to the dispersive nature and regional sourcing of air pollutants, air pollution is already largely a cumulative impact. The nonattainment status of regional pollutants, including ozone and PM, is a result of past and present development, and, thus, cumulative impacts related to these pollutants could be considered cumulatively significant.

To improve air quality and attain the health-based standards, reductions in emissions are necessary within nonattainment areas. The project is part of a pattern of urbanization occurring in the greater Sacramento ozone nonattainment area. The growth and combined vehicle usage, and business activity within the nonattainment area from the project, in combination with other past, present, and reasonably foreseeable projects within Roseville and surrounding areas, could either delay attainment of the standards or require the adoption of additional controls on existing and future air pollution sources to offset emission increases. Thus, the project could cumulatively contribute to regional air quality health effects through emissions of criteria and mobile source air pollutants.

The PCAPCD recommends using the region's existing attainment plans as a basis for analysis of cumulative emissions. If a project would interfere with an adopted attainment plan, the project would inhibit the future attainment of AAQS, and thus result in a cumulative impact. As discussed above, the PCAPCD's recommended thresholds of significance for ozone precursors and PM_{10} are based on attainment plans for the region. Thus, the PCAPCD concluded that if a project's ozone precursor and PM_{10} emissions would be less than PCAPCD project-level thresholds, the project would not be expected to conflict with any relevant attainment plans, and would not result in a cumulatively considerable contribution to a significant cumulative impact. As a result, the PCACPD established operational phase cumulative-level emissions thresholds identical to the operational thresholds identified above, in Table 1.

As shown in Table 3 above, the proposed project would not result in emissions in exceedance of the applicable thresholds of significance for ozone precursors or PM_{10}. Accordingly, impacts related to the cumulative emissions of criteria pollutants for which PCAPCD is in non-attainment would be considered ***less than significant***.

d. 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 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. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics. The proposed project would not involve the creation of new housing; however, the proposed project involves the creation of a new medical office building, which could be considered a sensitive receptor due to the expected presence of persons with existing health problems. The nearest existing sensitive receptors to the site would be the residences associated with the Rosemeade at Olympus Pointe apartment complex located approximately 230 feet northeast of the project site, measured from edge of project site boundaries to nearest apartment building.

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

<u>Localized CO Emissions</u>

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. Implementation of the proposed project would increase traffic volumes on streets near the project site; therefore, the project would be expected to increase local CO concentrations. High levels of localized CO concentrations are only expected where background levels are high, and traffic volumes and congestion levels are high. The Statewide CO Protocol document identifies signalized intersections operating at Level of Service (LOS) E or F, or projects that would result in the worsening of signalized intersections to LOS E or F, as having the potential to result in localized CO concentrations

in excess of the State or federal AAQS, as a result of large numbers of cars idling at stop lights.[1]

Consistent with the State CO Protocol, the PCAPCD recommends further analysis for localized CO concentrations if the project would cause a signalized intersection to be degraded from an acceptable LOS (i.e., LOS A, B, C, or D) to an unacceptable LOS (i.e., LOS E or F), or substantially worsen an already existing unacceptable peak-hour LOS at an intersection, as determined by a traffic study. Substantially worsen is defined by PCAPCD as an increase in delay by 10 seconds or more (or by five percent).

To assess potential traffic impacts that could result from operation of the proposed project, Kimley Horn completed a Traffic Evaluation for the proposed project. The main intersection of concern is the intersection of Eureka Road and Rocky Ridge Drive. Kimley Horn evaluated the intersection under cumulative conditions, which is assumed to represent the worst-case traffic scenario. Per the Traffic Evaluation, the intersection would operate at an unacceptable LOS E under cumulative conditions without the addition of project-related traffic. Traffic related to operation of the proposed project would increase the delay at the intersection of Eureka Road and Rocky Ridge Drive from 57.4 seconds to 59.9 seconds, an increase of 2.5 seconds, during the PM peak hour. The increase in delay of 2.5 seconds would not be considered to substantially worsen the intersection according to the PCAPCD. Thus, the proposed project would not result in the degradation of an intersection operating at an acceptable LOS to an unacceptable LOS, nor would project substantially worsen operations at an intersection already operating at an unacceptable LOS.

Based on the above, the proposed project would not result in substantial concentrations of localized CO at any affected intersection. Therefore, the proposed project would not expose sensitive receptors to substantial pollutant concentrations.

TAC Emissions

Another category of environmental concern is TACs. 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, and rail yards. The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks from TACs are a function of both the concentration of emissions and the duration of exposure. Health-related risks associated with DPM in particular are primarily associated with long-term exposure and associated risk of contracting cancer.

As part of the *California Building Industry Association v. Bay Area Air Quality Management District* case, the California Supreme Court granted limited review to the

[1] California Department of Transportation. *Transportation Project-Level Carbon Monoxide Protocol*. December 1997.

question: Under what circumstances, if any, does CEQA require an analysis of how existing environmental conditions will impact future residents or users (receptors) of a proposed project? In the opinion published on December 17, 2015, the Supreme Court stated that even in those specific instances where evaluation of a project's potentially significant exacerbating effects on existing environmental hazards is appropriate, the evaluation of how future residents or users could be affected by the exacerbated conditions is still compelled by the project's impact on the environment, and not the environment's impact on the project.[2]

Considering the recent court rulings, while the proposed project would be considered a sensitive receptor, due to the presence of medical patients, consideration of potential impacts related to existing sources of TACs on future patients at the proposed medical office are outside of the scope of CEQA. However, potential sources of TACs related to operation or construction of the proposed project could have the potential to expose existing sensitive receptors to TACs. As discussed previously, the closest sensitive receptor to the project site are the residents of the Rosemeade at Olympus development, approximately 230 feet northeast of the project site.

The proposed project would involve the operation of a new stationary diesel emergency generator on-site, for which a permit from the PCAPCD would be required to be obtained for operation. Per the permit, the generator would be regulated and monitored to ensure any associated emissions are under specified limitations. In addition, the generator is intended to be used only for emergency situations in order to provide continuous power operation during utility power outages, as required by the California Building Code. As such, the generator would not be used regularly and, per the permit, would be limited to a maximum operation time for maintenance and testing of 40 hours per year. Therefore, the emergency generator would not be associated with, or expose sensitive receptors to, any substantial pollutant concentrations. Thus, the proposed project would not generate any substantial pollutant concentrations during operations.

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. However, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project, particularly so for the proposed project, as the construction activities associated with the proposed project would occur over an approximately one-year period. All construction equipment and operation thereof would be regulated per the State's In-Use Off-Road Diesel Vehicle Regulation. Project construction would also be required to comply with all applicable PCAPCD rules and regulations, particularly associated with permitting of air pollutant sources. In addition, construction equipment would operate intermittently throughout the course of a day, would be restricted to daytime hours per Chapter 9.24 of the City's Municipal Code, and would likely only occur over portions of the project site at a time.

[2] Alameda County Superior Court. *California Building Industry Association v. Bay Area Air Quality Management District. A135335 and A136212*. Filed August 12, 2016.

According to CARB, DPM is highly dispersive (i.e., concentrations decrease substantially with distance). The nearest existing sensitive receptors to the site are located approximately 230 feet from the border of the project site. Considering the short-term nature of construction activities, the dispersive nature of DPM, and the regulated and intermittent nature of the operation of construction equipment, the likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended period of time would be low. For the aforementioned reasons, project construction would not be expected to expose sensitive receptors to substantial pollutant concentrations.

Conclusion

Based on the above, the proposed project would not expose any sensitive receptors to substantial concentrations of any pollutants. Therefore, impacts related to exposing sensitive receptors to substantial pollutant concentrations would be ***less than significant***.

e. Odors are generally regarded as an annoyance rather than a health hazard. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative methodologies to determine the presence of a significant odor impact do not exist. Certain land uses such as wastewater treatment facilities, landfills, confined animal facilities, composting operations, food manufacturing plants, refineries, and chemical plants have the potential to generate considerable odors. The project site is located in a developed area and is not located in the vicinity of any existing or planned such land uses. Medical office uses are not typically associated with the creation of objectionable odors. Thus, the project would not introduce any new sources or be exposed to any existing sources of potential objectionable odors.

Although less common, diesel fumes associated with substantial diesel-fueled equipment and heavy-duty trucks, such as from construction activities or freeway traffic, could be found to be objectionable. However, as addressed above, construction is temporary and construction equipment would operate intermittently throughout the course of a day, would be restricted to certain hours per the City's Municipal Code, and would likely only occur over portions of the improvement area at a time. In addition, all construction equipment and operation thereof would be regulated per the statewide In-Use Off-Road Diesel Vehicle Regulation. Construction equipment would also be required to comply with applicable PCAPCD rules and regulations, particularly associated with permitting of air pollutant sources. The aforementioned regulations would help to minimize air pollutant emissions as well as any associated odors. Considering the short-term nature of construction activities and the regulated and intermittent nature of the operation of construction equipment, construction of the proposed project would not be expected to create objectionable odors affecting a substantial number of people.

PCAPCD Rule 205, Nuisance, addresses the exposure of "nuisance or annoyance" air contaminant discharges, including odors, and provides enforcement of odor control. Rule 205 is complaint-based, where if public complaints are sufficient to cause the odor source to be considered a public nuisance, then the PCAPCD is required to investigate the identified source, as well as determine and ensure a solution for the source of the

complaint, which could include operational modifications to correct the nuisance condition. Thus, although not anticipated, if odor or air quality complaints are made upon development of the proposed project, the PCAPCD would be required (per PCAPCD Rule 205) to ensure that such complaints are addressed and mitigated, as necessary.

For the aforementioned reasons, construction and operation of the proposed project would not create objectionable odors affecting a substantial number of people, and impacts would be ***less than significant***.

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

Discussion

a,b. Emissions of greenhouse gases (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.

Recognizing the global scale of climate change, California has enacted several pieces of legislations in an attempt to address GHG emissions. Specifically, Assembly Bill (AB) 32, and more recently Senate Bill (SB) 32, have established statewide GHG emissions reduction targets. Accordingly, the CARB has prepared the Climate Change Scoping Plan for California (Scoping Plan), which was approved in 2008 and updated in 2014. The Scoping Plan provides the outline for actions to reduce California's GHG emissions and achieve the emissions reductions targets required by AB 32. In concert with statewide efforts to reduce GHG emissions, air districts, counties, and local jurisdictions throughout the State have implemented their own policies and plans to achieve emissions reductions in line with the Scoping Plan and emissions reductions targets, including AB 32 and SB 32.

As a means of achieving the regional GHG emissions reductions goals required by AB 32, on October 13, 2016, the PCAPCD adopted GHG emissions thresholds to help the district attain the GHG reduction goals established by AB 32 and SB 32. The common unit of measurement for GHG, used by PCAPCD, is expressed in terms of annual metric tons of CO_2 equivalents ($MTCO_2e$/yr). The updated thresholds begin with a screening emission level of 1,100 MT CO_2e/yr. Any project below the 1,100 MT CO_2e/yr threshold is judged by the PCAPCD as having a less-than-significant impact on GHG emissions within the District, and thus would not conflict with any state or regional GHG emissions reduction goals. Projects that would result in emissions above the 1,100 MT CO_2e/yr threshold would not necessarily result in substantial impacts, if certain efficiency

thresholds are met. The efficiency thresholds, which are calculated on a per capita or square foot basis, are presented in Table 4.

Table 4
PCAPCD Operational Thresholds of Significance

Efficiency Thresholds			
Residential (MT CO_2e/capita)		**Non-Residential (MT CO_2e/1,000 sf)**	
Urban	**Rural**	**Urban**	**Rural**
4.5	5.5	26.5	27.3

Source: Placer County Air Pollution Control District. Placer County Air Pollution Control District Policy. Review of Land Use Projects Under CEQA. October 13, 2016.

Projects that fall below the 1,100 MT CO_2e/yr threshold or meet the efficiency thresholds are considered to be in keeping with statewide GHG emissions reduction targets, which would ensure that the proposed project would not inhibit the State's achievement of GHG emissions reductions. Thus, projects with emissions below the 1,100 MT CO_2e/yr threshold or below the efficiency thresholds presented in Table 4, are considered to result in less-than-significant impacts in regards to GHG emissions within the District and thus would not conflict with any state or regional GHG emissions reduction goals. Finally, the PCAPCD has also established a Bright Line Cap, which shall be the maximum limit for any proposed project. The Bright Line Cap is 10,000 MT CO_2e/yr for all types of projects.

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 and natural gas), water usage, wastewater generation, and the generation of solid waste. The primary source of GHG emissions for the project would be mobile source emissions.

Buildout of the proposed project would contribute to increases of GHG emissions that are associated with global climate change during construction and operations. The proposed project's short-term construction-related and long-term operational GHG emissions are presented below.

Short-Term Construction GHG Emissions

Construction-related GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change, as global climate change is inherently a cumulative effect that occurs over a long period of time and is quantified on a yearly basis. However, the proposed project's construction GHG emissions have been estimated and compared to the PCAPCD's operational thresholds of significance for informational purposes. The proposed project's total construction-related GHG emissions are presented in Table 5. The construction modeling assumptions are described in the Air Quality section above and in Appendix A.

Table 5 Total Unmitigated Project Construction GHG Emissions		
	Construction GHG Emissions ($MTCO_2e$)	**Threshold of Significance ($MTCO_2e$/yr)**
Total Construction-related GHG Emissions	850.63	1,100
Source: CalEEMod, February 2017 (see Appendix A).		

As shown in Table 5 above, the proposed project's total unmitigated construction-related GHG emissions would be below the applicable 1,100 MT CO_2e/yr threshold. It should be noted that construction activity would occur over two years, thus the maximum annual construction emissions related to the proposed project would only be 520.82 $MTCO_2e$/yr. Accordingly, the proposed project would not be expected to have a significant impact related to GHG emissions during construction.

Long-Term Operational GHG Emissions

The proposed project's estimated operational GHG emissions are presented in Table 6.

Table 6 Unmitigated Project Operational GHG Emissions	
Emission Source	**Annual GHG Emissions ($MTCO_2e$/yr)**
Area	0.01
Energy	320.27
Mobile	1,223.37
Emergency Generator	2.57
Solid Waste	407.35
Water	25.52
TOTAL ANNUAL GHG EMISSIONS	**1,979.10**
Source: CalEEMod, February 2017 (see Appendix A).	

As shown in the table, the proposed project would result in operational GHG emissions in excess of the 1,100 $MTCO_2e$ threshold. Accordingly, the project must be further reviewed under the efficiency thresholds presented in Table 4. The PCAPCD maintains efficiency thresholds for both urban and rural commercial developments. Because the proposed project is located within the City of Roseville, and is surrounded by existing developments, the project is considered to be located in an urban setting. The efficiency thresholds adopted by PCAPCD rely on GHG emissions in $MTCO_2e$ per 1,000 sf of commercial space to determine significance for commercial projects. As such, the proposed project's estimated annual operational emissions of 1,979.10 $MTCO_2e$ must be divided by the floor area of the proposed medical office building. The proposed project would include 75,000 sf of medical office space. Thus, the proposed project would result in an efficiency rate of 26.39 $MTCO_2e$/1,000 sf. The PCAPCD urban commercial efficiency threshold is 26.5 $MTCO_2e$/1,000 sf.

Therefore, the proposed project would result in operational GHG emissions below the applicable PCAPCD efficiency thresholds. Because the project's unmitigated annual GHG emissions would be below the applicable PCAPCD efficiency threshold per capita

per year threshold, the proposed project would be considered to result in a ***less-than-significant*** impact related to GHG emissions and global climate change.

APPENDIX A

CALEEMOD RESULTS

Roseville MOB

Placer County APCD, Summary Report

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	75.00	1000sqft	1.50	75,000.00	0
Parking Lot	453.00	Space	4.20	181,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	74
Climate Zone	2			**Operational Year**	2018
Utility Company	Roseville Electric				
CO2 Intensity (lb/MWhr)	616.63	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments

Only CalEEMod defaults were used.

Project Characteristics - *

Land Use - *

Vehicle Trips - *per KDA

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Mobile Land Use Mitigation -

Construction Phase - Applicant provided construction schedule

Grading - *

Stationary Sources - Emergency Generators and Fire Pumps -

Area Mitigation -

2.0 Peak Daily Emissions

Peak Daily Construction Emissions

Peak Daily Construction Emissions

Roseville MOB - Placer County APCD Air District, Summary Report

		Unmitigated						Mitigated					
		ROG	NOX	CO	SO2	PM10	PM2.5	ROG	NOX	CO	SO2	PM10	PM2.5
Year	Phase	lb/day											
2017	Site Preparation	5.0558 S	52.3469 W	24.2023 S	0.0397 S	21.0937 S	12.6191 S	5.0558 S	52.3469 W	24.2023 S	0.0397 S	21.0937 S	12.6191 S
2017	Grading	3.1497 S	33.9464 W	17.7267 S	0.0310 S	8.2114 S	5.0100 S	3.1497 S	33.9464 W	17.7267 S	0.0310 S	8.2114 S	5.0100 S
2017	Building Construction	3.8827 S	33.0470 W	23.6484 S	0.0486 S	2.9520 W	2.0343 W	3.8827 S	33.0470 W	23.6484 S	0.0486 S	2.9520 W	2.0343 W
2018	Building Construction	3.3535 S	29.4520 W	22.3559 S	0.0483 S	2.6521 W	1.7538 W	3.3535 S	29.4520 W	22.3559 S	0.0483 S	2.6521 W	1.7538 W
2017	Paving	3.5961 S	20.7774 W	15.6544 S	0.0241 S	1.2833 S	1.0999 S	3.5961 S	20.7774 W	15.6544 S	0.0241 S	1.2833 S	1.0999 S
2017	Architectural Coating	2.6118 S	2.2645 W	2.6980 S	4.7700e-003 S	0.3388 S	0.2180 S	2.6118 S	2.2645 W	2.6980 S	4.7700e-003 S	0.3388 S	0.2180 S
2018	Architectural Coating	2.5660 S	2.0746 W	2.5797 S	4.7200e-003 S	0.3159 S	0.1951 S	2.5660 S	2.0746 W	2.5797 S	4.7200e-003 S	0.3159 S	0.1951 S
	Peak Daily Total	5.0558 S	52.3469 W	24.2023 S	0.0486 S	21.0937 S	12.6191 S	5.0558 S	52.3469 W	24.2023 S	0.0486 S	21.0937 S	12.6191 S
	Air District Threshold												
	Exceed Significance?												

Peak Daily Operational Emissions

Peak Daily Operational Emissions

		Unmitigated						Mitigated					
		ROG	NOX	CO	SO2	PM10	PM2.5	ROG	NOX	CO	SO2	PM10	PM2.5
	Operational Activity	lb/day											
On-Site	Stationary	3.1504 S	8.8065 S	8.0340 S	0.0151 S	0.4635 S	0.4635 S	3.1504 S	8.8065 S	8.0340 S	0.0151 S	0.4635 S	0.4635 S
On-Site	Area	1.8787 S	5.1000e-004 S	0.0547 S	0.0000 S	2.0000e-004 S	2.0000e-004 S	5.3465 S	5.1000e-004 S	0.0547 S	0.0000 S	2.0000e-004 S	2.0000e-004 S
On-Site	Energy	0.0367 S	0.3332 S	0.2799 S	2.0000e-003 S	0.0253 S	0.0253 S	0.0349 S	0.3170 S	0.2663 S	1.9000e-003 S	0.0241 S	0.0241 S
Off-Site	Mobile	8.5662 S	16.0390 W	68.7250 W	0.1150 S	8.8165 W	2.4480 W	8.2687 S	15.0088 W	63.8891 W	0.1043 S	7.9367 W	2.2049 W
	Peak Daily Total	13.6320 S	25.1793 W	77.0935 W	0.1321 S	9.3056 W	2.9371 W	16.8004 S	24.1328 W	72.2440 W	0.1214 S	8.4245 W	2.6927 W
	Air District Threshold												
	Exceed Significance?												

3.0 Annual GHG Emissions

Annual GHG

Annual GHG

		Unmitigated				Mitigated			
		CO2	CH4	N2O	CO2e	CO2	CH4	N2O	CO2e
GHG Activity	Year	MT/yr							
Construction	2017	328.4133	0.0560	0.0000	329.8122	328.4131	0.0560	0.0000	329.8119
Construction	2018	518.8850	0.0772	0.0000	520.8157	518.8846	0.0772	0.0000	520.8153
Operational	2018	1,857.2940	10.1368	0.0111	2,114.0304	1,723.7991	10.0912	0.0101	1,979.0985
	Total								
	Significance Threshold								
	Exceed Significance?								

Roseville MOB

Placer County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	75.00	1000sqft	1.50	75,000.00	0
Parking Lot	453.00	Space	4.20	181,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	74
Climate Zone	2			**Operational Year**	2018
Utility Company	Roseville Electric				
CO2 Intensity (lb/MWhr)	616.63	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Roseville MOB - Placer County APCD Air District, Annual

Project Characteristics - *

Land Use - *

Vehicle Trips - *per KDA

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Mobile Land Use Mitigation -

Construction Phase - Applicant provided construction schedule

Grading - *

Stationary Sources - Emergency Generators and Fire Pumps -

Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	343.00
tblConstructionPhase	NumDays	230.00	343.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	20.00	7.00
tblConstructionPhase	NumDays	10.00	2.00
tblConstructionPhase	PhaseEndDate	8/22/2018	11/19/2018
tblConstructionPhase	PhaseEndDate	6/27/2018	11/5/2018
tblConstructionPhase	PhaseEndDate	8/9/2017	7/3/2017
tblConstructionPhase	PhaseEndDate	7/25/2018	7/12/2017
tblConstructionPhase	PhaseEndDate	7/12/2017	6/2/2017
tblConstructionPhase	PhaseStartDate	7/26/2018	7/27/2017
tblConstructionPhase	PhaseStartDate	8/10/2017	7/13/2017
tblConstructionPhase	PhaseStartDate	7/13/2017	6/3/2017

tblConstructionPhase	PhaseStartDate	6/28/2018	7/4/2017
tblConstructionPhase	PhaseStartDate	6/29/2017	6/1/2017
tblGrading	AcresOfGrading	10.50	5.70
tblGrading	MaterialExported	0.00	1.00
tblLandUse	LotAcreage	1.72	1.50
tblLandUse	LotAcreage	4.08	4.20
tblProjectCharacteristics	CO2IntensityFactor	793.8	616.63
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	480.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	4.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	14.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	DV_TP	30.00	40.00
tblVehicleTrips	PR_TP	60.00	50.00
tblVehicleTrips	WD_TR	36.13	31.44

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.4301	2.6224	1.8349	3.6100e-003	0.1595	0.1480	0.3075	0.0654	0.1391	0.2045	0.0000	328.4133	328.4133	0.0560	0.0000	329.8122
2018	0.6608	3.4919	2.7289	5.7600e-003	0.1352	0.1883	0.3235	0.0367	0.1781	0.2148	0.0000	518.8850	518.8850	0.0772	0.0000	520.8156
Maximum	**0.6608**	**3.4919**	**2.7289**	**5.7600e-003**	**0.1595**	**0.1883**	**0.3235**	**0.0654**	**0.1781**	**0.2148**	**0.0000**	**518.8850**	**518.8850**	**0.0772**	**0.0000**	**520.8156**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.4301	2.6224	1.8349	3.6100e-003	0.1595	0.1480	0.3075	0.0654	0.1391	0.2045	0.0000	328.4131	328.4131	0.0560	0.0000	329.8120
2018	0.6608	3.4919	2.7289	5.7600e-003	0.1352	0.1883	0.3235	0.0367	0.1781	0.2148	0.0000	518.8846	518.8846	0.0772	0.0000	520.8153
Maximum	**0.6608**	**3.4919**	**2.7289**	**5.7600e-003**	**0.1595**	**0.1883**	**0.3235**	**0.0654**	**0.1781**	**0.2148**	**0.0000**	**518.8846**	**518.8846**	**0.0772**	**0.0000**	**520.8153**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2017	8-31-2017	1.2485	1.2485
2	9-1-2017	11-30-2017	1.3564	1.3564
3	12-1-2017	2-28-2018	1.2517	1.2517
4	3-1-2018	5-31-2018	1.2266	1.2266
5	6-1-2018	8-31-2018	1.2248	1.2248
6	9-1-2018	9-30-2018	0.3994	0.3994
		Highest	1.3564	1.3564

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3424	5.0000e-005	4.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.4300e-003	9.4300e-003	3.0000e-005	0.0000	0.0101
Energy	6.6900e-003	0.0608	0.0511	3.6000e-004		4.6200e-003	4.6200e-003		4.6200e-003	4.6200e-003	0.0000	325.6060	325.6060	0.0135	3.7400e-003	327.0566
Mobile	0.9798	2.1489	8.8682	0.0149	1.1512	0.0191	1.1703	0.3086	0.0180	0.3266	0.0000	1,345.7133	1,345.7133	0.0984	0.0000	1,348.1734
Stationary	5.5100e-003	0.0154	0.0141	3.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	2.5590	2.5590	3.6000e-004	0.0000	2.5679
Waste						0.0000	0.0000		0.0000	0.0000	164.4227	0.0000	164.4227	9.7171	0.0000	407.3502
Water						0.0000	0.0000		0.0000	0.0000	2.9857	15.9980	18.9837	0.3074	7.4000e-003	28.8731
Total	**1.3344**	**2.2252**	**8.9383**	**0.0152**	**1.1512**	**0.0245**	**1.1757**	**0.3086**	**0.0235**	**0.3320**	**167.4084**	**1,689.8856**	**1,857.2940**	**10.1368**	**0.0111**	**2,114.0313**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3205	5.0000e-005	4.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.4300e-003	9.4300e-003	3.0000e-005	0.0000	0.0101
Energy	6.3600e-003	0.0579	0.0486	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003	0.0000	318.8555	318.8555	0.0132	3.6400e-003	320.2725
Mobile	0.9373	2.0128	8.2177	0.0135	1.0361	0.0174	1.0535	0.2777	0.0164	0.2941	0.0000	1,221.0983	1,221.0983	0.0910	0.0000	1,223.3741
Stationary	5.5100e-003	0.0154	0.0141	3.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	2.5590	2.5590	3.6000e-004	0.0000	2.5679
Waste						0.0000	0.0000		0.0000	0.0000	164.4227	0.0000	164.4227	9.7171	0.0000	407.3502
Water						0.0000	0.0000		0.0000	0.0000	2.6167	14.2375	16.8542	0.2694	6.4800e-003	25.5222
Total	**1.2697**	**2.0861**	**8.2853**	**0.0139**	**1.0361**	**0.0226**	**1.0587**	**0.2777**	**0.0217**	**0.2994**	**167.0393**	**1,556.7597**	**1,723.7991**	**10.0912**	**0.0101**	**1,979.0970**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**4.85**	**6.25**	**7.31**	**9.06**	**10.00**	**7.70**	**9.95**	**10.00**	**7.68**	**9.83**	**0.22**	**7.88**	**7.19**	**0.45**	**9.16**	**6.38**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2017	6/2/2017	5	2	
2	Grading	Grading	6/3/2017	7/3/2017	5	21	
3	Building Construction	Building Construction	7/13/2017	11/5/2018	5	343	
4	Paving	Paving	7/4/2017	7/12/2017	5	7	
5	Architectural Coating	Architectural Coating	7/27/2017	11/19/2018	5	343	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 5.7

Acres of Paving: 4.2

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 112,500; Non-Residential Outdoor: 37,500; Striped Parking Area: 10,872 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	100.00	42.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0181	0.0000	0.0181	9.9300e-003	0.0000	9.9300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9600e-003	0.0523	0.0235	4.0000e-005		2.8800e-003	2.8800e-003		2.6500e-003	2.6500e-003	0.0000	3.5334	3.5334	1.0800e-003	0.0000	3.5605
Total	**4.9600e-003**	**0.0523**	**0.0235**	**4.0000e-005**	**0.0181**	**2.8800e-003**	**0.0210**	**9.9300e-003**	**2.6500e-003**	**0.0126**	**0.0000**	**3.5334**	**3.5334**	**1.0800e-003**	**0.0000**	**3.5605**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	6.0000e-005	6.7000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1338	0.1338	0.0000	0.0000	0.1339
Total	**9.0000e-005**	**6.0000e-005**	**6.7000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1338**	**0.1338**	**0.0000**	**0.0000**	**0.1339**

3.2 Site Preparation - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0181	0.0000	0.0181	9.9300e-003	0.0000	9.9300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9600e-003	0.0523	0.0235	4.0000e-005		2.8800e-003	2.8800e-003		2.6500e-003	2.6500e-003	0.0000	3.5334	3.5334	1.0800e-003	0.0000	3.5605
Total	**4.9600e-003**	**0.0523**	**0.0235**	**4.0000e-005**	**0.0181**	**2.8800e-003**	**0.0210**	**9.9300e-003**	**2.6500e-003**	**0.0126**	**0.0000**	**3.5334**	**3.5334**	**1.0800e-003**	**0.0000**	**3.5605**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	6.0000e-005	6.7000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1338	0.1338	0.0000	0.0000	0.1339
Total	**9.0000e-005**	**6.0000e-005**	**6.7000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1338**	**0.1338**	**0.0000**	**0.0000**	**0.1339**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0663	0.0000	0.0663	0.0351	0.0000	0.0351	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0322	0.3558	0.1796	3.1000e-004		0.0187	0.0187		0.0172	0.0172	0.0000	28.9374	28.9374	8.8700e-003	0.0000	29.1591
Total	**0.0322**	**0.3558**	**0.1796**	**3.1000e-004**	**0.0663**	**0.0187**	**0.0849**	**0.0351**	**0.0172**	**0.0523**	**0.0000**	**28.9374**	**28.9374**	**8.8700e-003**	**0.0000**	**29.1591**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.5000e-004	5.7000e-004	5.8800e-003	1.0000e-005	1.2400e-003	1.0000e-005	1.2500e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.1704	1.1704	4.0000e-005	0.0000	1.1714
Total	**7.5000e-004**	**5.7000e-004**	**5.8800e-003**	**1.0000e-005**	**1.2400e-003**	**1.0000e-005**	**1.2500e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.1704**	**1.1704**	**4.0000e-005**	**0.0000**	**1.1714**

3.3 Grading - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0663	0.0000	0.0663	0.0351	0.0000	0.0351	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0322	0.3558	0.1796	3.1000e-004		0.0187	0.0187		0.0172	0.0172	0.0000	28.9374	28.9374	8.8700e-003	0.0000	29.1591
Total	**0.0322**	**0.3558**	**0.1796**	**3.1000e-004**	**0.0663**	**0.0187**	**0.0849**	**0.0351**	**0.0172**	**0.0523**	**0.0000**	**28.9374**	**28.9374**	**8.8700e-003**	**0.0000**	**29.1591**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.5000e-004	5.7000e-004	5.8800e-003	1.0000e-005	1.2400e-003	1.0000e-005	1.2500e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.1704	1.1704	4.0000e-005	0.0000	1.1714
Total	**7.5000e-004**	**5.7000e-004**	**5.8800e-003**	**1.0000e-005**	**1.2400e-003**	**1.0000e-005**	**1.2500e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.1704**	**1.1704**	**4.0000e-005**	**0.0000**	**1.1714**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1900	1.6198	1.1091	1.6400e-003		0.1091	0.1091		0.1024	0.1024	0.0000	146.7006	146.7006	0.0361	0.0000	147.6042
Total	**0.1900**	**1.6198**	**1.1091**	**1.6400e-003**		**0.1091**	**0.1091**		**0.1024**	**0.1024**	**0.0000**	**146.7006**	**146.7006**	**0.0361**	**0.0000**	**147.6042**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0149	0.3728	0.0874	7.6000e-004	0.0167	3.1700e-003	0.0199	4.8400e-003	3.0300e-003	7.8800e-003	0.0000	72.1978	72.1978	4.2300e-003	0.0000	72.3036
Worker	0.0289	0.0219	0.2278	5.0000e-004	0.0479	3.4000e-004	0.0482	0.0128	3.1000e-004	0.0131	0.0000	45.3287	45.3287	1.5200e-003	0.0000	45.3667
Total	**0.0439**	**0.3948**	**0.3152**	**1.2600e-003**	**0.0646**	**3.5100e-003**	**0.0681**	**0.0176**	**3.3400e-003**	**0.0209**	**0.0000**	**117.5265**	**117.5265**	**5.7500e-003**	**0.0000**	**117.6703**

3.4 Building Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1900	1.6198	1.1091	1.6400e-003		0.1091	0.1091		0.1024	0.1024	0.0000	146.7005	146.7005	0.0361	0.0000	147.6040
Total	**0.1900**	**1.6198**	**1.1091**	**1.6400e-003**		**0.1091**	**0.1091**		**0.1024**	**0.1024**	**0.0000**	**146.7005**	**146.7005**	**0.0361**	**0.0000**	**147.6040**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0149	0.3728	0.0874	7.6000e-004	0.0167	3.1700e-003	0.0199	4.8400e-003	3.0300e-003	7.8800e-003	0.0000	72.1978	72.1978	4.2300e-003	0.0000	72.3036
Worker	0.0289	0.0219	0.2278	5.0000e-004	0.0479	3.4000e-004	0.0482	0.0128	3.1000e-004	0.0131	0.0000	45.3287	45.3287	1.5200e-003	0.0000	45.3667
Total	**0.0439**	**0.3948**	**0.3152**	**1.2600e-003**	**0.0646**	**3.5100e-003**	**0.0681**	**0.0176**	**3.3400e-003**	**0.0209**	**0.0000**	**117.5265**	**117.5265**	**5.7500e-003**	**0.0000**	**117.6703**

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2961	2.5846	1.9426	2.9700e-003		0.1657	0.1657		0.1558	0.1558	0.0000	262.7328	262.7328	0.0644	0.0000	264.3420
Total	**0.2961**	**2.5846**	**1.9426**	**2.9700e-003**		**0.1657**	**0.1657**		**0.1558**	**0.1558**	**0.0000**	**262.7328**	**262.7328**	**0.0644**	**0.0000**	**264.3420**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0233	0.6340	0.1387	1.3700e-003	0.0303	4.4600e-003	0.0348	8.7700e-003	4.2700e-003	0.0130	0.0000	130.2295	130.2295	7.1600e-003	0.0000	130.4086
Worker	0.0462	0.0345	0.3585	8.8000e-004	0.0868	6.0000e-004	0.0874	0.0231	5.5000e-004	0.0237	0.0000	79.7589	79.7589	2.3900e-003	0.0000	79.8188
Total	**0.0695**	**0.6685**	**0.4972**	**2.2500e-003**	**0.1171**	**5.0600e-003**	**0.1221**	**0.0319**	**4.8200e-003**	**0.0367**	**0.0000**	**209.9884**	**209.9884**	**9.5500e-003**	**0.0000**	**210.2273**

3.4 Building Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2961	2.5846	1.9426	2.9700e-003		0.1657	0.1657		0.1558	0.1558	0.0000	262.7325	262.7325	0.0644	0.0000	264.3417
Total	**0.2961**	**2.5846**	**1.9426**	**2.9700e-003**		**0.1657**	**0.1657**		**0.1558**	**0.1558**	**0.0000**	**262.7325**	**262.7325**	**0.0644**	**0.0000**	**264.3417**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0233	0.6340	0.1387	1.3700e-003	0.0303	4.4600e-003	0.0348	8.7700e-003	4.2700e-003	0.0130	0.0000	130.2295	130.2295	7.1600e-003	0.0000	130.4086
Worker	0.0462	0.0345	0.3585	8.8000e-004	0.0868	6.0000e-004	0.0874	0.0231	5.5000e-004	0.0237	0.0000	79.7589	79.7589	2.3900e-003	0.0000	79.8188
Total	**0.0695**	**0.6685**	**0.4972**	**2.2500e-003**	**0.1171**	**5.0600e-003**	**0.1221**	**0.0319**	**4.8200e-003**	**0.0367**	**0.0000**	**209.9884**	**209.9884**	**9.5500e-003**	**0.0000**	**210.2273**

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.8100e-003	0.0725	0.0526	8.0000e-005		4.0600e-003	4.0600e-003		3.7300e-003	3.7300e-003	0.0000	7.4001	7.4001	2.2700e-003	0.0000	7.4568
Paving	5.5000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0123**	**0.0725**	**0.0526**	**8.0000e-005**		**4.0600e-003**	**4.0600e-003**		**3.7300e-003**	**3.7300e-003**	**0.0000**	**7.4001**	**7.4001**	**2.2700e-003**	**0.0000**	**7.4568**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	1.9000e-004	1.9600e-003	0.0000	4.1000e-004	0.0000	4.2000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3901	0.3901	1.0000e-005	0.0000	0.3905
Total	**2.5000e-004**	**1.9000e-004**	**1.9600e-003**	**0.0000**	**4.1000e-004**	**0.0000**	**4.2000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3901**	**0.3901**	**1.0000e-005**	**0.0000**	**0.3905**

3.5 Paving - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.8100e-003	0.0725	0.0526	8.0000e-005		4.0600e-003	4.0600e-003		3.7300e-003	3.7300e-003	0.0000	7.4001	7.4001	2.2700e-003	0.0000	7.4568
Paving	5.5000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0123**	**0.0725**	**0.0526**	**8.0000e-005**		**4.0600e-003**	**4.0600e-003**		**3.7300e-003**	**3.7300e-003**	**0.0000**	**7.4001**	**7.4001**	**2.2700e-003**	**0.0000**	**7.4568**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	1.9000e-004	1.9600e-003	0.0000	4.1000e-004	0.0000	4.2000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3901	0.3901	1.0000e-005	0.0000	0.3905
Total	**2.5000e-004**	**1.9000e-004**	**1.9600e-003**	**0.0000**	**4.1000e-004**	**0.0000**	**4.2000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3901**	**0.3901**	**1.0000e-005**	**0.0000**	**0.3905**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1217					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0186	0.1224	0.1046	1.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003	0.0000	14.2982	14.2982	1.5100e-003	0.0000	14.3360
Total	**0.1404**	**0.1224**	**0.1046**	**1.7000e-004**		**9.7100e-003**	**9.7100e-003**		**9.7100e-003**	**9.7100e-003**	**0.0000**	**14.2982**	**14.2982**	**1.5100e-003**	**0.0000**	**14.3360**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3100e-003	4.0300e-003	0.0418	9.0000e-005	8.8000e-003	6.0000e-005	8.8600e-003	2.3400e-003	6.0000e-005	2.4000e-003	0.0000	8.3227	8.3227	2.8000e-004	0.0000	8.3296
Total	**5.3100e-003**	**4.0300e-003**	**0.0418**	**9.0000e-005**	**8.8000e-003**	**6.0000e-005**	**8.8600e-003**	**2.3400e-003**	**6.0000e-005**	**2.4000e-003**	**0.0000**	**8.3227**	**8.3227**	**2.8000e-004**	**0.0000**	**8.3296**

3.6 Architectural Coating - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1217					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0186	0.1224	0.1046	1.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003	0.0000	14.2982	14.2982	1.5100e-003	0.0000	14.3359
Total	**0.1404**	**0.1224**	**0.1046**	**1.7000e-004**		**9.7100e-003**	**9.7100e-003**		**9.7100e-003**	**9.7100e-003**	**0.0000**	**14.2982**	**14.2982**	**1.5100e-003**	**0.0000**	**14.3359**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3100e-003	4.0300e-003	0.0418	9.0000e-005	8.8000e-003	6.0000e-005	8.8600e-003	2.3400e-003	6.0000e-005	2.4000e-003	0.0000	8.3227	8.3227	2.8000e-004	0.0000	8.3296
Total	**5.3100e-003**	**4.0300e-003**	**0.0418**	**9.0000e-005**	**8.8000e-003**	**6.0000e-005**	**8.8600e-003**	**2.3400e-003**	**6.0000e-005**	**2.4000e-003**	**0.0000**	**8.3227**	**8.3227**	**2.8000e-004**	**0.0000**	**8.3296**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2511					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0345	0.2317	0.2142	3.4000e-004		0.0174	0.0174		0.0174	0.0174	0.0000	29.4901	29.4901	2.8000e-003	0.0000	29.5602
Total	**0.2856**	**0.2317**	**0.2142**	**3.4000e-004**		**0.0174**	**0.0174**		**0.0174**	**0.0174**	**0.0000**	**29.4901**	**29.4901**	**2.8000e-003**	**0.0000**	**29.5602**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6600e-003	7.2000e-003	0.0749	1.8000e-004	0.0181	1.2000e-004	0.0183	4.8300e-003	1.1000e-004	4.9400e-003	0.0000	16.6736	16.6736	5.0000e-004	0.0000	16.6861
Total	**9.6600e-003**	**7.2000e-003**	**0.0749**	**1.8000e-004**	**0.0181**	**1.2000e-004**	**0.0183**	**4.8300e-003**	**1.1000e-004**	**4.9400e-003**	**0.0000**	**16.6736**	**16.6736**	**5.0000e-004**	**0.0000**	**16.6861**

3.6 Architectural Coating - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2511					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0345	0.2317	0.2142	3.4000e-004		0.0174	0.0174		0.0174	0.0174	0.0000	29.4901	29.4901	2.8000e-003	0.0000	29.5602
Total	**0.2856**	**0.2317**	**0.2142**	**3.4000e-004**		**0.0174**	**0.0174**		**0.0174**	**0.0174**	**0.0000**	**29.4901**	**29.4901**	**2.8000e-003**	**0.0000**	**29.5602**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6600e-003	7.2000e-003	0.0749	1.8000e-004	0.0181	1.2000e-004	0.0183	4.8300e-003	1.1000e-004	4.9400e-003	0.0000	16.6736	16.6736	5.0000e-004	0.0000	16.6861
Total	**9.6600e-003**	**7.2000e-003**	**0.0749**	**1.8000e-004**	**0.0181**	**1.2000e-004**	**0.0183**	**4.8300e-003**	**1.1000e-004**	**4.9400e-003**	**0.0000**	**16.6736**	**16.6736**	**5.0000e-004**	**0.0000**	**16.6861**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9373	2.0128	8.2177	0.0135	1.0361	0.0174	1.0535	0.2777	0.0164	0.2941	0.0000	1,221.0983	1,221.0983	0.0910	0.0000	1,223.3741
Unmitigated	0.9798	2.1489	8.8682	0.0149	1.1512	0.0191	1.1703	0.3086	0.0180	0.3266	0.0000	1,345.7133	1,345.7133	0.0984	0.0000	1,348.1734

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Medical Office Building	2,358.00	672.00	116.25	3,126,921	2,814,229
Parking Lot	0.00	0.00	0.00		
Total	2,358.00	672.00	116.25	3,126,921	2,814,229

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	50	40	10
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Medical Office Building	0.472854	0.047686	0.207327	0.157858	0.035960	0.007313	0.016190	0.010860	0.000931	0.000377	0.034753	0.000753	0.007138
Parking Lot	0.472854	0.047686	0.207327	0.157858	0.035960	0.007313	0.016190	0.010860	0.000931	0.000377	0.034753	0.000753	0.007138

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	255.8735	255.8735	0.0120	2.4900e-003	256.9163
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	259.4082	259.4082	0.0122	2.5200e-003	260.4654
NaturalGas Mitigated	6.3600e-003	0.0579	0.0486	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003	0.0000	62.9820	62.9820	1.2100e-003	1.1500e-003	63.3562
NaturalGas Unmitigated	6.6900e-003	0.0608	0.0511	3.6000e-004		4.6200e-003	4.6200e-003		4.6200e-003	4.6200e-003	0.0000	66.1978	66.1978	1.2700e-003	1.2100e-003	66.5912

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Medical Office Building	1.2405e+006	6.6900e-003	0.0608	0.0511	3.6000e-004		4.6200e-003	4.6200e-003		4.6200e-003	4.6200e-003	0.0000	66.1978	66.1978	1.2700e-003	1.2100e-003	66.5912
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.6900e-003**	**0.0608**	**0.0511**	**3.6000e-004**		**4.6200e-003**	**4.6200e-003**		**4.6200e-003**	**4.6200e-003**	**0.0000**	**66.1978**	**66.1978**	**1.2700e-003**	**1.2100e-003**	**66.5912**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Medical Office Building	1.18024e+006	6.3600e-003	0.0579	0.0486	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003	0.0000	62.9820	62.9820	1.2100e-003	1.1500e-003	63.3562
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.3600e-003**	**0.0579**	**0.0486**	**3.5000e-004**		**4.4000e-003**	**4.4000e-003**		**4.4000e-003**	**4.4000e-003**	**0.0000**	**62.9820**	**62.9820**	**1.2100e-003**	**1.1500e-003**	**63.3562**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Medical Office Building	768000	214.8086	0.0101	2.0900e-003	215.6840
Parking Lot	159456	44.5996	2.1000e-003	4.3000e-004	44.7814
Total		**259.4082**	**0.0122**	**2.5200e-003**	**260.4654**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Medical Office Building	755363	211.2739	9.9400e-003	2.0600e-003	212.1349
Parking Lot	159456	44.5996	2.1000e-003	4.3000e-004	44.7814
Total		**255.8735**	**0.0120**	**2.4900e-003**	**256.9163**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3205	5.0000e-005	4.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.4300e-003	9.4300e-003	3.0000e-005	0.0000	0.0101
Unmitigated	0.3424	5.0000e-005	4.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.4300e-003	9.4300e-003	3.0000e-005	0.0000	0.0101

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0373					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3046					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.7000e-004	5.0000e-005	4.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.4300e-003	9.4300e-003	3.0000e-005	0.0000	0.0101
Total	**0.3424**	**5.0000e-005**	**4.9200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**9.4300e-003**	**9.4300e-003**	**3.0000e-005**	**0.0000**	**0.0101**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0373					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2827					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.7000e-004	5.0000e-005	4.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.4300e-003	9.4300e-003	3.0000e-005	0.0000	0.0101
Total	**0.3205**	**5.0000e-005**	**4.9200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**9.4300e-003**	**9.4300e-003**	**3.0000e-005**	**0.0000**	**0.0101**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	16.8542	0.2694	6.4800e-003	25.5222
Unmitigated	18.9837	0.3074	7.4000e-003	28.8731

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Medical Office Building	9.41104 / 1.79258	18.9837	0.3074	7.4000e-003	28.8731
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**18.9837**	**0.3074**	**7.4000e-003**	**28.8731**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Medical Office Building	8.24784 / 1.79258	16.8542	0.2694	6.4800e-003	25.5222
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**16.8542**	**0.2694**	**6.4800e-003**	**25.5222**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	164.4227	9.7171	0.0000	407.3502
Unmitigated	164.4227	9.7171	0.0000	407.3502

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Medical Office Building	810	164.4227	9.7171	0.0000	407.3502
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**164.4227**	**9.7171**	**0.0000**	**407.3502**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Medical Office Building	810	164.4227	9.7171	0.0000	407.3502
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**164.4227**	**9.7171**	**0.0000**	**407.3502**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	4	14	480	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (300 - 600 HP)	5.5100e-003	0.0154	0.0141	3.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	2.5590	2.5590	3.6000e-004	0.0000	2.5679
Total	**5.5100e-003**	**0.0154**	**0.0141**	**3.0000e-005**		**8.1000e-004**	**8.1000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**2.5590**	**2.5590**	**3.6000e-004**	**0.0000**	**2.5679**

11.0 Vegetation

Roseville MOB

Placer County APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	75.00	1000sqft	1.50	75,000.00	0
Parking Lot	453.00	Space	4.20	181,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	74
Climate Zone	2			**Operational Year**	2018
Utility Company	Roseville Electric				
CO2 Intensity (lb/MWhr)	616.63	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - *

Land Use - *

Vehicle Trips - *per KDA

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Mobile Land Use Mitigation -

Construction Phase - Applicant provided construction schedule

Grading - *

Stationary Sources - Emergency Generators and Fire Pumps -

Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	343.00
tblConstructionPhase	NumDays	230.00	343.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	20.00	7.00
tblConstructionPhase	NumDays	10.00	2.00
tblConstructionPhase	PhaseEndDate	8/22/2018	11/19/2018
tblConstructionPhase	PhaseEndDate	6/27/2018	11/5/2018
tblConstructionPhase	PhaseEndDate	8/9/2017	7/3/2017
tblConstructionPhase	PhaseEndDate	7/25/2018	7/12/2017
tblConstructionPhase	PhaseEndDate	7/12/2017	6/2/2017
tblConstructionPhase	PhaseStartDate	7/26/2018	7/27/2017
tblConstructionPhase	PhaseStartDate	8/10/2017	7/13/2017
tblConstructionPhase	PhaseStartDate	7/13/2017	6/3/2017

tblConstructionPhase	PhaseStartDate	6/28/2018	7/4/2017
tblConstructionPhase	PhaseStartDate	6/29/2017	6/1/2017
tblGrading	AcresOfGrading	10.50	5.70
tblGrading	MaterialExported	0.00	1.00
tblLandUse	LotAcreage	1.72	1.50
tblLandUse	LotAcreage	4.08	4.20
tblProjectCharacteristics	CO2IntensityFactor	793.8	616.63
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	480.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	4.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	14.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	DV_TP	30.00	40.00
tblVehicleTrips	PR_TP	60.00	50.00
tblVehicleTrips	WD_TR	36.13	31.44

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	6.4945	52.3323	26.3464	0.0534	18.2142	2.8796	21.0937	9.9699	2.6492	12.6191	0.0000	5,331.6498	5,331.6498	1.1987	0.0000	5,351.4211
2018	5.9196	31.3574	24.9357	0.0530	1.2703	1.6969	2.9671	0.3434	1.6047	1.9481	0.0000	5,265.8165	5,265.8165	0.7675	0.0000	5,285.0040
Maximum	**6.4945**	**52.3323**	**26.3464**	**0.0534**	**18.2142**	**2.8796**	**21.0937**	**9.9699**	**2.6492**	**12.6191**	**0.0000**	**5,331.6498**	**5,331.6498**	**1.1987**	**0.0000**	**5,351.4211**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	6.4945	52.3323	26.3464	0.0534	18.2142	2.8796	21.0937	9.9699	2.6492	12.6191	0.0000	5,331.6498	5,331.6498	1.1987	0.0000	5,351.4211
2018	5.9196	31.3574	24.9357	0.0530	1.2703	1.6969	2.9671	0.3434	1.6047	1.9481	0.0000	5,265.8165	5,265.8165	0.7675	0.0000	5,285.0040
Maximum	**6.4945**	**52.3323**	**26.3464**	**0.0534**	**18.2142**	**2.8796**	**21.0937**	**9.9699**	**2.6492**	**12.6191**	**0.0000**	**5,331.6498**	**5,331.6498**	**1.1987**	**0.0000**	**5,351.4211**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8787	5.1000e-004	0.0547	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1156	0.1156	3.2000e-004		0.1235
Energy	0.0367	0.3332	0.2799	2.0000e-003		0.0253	0.0253		0.0253	0.0253		399.8388	399.8388	7.6600e-003	7.3300e-003	402.2149
Mobile	8.5662	14.5824	64.4383	0.1150	8.6781	0.1372	8.8153	2.3174	0.1295	2.4469		11,491.2988	11,491.2988	0.7636		11,510.3894
Stationary	3.1504	8.8065	8.0340	0.0151		0.4635	0.4635		0.4635	0.4635		1,611.8671	1,611.8671	0.2260		1,617.5167
Total	**13.6320**	**23.7226**	**72.8069**	**0.1321**	**8.6781**	**0.6263**	**9.3044**	**2.3174**	**0.6185**	**2.9359**		**13,503.1203**	**13,503.1203**	**0.9976**	**7.3300e-003**	**13,530.2445**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.3465	5.1000e-004	0.0547	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1156	0.1156	3.2000e-004		0.1235
Energy	0.0349	0.3170	0.2663	1.9000e-003		0.0241	0.0241		0.0241	0.0241		380.4150	380.4150	7.2900e-003	6.9700e-003	382.6756
Mobile	8.2687	13.6861	59.3628	0.1043	7.8103	0.1252	7.9355	2.0857	0.1181	2.2038		10,423.6768	10,423.6768	0.7041		10,441.2785
Stationary	3.1504	8.8065	8.0340	0.0151		0.4635	0.4635		0.4635	0.4635		1,611.8671	1,611.8671	0.2260		1,617.5167
Total	**16.8004**	**22.8101**	**67.7177**	**0.1214**	**7.8103**	**0.6130**	**8.4233**	**2.0857**	**0.6059**	**2.6916**		**12,416.0744**	**12,416.0744**	**0.9377**	**6.9700e-003**	**12,441.5943**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**-23.24**	**3.85**	**6.99**	**8.15**	**10.00**	**2.12**	**9.47**	**10.00**	**2.04**	**8.32**	**0.00**	**8.05**	**8.05**	**6.01**	**4.91**	**8.05**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2017	6/2/2017	5	2	
2	Grading	Grading	6/3/2017	7/3/2017	5	21	
3	Building Construction	Building Construction	7/13/2017	11/5/2018	5	343	
4	Paving	Paving	7/4/2017	7/12/2017	5	7	
5	Architectural Coating	Architectural Coating	7/27/2017	11/19/2018	5	343	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 5.7

Acres of Paving: 4.2

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 112,500; Non-Residential Outdoor: 37,500; Striped Parking Area: 10,872 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	100.00	42.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.9608	52.2754	23.4554	0.0380		2.8786	2.8786		2.6483	2.6483		3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**4.9608**	**52.2754**	**23.4554**	**0.0380**	**18.0663**	**2.8786**	**20.9449**	**9.9307**	**2.6483**	**12.5790**		**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0950	0.0569	0.7469	1.6200e-003	0.1479	1.0000e-003	0.1489	0.0392	9.3000e-004	0.0402		161.5102	161.5102	5.3200e-003		161.6433
Total	**0.0950**	**0.0569**	**0.7469**	**1.6200e-003**	**0.1479**	**1.0000e-003**	**0.1489**	**0.0392**	**9.3000e-004**	**0.0402**		**161.5102**	**161.5102**	**5.3200e-003**		**161.6433**

3.2 Site Preparation - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.9608	52.2754	23.4554	0.0380		2.8786	2.8786		2.6483	2.6483	0.0000	3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**4.9608**	**52.2754**	**23.4554**	**0.0380**	**18.0663**	**2.8786**	**20.9449**	**9.9307**	**2.6483**	**12.5790**	**0.0000**	**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0950	0.0569	0.7469	1.6200e-003	0.1479	1.0000e-003	0.1489	0.0392	9.3000e-004	0.0402		161.5102	161.5102	5.3200e-003		161.6433
Total	**0.0950**	**0.0569**	**0.7469**	**1.6200e-003**	**0.1479**	**1.0000e-003**	**0.1489**	**0.0392**	**9.3000e-004**	**0.0402**		**161.5102**	**161.5102**	**5.3200e-003**		**161.6433**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3099	0.0000	6.3099	3.3413	0.0000	3.3413			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352		3,037.9107	3,037.9107	0.9308		3,061.1809
Total	**3.0705**	**33.8868**	**17.1042**	**0.0297**	**6.3099**	**1.7774**	**8.0874**	**3.3413**	**1.6352**	**4.9766**		**3,037.9107**	**3,037.9107**	**0.9308**		**3,061.1809**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0792	0.0474	0.6224	1.3500e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		134.5919	134.5919	4.4300e-003		134.7027
Total	**0.0792**	**0.0474**	**0.6224**	**1.3500e-003**	**0.1232**	**8.3000e-004**	**0.1241**	**0.0327**	**7.7000e-004**	**0.0335**		**134.5919**	**134.5919**	**4.4300e-003**		**134.7027**

3.3 Grading - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3099	0.0000	6.3099	3.3413	0.0000	3.3413			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352	0.0000	3,037.9107	3,037.9107	0.9308		3,061.1809
Total	**3.0705**	**33.8868**	**17.1042**	**0.0297**	**6.3099**	**1.7774**	**8.0874**	**3.3413**	**1.6352**	**4.9766**	**0.0000**	**3,037.9107**	**3,037.9107**	**0.9308**		**3,061.1809**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0792	0.0474	0.6224	1.3500e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		134.5919	134.5919	4.4300e-003		134.7027
Total	**0.0792**	**0.0474**	**0.6224**	**1.3500e-003**	**0.1232**	**8.3000e-004**	**0.1241**	**0.0327**	**7.7000e-004**	**0.0335**		**134.5919**	**134.5919**	**4.4300e-003**		**134.7027**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**		**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2399	5.9890	1.3163	0.0127	0.2845	0.0515	0.3360	0.0819	0.0493	0.1312		1,322.4871	1,322.4871	0.0725		1,324.3007
Worker	0.5279	0.3162	4.1496	9.0200e-003	0.8215	5.5700e-003	0.8270	0.2179	5.1400e-003	0.2230		897.2791	897.2791	0.0296		898.0181
Total	**0.7678**	**6.3051**	**5.4659**	**0.0217**	**1.1060**	**0.0571**	**1.1631**	**0.2998**	**0.0545**	**0.3542**		**2,219.7662**	**2,219.7662**	**0.1021**		**2,222.3188**

3.4 Building Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**	**0.0000**	**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2399	5.9890	1.3163	0.0127	0.2845	0.0515	0.3360	0.0819	0.0493	0.1312		1,322.4871	1,322.4871	0.0725		1,324.3007
Worker	0.5279	0.3162	4.1496	9.0200e-003	0.8215	5.5700e-003	0.8270	0.2179	5.1400e-003	0.2230		897.2791	897.2791	0.0296		898.0181
Total	**0.7678**	**6.3051**	**5.4659**	**0.0217**	**1.1060**	**0.0571**	**1.1631**	**0.2998**	**0.0545**	**0.3542**		**2,219.7662**	**2,219.7662**	**0.1021**		**2,222.3188**

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2065	5.6324	1.1478	0.0126	0.2845	0.0400	0.3245	0.0819	0.0383	0.1202		1,317.3630	1,317.3630	0.0676		1,319.0540
Worker	0.4676	0.2743	3.6277	8.7600e-003	0.8215	5.3900e-003	0.8269	0.2179	4.9700e-003	0.2229		871.7249	871.7249	0.0258		872.3705
Total	**0.6740**	**5.9068**	**4.7755**	**0.0214**	**1.1060**	**0.0454**	**1.1514**	**0.2998**	**0.0432**	**0.3430**		**2,189.0879**	**2,189.0879**	**0.0935**		**2,191.4245**

3.4 Building Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2065	5.6324	1.1478	0.0126	0.2845	0.0400	0.3245	0.0819	0.0383	0.1202		1,317.3630	1,317.3630	0.0676		1,319.0540
Worker	0.4676	0.2743	3.6277	8.7600e-003	0.8215	5.3900e-003	0.8269	0.2179	4.9700e-003	0.2229		871.7249	871.7249	0.0258		872.3705
Total	**0.6740**	**5.9068**	**4.7755**	**0.0214**	**1.1060**	**0.0454**	**1.1514**	**0.2998**	**0.0432**	**0.3430**		**2,189.0879**	**2,189.0879**	**0.0935**		**2,191.4245**

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665		2,330.6461	2,330.6461	0.7141		2,348.4988
Paving	1.5720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.5169**	**20.7178**	**15.0320**	**0.0228**		**1.1592**	**1.1592**		**1.0665**	**1.0665**		**2,330.6461**	**2,330.6461**	**0.7141**		**2,348.4988**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0792	0.0474	0.6224	1.3500e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		134.5919	134.5919	4.4300e-003		134.7027
Total	**0.0792**	**0.0474**	**0.6224**	**1.3500e-003**	**0.1232**	**8.3000e-004**	**0.1241**	**0.0327**	**7.7000e-004**	**0.0335**		**134.5919**	**134.5919**	**4.4300e-003**		**134.7027**

3.5 Paving - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665	0.0000	2,330.6461	2,330.6461	0.7141		2,348.4988
Paving	1.5720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.5169**	**20.7178**	**15.0320**	**0.0228**		**1.1592**	**1.1592**		**1.0665**	**1.0665**	**0.0000**	**2,330.6461**	**2,330.6461**	**0.7141**		**2,348.4988**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0792	0.0474	0.6224	1.3500e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		134.5919	134.5919	4.4300e-003		134.7027
Total	**0.0792**	**0.0474**	**0.6224**	**1.3500e-003**	**0.1232**	**8.3000e-004**	**0.1241**	**0.0327**	**7.7000e-004**	**0.0335**		**134.5919**	**134.5919**	**4.4300e-003**		**134.7027**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.1739					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	**2.5062**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.1909**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1056	0.0632	0.8299	1.8000e-003	0.1643	1.1100e-003	0.1654	0.0436	1.0300e-003	0.0446		179.4558	179.4558	5.9100e-003		179.6036
Total	**0.1056**	**0.0632**	**0.8299**	**1.8000e-003**	**0.1643**	**1.1100e-003**	**0.1654**	**0.0436**	**1.0300e-003**	**0.0446**		**179.4558**	**179.4558**	**5.9100e-003**		**179.6036**

3.6 Architectural Coating - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.1739					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	**2.5062**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.1909**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1056	0.0632	0.8299	1.8000e-003	0.1643	1.1100e-003	0.1654	0.0436	1.0300e-003	0.0446		179.4558	179.4558	5.9100e-003		179.6036
Total	**0.1056**	**0.0632**	**0.8299**	**1.8000e-003**	**0.1643**	**1.1100e-003**	**0.1654**	**0.0436**	**1.0300e-003**	**0.0446**		**179.4558**	**179.4558**	**5.9100e-003**		**179.6036**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.1739					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	**2.4725**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.1171**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0935	0.0549	0.7255	1.7500e-003	0.1643	1.0800e-003	0.1654	0.0436	9.9000e-004	0.0446		174.3450	174.3450	5.1700e-003		174.4741
Total	**0.0935**	**0.0549**	**0.7255**	**1.7500e-003**	**0.1643**	**1.0800e-003**	**0.1654**	**0.0436**	**9.9000e-004**	**0.0446**		**174.3450**	**174.3450**	**5.1700e-003**		**174.4741**

3.6 Architectural Coating - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.1739					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	**2.4725**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.1171**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0935	0.0549	0.7255	1.7500e-003	0.1643	1.0800e-003	0.1654	0.0436	9.9000e-004	0.0446		174.3450	174.3450	5.1700e-003		174.4741
Total	**0.0935**	**0.0549**	**0.7255**	**1.7500e-003**	**0.1643**	**1.0800e-003**	**0.1654**	**0.0436**	**9.9000e-004**	**0.0446**		**174.3450**	**174.3450**	**5.1700e-003**		**174.4741**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.2687	13.6861	59.3628	0.1043	7.8103	0.1252	7.9355	2.0857	0.1181	2.2038		10,423.6768	10,423.6768	0.7041		10,441.2785
Unmitigated	8.5662	14.5824	64.4383	0.1150	8.6781	0.1372	8.8153	2.3174	0.1295	2.4469		11,491.2988	11,491.2988	0.7636		11,510.3894

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Medical Office Building	2,358.00	672.00	116.25	3,126,921	2,814,229
Parking Lot	0.00	0.00	0.00		
Total	2,358.00	672.00	116.25	3,126,921	2,814,229

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	50	40	10
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Medical Office Building	0.472854	0.047686	0.207327	0.157858	0.035960	0.007313	0.016190	0.010860	0.000931	0.000377	0.034753	0.000753	0.007138
Parking Lot	0.472854	0.047686	0.207327	0.157858	0.035960	0.007313	0.016190	0.010860	0.000931	0.000377	0.034753	0.000753	0.007138

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0349	0.3170	0.2663	1.9000e-003		0.0241	0.0241		0.0241	0.0241		380.4150	380.4150	7.2900e-003	6.9700e-003	382.6756
NaturalGas Unmitigated	0.0367	0.3332	0.2799	2.0000e-003		0.0253	0.0253		0.0253	0.0253		399.8388	399.8388	7.6600e-003	7.3300e-003	402.2149

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Medical Office Building	3398.63	0.0367	0.3332	0.2799	2.0000e-003		0.0253	0.0253		0.0253	0.0253		399.8388	399.8388	7.6600e-003	7.3300e-003	402.2149
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0367**	**0.3332**	**0.2799**	**2.0000e-003**		**0.0253**	**0.0253**		**0.0253**	**0.0253**		**399.8388**	**399.8388**	**7.6600e-003**	**7.3300e-003**	**402.2149**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Medical Office Building	3.23353	0.0349	0.3170	0.2663	1.9000e-003		0.0241	0.0241		0.0241	0.0241		380.4150	380.4150	7.2900e-003	6.9700e-003	382.6756
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0349**	**0.3170**	**0.2663**	**1.9000e-003**		**0.0241**	**0.0241**		**0.0241**	**0.0241**		**380.4150**	**380.4150**	**7.2900e-003**	**6.9700e-003**	**382.6756**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.3465	5.1000e-004	0.0547	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1156	0.1156	3.2000e-004		0.1235
Unmitigated	1.8787	5.1000e-004	0.0547	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1156	0.1156	3.2000e-004		0.1235

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2043					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6692					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.2200e-003	5.1000e-004	0.0547	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1156	0.1156	3.2000e-004		0.1235
Total	**1.8787**	**5.1000e-004**	**0.0547**	**0.0000**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**		**0.1156**	**0.1156**	**3.2000e-004**		**0.1235**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2043					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.1369					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.2200e-003	5.1000e-004	0.0547	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1156	0.1156	3.2000e-004		0.1235
Total	**5.3465**	**5.1000e-004**	**0.0547**	**0.0000**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**		**0.1156**	**0.1156**	**3.2000e-004**		**0.1235**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	4	14	480	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (300 - 600 HP)	3.1504	8.8065	8.0340	0.0151		0.4635	0.4635		0.4635	0.4635		1,611.8671	1,611.8671	0.2260		1,617.5167
Total	**3.1504**	**8.8065**	**8.0340**	**0.0151**		**0.4635**	**0.4635**		**0.4635**	**0.4635**		**1,611.8671**	**1,611.8671**	**0.2260**		**1,617.5167**

11.0 Vegetation

Roseville MOB

Placer County APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	75.00	1000sqft	1.50	75,000.00	0
Parking Lot	453.00	Space	4.20	181,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	74
Climate Zone	2			**Operational Year**	2018
Utility Company	Roseville Electric				
CO2 Intensity (lb/MWhr)	616.63	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Roseville MOB - Placer County APCD Air District, Winter

Project Characteristics - *

Land Use - *

Vehicle Trips - *per KDA

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Mobile Land Use Mitigation -

Construction Phase - Applicant provided construction schedule

Grading - *

Stationary Sources - Emergency Generators and Fire Pumps -

Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	343.00
tblConstructionPhase	NumDays	230.00	343.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	20.00	7.00
tblConstructionPhase	NumDays	10.00	2.00
tblConstructionPhase	PhaseEndDate	8/22/2018	11/19/2018
tblConstructionPhase	PhaseEndDate	6/27/2018	11/5/2018
tblConstructionPhase	PhaseEndDate	8/9/2017	7/3/2017
tblConstructionPhase	PhaseEndDate	7/25/2018	7/12/2017
tblConstructionPhase	PhaseEndDate	7/12/2017	6/2/2017
tblConstructionPhase	PhaseStartDate	7/26/2018	7/27/2017
tblConstructionPhase	PhaseStartDate	8/10/2017	7/13/2017
tblConstructionPhase	PhaseStartDate	7/13/2017	6/3/2017

tblConstructionPhase	PhaseStartDate	6/28/2018	7/4/2017
tblConstructionPhase	PhaseStartDate	6/29/2017	6/1/2017
tblGrading	AcresOfGrading	10.50	5.70
tblGrading	MaterialExported	0.00	1.00
tblLandUse	LotAcreage	1.72	1.50
tblLandUse	LotAcreage	4.08	4.20
tblProjectCharacteristics	CO2IntensityFactor	793.8	616.63
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	480.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	4.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	14.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	DV_TP	30.00	40.00
tblVehicleTrips	PR_TP	60.00	50.00
tblVehicleTrips	WD_TR	36.13	31.44

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	6.4914	52.3469	26.2057	0.0518	18.2142	2.8796	21.0937	9.9699	2.6492	12.6191	0.0000	5,171.4288	5,171.4288	1.1984	0.0000	5,191.3553
2018	5.9136	31.5266	24.7802	0.0514	1.2703	1.6978	2.9680	0.3434	1.6056	1.9489	0.0000	5,107.7476	5,107.7476	0.7735	0.0000	5,127.0857
Maximum	**6.4914**	**52.3469**	**26.2057**	**0.0518**	**18.2142**	**2.8796**	**21.0937**	**9.9699**	**2.6492**	**12.6191**	**0.0000**	**5,171.4288**	**5,171.4288**	**1.1984**	**0.0000**	**5,191.3553**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	6.4914	52.3469	26.2057	0.0518	18.2142	2.8796	21.0937	9.9699	2.6492	12.6191	0.0000	5,171.4288	5,171.4288	1.1984	0.0000	5,191.3553
2018	5.9136	31.5266	24.7802	0.0514	1.2703	1.6978	2.9680	0.3434	1.6056	1.9489	0.0000	5,107.7476	5,107.7476	0.7735	0.0000	5,127.0857
Maximum	**6.4914**	**52.3469**	**26.2057**	**0.0518**	**18.2142**	**2.8796**	**21.0937**	**9.9699**	**2.6492**	**12.6191**	**0.0000**	**5,171.4288**	**5,171.4288**	**1.1984**	**0.0000**	**5,191.3553**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8787	5.1000e-004	0.0547	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1156	0.1156	3.2000e-004		0.1235
Energy	0.0367	0.3332	0.2799	2.0000e-003		0.0253	0.0253		0.0253	0.0253		399.8388	399.8388	7.6600e-003	7.3300e-003	402.2149
Mobile	6.9302	16.0390	68.7250	0.1050	8.6781	0.1384	8.8165	2.3174	0.1306	2.4480		10,482.0935	10,482.0935	0.8213		10,502.6258
Stationary	3.1504	8.8065	8.0340	0.0151		0.4635	0.4635		0.4635	0.4635		1,611.8671	1,611.8671	0.2260		1,617.5167
Total	**11.9960**	**25.1793**	**77.0935**	**0.1222**	**8.6781**	**0.6275**	**9.3056**	**2.3174**	**0.6196**	**2.9371**		**12,493.9150**	**12,493.9150**	**1.0553**	**7.3300e-003**	**12,522.4809**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.3465	5.1000e-004	0.0547	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1156	0.1156	3.2000e-004		0.1235
Energy	0.0349	0.3170	0.2663	1.9000e-003		0.0241	0.0241		0.0241	0.0241		380.4150	380.4150	7.2900e-003	6.9700e-003	382.6756
Mobile	6.6102	15.0088	63.8891	0.0953	7.8103	0.1264	7.9367	2.0857	0.1192	2.2049		9,509.9642	9,509.9642	0.7614		9,528.9981
Stationary	3.1504	8.8065	8.0340	0.0151		0.4635	0.4635		0.4635	0.4635		1,611.8671	1,611.8671	0.2260		1,617.5167
Total	**15.1420**	**24.1328**	**72.2440**	**0.1124**	**7.8103**	**0.6142**	**8.4245**	**2.0857**	**0.6070**	**2.6927**		**11,502.3619**	**11,502.3619**	**0.9950**	**6.9700e-003**	**11,529.3139**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**-26.23**	**4.16**	**6.29**	**8.04**	**10.00**	**2.11**	**9.47**	**10.00**	**2.03**	**8.32**	**0.00**	**7.94**	**7.94**	**5.72**	**4.91**	**7.93**

3.0 Construction Detail

Construction Phase

Roseville MOB - Placer County APCD Air District, Winter

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2017	6/2/2017	5	2	
2	Grading	Grading	6/3/2017	7/3/2017	5	21	
3	Building Construction	Building Construction	7/13/2017	11/5/2018	5	343	
4	Paving	Paving	7/4/2017	7/12/2017	5	7	
5	Architectural Coating	Architectural Coating	7/27/2017	11/19/2018	5	343	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 5.7

Acres of Paving: 4.2

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 112,500; Non-Residential Outdoor: 37,500; Striped Parking Area: 10,872 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	100.00	42.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.9608	52.2754	23.4554	0.0380		2.8786	2.8786		2.6483	2.6483		3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**4.9608**	**52.2754**	**23.4554**	**0.0380**	**18.0663**	**2.8786**	**20.9449**	**9.9307**	**2.6483**	**12.5790**		**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0927	0.0715	0.6883	1.4500e-003	0.1479	1.0000e-003	0.1489	0.0392	9.3000e-004	0.0402		143.8409	143.8409	4.9700e-003		143.9650
Total	**0.0927**	**0.0715**	**0.6883**	**1.4500e-003**	**0.1479**	**1.0000e-003**	**0.1489**	**0.0392**	**9.3000e-004**	**0.0402**		**143.8409**	**143.8409**	**4.9700e-003**		**143.9650**

3.2 Site Preparation - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.9608	52.2754	23.4554	0.0380		2.8786	2.8786		2.6483	2.6483	0.0000	3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**4.9608**	**52.2754**	**23.4554**	**0.0380**	**18.0663**	**2.8786**	**20.9449**	**9.9307**	**2.6483**	**12.5790**	**0.0000**	**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0927	0.0715	0.6883	1.4500e-003	0.1479	1.0000e-003	0.1489	0.0392	9.3000e-004	0.0402		143.8409	143.8409	4.9700e-003		143.9650
Total	**0.0927**	**0.0715**	**0.6883**	**1.4500e-003**	**0.1479**	**1.0000e-003**	**0.1489**	**0.0392**	**9.3000e-004**	**0.0402**		**143.8409**	**143.8409**	**4.9700e-003**		**143.9650**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3099	0.0000	6.3099	3.3413	0.0000	3.3413			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352		3,037.9107	3,037.9107	0.9308		3,061.1809
Total	**3.0705**	**33.8868**	**17.1042**	**0.0297**	**6.3099**	**1.7774**	**8.0874**	**3.3413**	**1.6352**	**4.9766**		**3,037.9107**	**3,037.9107**	**0.9308**		**3,061.1809**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0773	0.0596	0.5736	1.2100e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		119.8674	119.8674	4.1400e-003		119.9709
Total	**0.0773**	**0.0596**	**0.5736**	**1.2100e-003**	**0.1232**	**8.3000e-004**	**0.1241**	**0.0327**	**7.7000e-004**	**0.0335**		**119.8674**	**119.8674**	**4.1400e-003**		**119.9709**

3.3 Grading - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3099	0.0000	6.3099	3.3413	0.0000	3.3413			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352	0.0000	3,037.9107	3,037.9107	0.9308		3,061.1809
Total	**3.0705**	**33.8868**	**17.1042**	**0.0297**	**6.3099**	**1.7774**	**8.0874**	**3.3413**	**1.6352**	**4.9766**	**0.0000**	**3,037.9107**	**3,037.9107**	**0.9308**		**3,061.1809**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0773	0.0596	0.5736	1.2100e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		119.8674	119.8674	4.1400e-003		119.9709
Total	**0.0773**	**0.0596**	**0.5736**	**1.2100e-003**	**0.1232**	**8.3000e-004**	**0.1241**	**0.0327**	**7.7000e-004**	**0.0335**		**119.8674**	**119.8674**	**4.1400e-003**		**119.9709**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**		**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2522	6.0954	1.5664	0.0122	0.2845	0.0526	0.3371	0.0819	0.0503	0.1322		1,280.0617	1,280.0617	0.0811		1,282.0896
Worker	0.5151	0.3971	3.8240	8.0400e-003	0.8215	5.5700e-003	0.8270	0.2179	5.1400e-003	0.2230		799.1160	799.1160	0.0276		799.8058
Total	**0.7673**	**6.4925**	**5.3904**	**0.0203**	**1.1060**	**0.0582**	**1.1641**	**0.2998**	**0.0554**	**0.3552**		**2,079.1778**	**2,079.1778**	**0.1087**		**2,081.8954**

3.4 Building Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**	**0.0000**	**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2522	6.0954	1.5664	0.0122	0.2845	0.0526	0.3371	0.0819	0.0503	0.1322		1,280.0617	1,280.0617	0.0811		1,282.0896
Worker	0.5151	0.3971	3.8240	8.0400e-003	0.8215	5.5700e-003	0.8270	0.2179	5.1400e-003	0.2230		799.1160	799.1160	0.0276		799.8058
Total	**0.7673**	**6.4925**	**5.3904**	**0.0203**	**1.1060**	**0.0582**	**1.1641**	**0.2998**	**0.0554**	**0.3552**		**2,079.1778**	**2,079.1778**	**0.1087**		**2,081.8954**

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2176	5.7176	1.3774	0.0122	0.2845	0.0409	0.3254	0.0819	0.0391	0.1210		1,273.9544	1,273.9544	0.0760		1,275.8548
Worker	0.4533	0.3443	3.3069	7.8000e-003	0.8215	5.3900e-003	0.8269	0.2179	4.9700e-003	0.2229		776.1746	776.1746	0.0239		776.7712
Total	**0.6709**	**6.0620**	**4.6842**	**0.0200**	**1.1060**	**0.0463**	**1.1523**	**0.2998**	**0.0441**	**0.3439**		**2,050.1291**	**2,050.1291**	**0.0999**		**2,052.6260**

3.4 Building Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2176	5.7176	1.3774	0.0122	0.2845	0.0409	0.3254	0.0819	0.0391	0.1210		1,273.9544	1,273.9544	0.0760		1,275.8548
Worker	0.4533	0.3443	3.3069	7.8000e-003	0.8215	5.3900e-003	0.8269	0.2179	4.9700e-003	0.2229		776.1746	776.1746	0.0239		776.7712
Total	**0.6709**	**6.0620**	**4.6842**	**0.0200**	**1.1060**	**0.0463**	**1.1523**	**0.2998**	**0.0441**	**0.3439**		**2,050.1291**	**2,050.1291**	**0.0999**		**2,052.6260**

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665		2,330.6461	2,330.6461	0.7141		2,348.4988
Paving	1.5720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.5169**	**20.7178**	**15.0320**	**0.0228**		**1.1592**	**1.1592**		**1.0665**	**1.0665**		**2,330.6461**	**2,330.6461**	**0.7141**		**2,348.4988**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0773	0.0596	0.5736	1.2100e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		119.8674	119.8674	4.1400e-003		119.9709
Total	**0.0773**	**0.0596**	**0.5736**	**1.2100e-003**	**0.1232**	**8.3000e-004**	**0.1241**	**0.0327**	**7.7000e-004**	**0.0335**		**119.8674**	**119.8674**	**4.1400e-003**		**119.9709**

3.5 Paving - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665	0.0000	2,330.6461	2,330.6461	0.7141		2,348.4988
Paving	1.5720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.5169**	**20.7178**	**15.0320**	**0.0228**		**1.1592**	**1.1592**		**1.0665**	**1.0665**	**0.0000**	**2,330.6461**	**2,330.6461**	**0.7141**		**2,348.4988**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0773	0.0596	0.5736	1.2100e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		119.8674	119.8674	4.1400e-003		119.9709
Total	**0.0773**	**0.0596**	**0.5736**	**1.2100e-003**	**0.1232**	**8.3000e-004**	**0.1241**	**0.0327**	**7.7000e-004**	**0.0335**		**119.8674**	**119.8674**	**4.1400e-003**		**119.9709**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.1739					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	**2.5062**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.1909**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1030	0.0794	0.7648	1.6100e-003	0.1643	1.1100e-003	0.1654	0.0436	1.0300e-003	0.0446		159.8232	159.8232	5.5200e-003		159.9612
Total	**0.1030**	**0.0794**	**0.7648**	**1.6100e-003**	**0.1643**	**1.1100e-003**	**0.1654**	**0.0436**	**1.0300e-003**	**0.0446**		**159.8232**	**159.8232**	**5.5200e-003**		**159.9612**

3.6 Architectural Coating - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.1739					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	**2.5062**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.1909**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1030	0.0794	0.7648	1.6100e-003	0.1643	1.1100e-003	0.1654	0.0436	1.0300e-003	0.0446		159.8232	159.8232	5.5200e-003		159.9612
Total	**0.1030**	**0.0794**	**0.7648**	**1.6100e-003**	**0.1643**	**1.1100e-003**	**0.1654**	**0.0436**	**1.0300e-003**	**0.0446**		**159.8232**	**159.8232**	**5.5200e-003**		**159.9612**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.1739					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	**2.4725**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.1171**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0907	0.0689	0.6614	1.5600e-003	0.1643	1.0800e-003	0.1654	0.0436	9.9000e-004	0.0446		155.2349	155.2349	4.7700e-003		155.3542
Total	**0.0907**	**0.0689**	**0.6614**	**1.5600e-003**	**0.1643**	**1.0800e-003**	**0.1654**	**0.0436**	**9.9000e-004**	**0.0446**		**155.2349**	**155.2349**	**4.7700e-003**		**155.3542**

3.6 Architectural Coating - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.1739					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	**2.4725**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.1171**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0907	0.0689	0.6614	1.5600e-003	0.1643	1.0800e-003	0.1654	0.0436	9.9000e-004	0.0446		155.2349	155.2349	4.7700e-003		155.3542
Total	**0.0907**	**0.0689**	**0.6614**	**1.5600e-003**	**0.1643**	**1.0800e-003**	**0.1654**	**0.0436**	**9.9000e-004**	**0.0446**		**155.2349**	**155.2349**	**4.7700e-003**		**155.3542**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.6102	15.0088	63.8891	0.0953	7.8103	0.1264	7.9367	2.0857	0.1192	2.2049		9,509.9642	9,509.9642	0.7614		9,528.9981
Unmitigated	6.9302	16.0390	68.7250	0.1050	8.6781	0.1384	8.8165	2.3174	0.1306	2.4480		10,482.0935	10,482.0935	0.8213		10,502.6258

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Medical Office Building	2,358.00	672.00	116.25	3,126,921	2,814,229
Parking Lot	0.00	0.00	0.00		
Total	2,358.00	672.00	116.25	3,126,921	2,814,229

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	50	40	10
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Medical Office Building	0.472854	0.047686	0.207327	0.157858	0.035960	0.007313	0.016190	0.010860	0.000931	0.000377	0.034753	0.000753	0.007138
Parking Lot	0.472854	0.047686	0.207327	0.157858	0.035960	0.007313	0.016190	0.010860	0.000931	0.000377	0.034753	0.000753	0.007138

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0349	0.3170	0.2663	1.9000e-003		0.0241	0.0241		0.0241	0.0241		380.4150	380.4150	7.2900e-003	6.9700e-003	382.6756
NaturalGas Unmitigated	0.0367	0.3332	0.2799	2.0000e-003		0.0253	0.0253		0.0253	0.0253		399.8388	399.8388	7.6600e-003	7.3300e-003	402.2149

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Medical Office Building	3398.63	0.0367	0.3332	0.2799	2.0000e-003		0.0253	0.0253		0.0253	0.0253		399.8388	399.8388	7.6600e-003	7.3300e-003	402.2149
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0367**	**0.3332**	**0.2799**	**2.0000e-003**		**0.0253**	**0.0253**		**0.0253**	**0.0253**		**399.8388**	**399.8388**	**7.6600e-003**	**7.3300e-003**	**402.2149**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Medical Office Building	3.23353	0.0349	0.3170	0.2663	1.9000e-003		0.0241	0.0241		0.0241	0.0241		380.4150	380.4150	7.2900e-003	6.9700e-003	382.6756
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0349**	**0.3170**	**0.2663**	**1.9000e-003**		**0.0241**	**0.0241**		**0.0241**	**0.0241**		**380.4150**	**380.4150**	**7.2900e-003**	**6.9700e-003**	**382.6756**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.3465	5.1000e-004	0.0547	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1156	0.1156	3.2000e-004		0.1235
Unmitigated	1.8787	5.1000e-004	0.0547	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1156	0.1156	3.2000e-004		0.1235

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2043					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6692					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.2200e-003	5.1000e-004	0.0547	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1156	0.1156	3.2000e-004		0.1235
Total	**1.8787**	**5.1000e-004**	**0.0547**	**0.0000**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**		**0.1156**	**0.1156**	**3.2000e-004**		**0.1235**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2043					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.1369					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.2200e-003	5.1000e-004	0.0547	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1156	0.1156	3.2000e-004		0.1235
Total	**5.3465**	**5.1000e-004**	**0.0547**	**0.0000**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**		**0.1156**	**0.1156**	**3.2000e-004**		**0.1235**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	4	14	480	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (300 - 600 HP)	3.1504	8.8065	8.0340	0.0151		0.4635	0.4635		0.4635	0.4635		1,611.8671	1,611.8671	0.2260		1,617.5167
Total	**3.1504**	**8.8065**	**8.0340**	**0.0151**		**0.4635**	**0.4635**		**0.4635**	**0.4635**		**1,611.8671**	**1,611.8671**	**0.2260**		**1,617.5167**

11.0 Vegetation

Roseville MOB

Placer County APCD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Excavators	Diesel	No Change	0	1	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Forklifts	Diesel	No Change	0	3	No Change	0.00
Graders	Diesel	No Change	0	1	No Change	0.00
Pavers	Diesel	No Change	0	2	No Change	0.00
Rollers	Diesel	No Change	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	4	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	10	No Change	0.00
Generator Sets	Diesel	No Change	0	1	No Change	0.00
Paving Equipment	Diesel	No Change	0	2	No Change	0.00
Welders	Diesel	No Change	0	1	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	5.31000E-002	3.54030E-001	3.18770E-001	5.10000E-004	2.71000E-002	2.71000E-002	0.00000E+000	4.37884E+001	4.37884E+001	4.31000E-003	0.00000E+000	4.38962E+001
Cranes	9.05300E-002	1.07918E+000	3.94210E-001	8.70000E-004	4.72500E-002	4.34700E-002	0.00000E+000	7.94950E+001	7.94950E+001	2.46100E-002	0.00000E+000	8.01102E+001
Excavators	3.71000E-003	4.11400E-002	3.50300E-002	5.00000E-005	2.02000E-003	1.86000E-003	0.00000E+000	5.02845E+000	5.02845E+000	1.54000E-003	0.00000E+000	5.06697E+000
Forklifts	9.76600E-002	8.56180E-001	6.30110E-001	7.90000E-004	6.92300E-002	6.36900E-002	0.00000E+000	7.21894E+001	7.21894E+001	2.23500E-002	0.00000E+000	7.27481E+001
Generator Sets	9.06200E-002	7.26840E-001	6.44250E-001	1.13000E-003	4.72800E-002	4.72800E-002	0.00000E+000	9.69331E+001	9.69331E+001	7.30000E-003	0.00000E+000	9.71155E+001
Graders	5.62000E-003	7.84400E-002	2.05700E-002	7.00000E-005	2.56000E-003	2.35000E-003	0.00000E+000	6.48925E+000	6.48925E+000	1.99000E-003	0.00000E+000	6.53896E+000
Pavers	2.62000E-003	2.93400E-002	2.06500E-002	3.00000E-005	1.44000E-003	1.33000E-003	0.00000E+000	3.05128E+000	3.05128E+000	9.30000E-004	0.00000E+000	3.07466E+000
Paving Equipment	2.01000E-003	2.28600E-002	1.80300E-002	3.00000E-005	1.14000E-003	1.05000E-003	0.00000E+000	2.64594E+000	2.64594E+000	8.10000E-004	0.00000E+000	2.66621E+000
Rollers	2.18000E-003	2.03100E-002	1.39400E-002	2.00000E-005	1.47000E-003	1.35000E-003	0.00000E+000	1.70292E+000	1.70292E+000	5.20000E-004	0.00000E+000	1.71596E+000
Rubber Tired Dozers	1.66200E-002	1.80450E-001	6.24600E-002	1.20000E-004	8.83000E-003	8.13000E-003	0.00000E+000	1.07034E+001	1.07034E+001	3.28000E-003	0.00000E+000	1.07854E+001
Tractors/Loaders/ Backhoes	1.39160E-001	1.35824E+000	1.14609E+000	1.51000E-003	9.88200E-002	9.09100E-002	0.00000E+000	1.38786E+002	1.38786E+002	4.29300E-002	0.00000E+000	1.39859E+002
Welders	7.93700E-002	2.92040E-001	3.22090E-001	4.40000E-004	2.03400E-002	2.03400E-002	0.00000E+000	3.22798E+001	3.22798E+001	6.47000E-003	0.00000E+000	3.24417E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	5.31000E-002	3.54030E-001	3.18770E-001	5.10000E-004	2.71000E-002	2.71000E-002	0.00000E+000	4.37883E+001	4.37883E+001	4.31000E-003	0.00000E+000	4.38961E+001
Cranes	9.05300E-002	1.07918E+000	3.94210E-001	8.70000E-004	4.72500E-002	4.34700E-002	0.00000E+000	7.94949E+001	7.94949E+001	2.46100E-002	0.00000E+000	8.01101E+001
Excavators	3.71000E-003	4.11400E-002	3.50300E-002	5.00000E-005	2.02000E-003	1.86000E-003	0.00000E+000	5.02845E+000	5.02845E+000	1.54000E-003	0.00000E+000	5.06697E+000
Forklifts	9.76600E-002	8.56180E-001	6.30110E-001	7.90000E-004	6.92300E-002	6.36900E-002	0.00000E+000	7.21893E+001	7.21893E+001	2.23500E-002	0.00000E+000	7.27480E+001
Generator Sets	9.06200E-002	7.26840E-001	6.44250E-001	1.13000E-003	4.72800E-002	4.72800E-002	0.00000E+000	9.69330E+001	9.69330E+001	7.30000E-003	0.00000E+000	9.71154E+001
Graders	5.62000E-003	7.84400E-002	2.05700E-002	7.00000E-005	2.56000E-003	2.35000E-003	0.00000E+000	6.48925E+000	6.48925E+000	1.99000E-003	0.00000E+000	6.53895E+000
Pavers	2.62000E-003	2.93400E-002	2.06500E-002	3.00000E-005	1.44000E-003	1.33000E-003	0.00000E+000	3.05128E+000	3.05128E+000	9.30000E-004	0.00000E+000	3.07465E+000
Paving Equipment	2.01000E-003	2.28600E-002	1.80300E-002	3.00000E-005	1.14000E-003	1.05000E-003	0.00000E+000	2.64594E+000	2.64594E+000	8.10000E-004	0.00000E+000	2.66621E+000
Rollers	2.18000E-003	2.03100E-002	1.39400E-002	2.00000E-005	1.47000E-003	1.35000E-003	0.00000E+000	1.70292E+000	1.70292E+000	5.20000E-004	0.00000E+000	1.71596E+000
Rubber Tired Dozers	1.66200E-002	1.80450E-001	6.24600E-002	1.20000E-004	8.83000E-003	8.13000E-003	0.00000E+000	1.07034E+001	1.07034E+001	3.28000E-003	0.00000E+000	1.07854E+001
Tractors/Loaders/Backhoes	1.39160E-001	1.35824E+000	1.14609E+000	1.51000E-003	9.88200E-002	9.09100E-002	0.00000E+000	1.38786E+002	1.38786E+002	4.29300E-002	0.00000E+000	1.39859E+002
Welders	7.93700E-002	2.92040E-001	3.22090E-001	4.40000E-004	2.03400E-002	2.03400E-002	0.00000E+000	3.22798E+001	3.22798E+001	6.47000E-003	0.00000E+000	3.24417E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.14186E-006	1.14186E-006	0.00000E+000	0.00000E+000	1.36686E-006
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.25794E-006	1.25794E-006	0.00000E+000	0.00000E+000	1.12345E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.10820E-006	1.10820E-006	0.00000E+000	0.00000E+000	1.09969E-006
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.23797E-006	1.23797E-006	0.00000E+000	0.00000E+000	1.13267E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.52930E-006
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	3.25239E-006
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	9.34281E-007	9.34281E-007	0.00000E+000	0.00000E+000	9.27178E-007
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.22491E-006	1.22491E-006	0.00000E+000	0.00000E+000	1.21551E-006
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.23916E-006	1.23916E-006	0.00000E+000	0.00000E+000	1.23298E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)			

No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.03	0.01	0.03	0.01	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.18	0.05	0.18	0.05	0.00	0.00
Grading	Fugitive Dust	0.07	0.04	0.07	0.04	0.00	0.00
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.02	0.01	0.02	0.01	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	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	7.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.36	1.36	1.31	1.19	1.36
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	4.33	6.33	7.34	9.23	8.75	8.78	0.00	9.26	9.26	7.50	0.00	9.26
Natural Gas	4.93	4.87	4.86	2.78	4.76	4.76	0.00	4.86	4.86	4.72	4.96	4.86
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	12.36	11.00	11.22	12.35	12.43	11.61
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Suburban Center

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	0.11	0.33		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
Yes	Land Use	Increase Transit Accessibility	0.16	0.25		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.10			

No	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site		
No	Neighborhood Enhancements	Provide Traffic Calming Measures	0.00			
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00	0.00		
No	Transit Improvements	Expand Transit Network	0.00	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		0.00	
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.10			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	4.50			
No	Commute	Workplace Parking Charge		0.00		
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program	10.00			
	Commute	Commute Subtotal	0.00			

No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.10			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
Yes	Use Low VOC Cleaning Supplies	
Yes	Use Low VOC Paint (Residential Interior)	100.00
Yes	Use Low VOC Paint (Residential Exterior)	100.00
Yes	Use Low VOC Paint (Non-residential Interior)	100.00
Yes	Use Low VOC Paint (Non-residential Exterior)	100.00
Yes	Use Low VOC Paint (Parking)	100.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	5.00	
No	Install High Efficiency Lighting	0.00	
No	On-site Renewable	0.00	0.00

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
Yes	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
Yes	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value

Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

APPENDIX B

PERSONAL COMMUNICATION BETWEEN WAYNE SHIJO, PROJECT MANAGER, KD ANDERSON AND ASSOCIATES, INC. AND ROD STINSON, DIVISION MANAGER/AIR QUALITY SPECIALIST, RANEY PLANNING AND MANAGEMENT

Subject: FW: Eureka Road MOB

From: Wayne Shijo <WShijo@kdanderson.com>
Date: February 8, 2017 at 5:01:47 PM PST
To: 'Rod Stinson' <rods@raneymanagement.com>
Cc: "Travis Batts (Travis@pappasinvestments.com)" <Travis@pappasinvestments.com>
Subject: RE: Eureka Road MOB

Rod -

The purpose of this E-mail message is to address primary, diverted, and pass-by trips for the Eureka Gateway Medical Office Building project in Roseville. In particular, the following describes reasons why the percent of diverted trips to the Eureka Gateway project may be expected to be higher than default values from the CalEEMod emissions model.

The CalEEMod model includes default values for primary, diverted, and pass-by trip percentages. These percentages are presented in your E-mail message below. The default percentages are based on statewide or national averages, and do not account for site-specific or project-specific factors. Two reasons why the percent of diverted trips to the Eureka Gateway Medical Office Building project may be higher than the CalEEMod default values are:

- the relocation of the UC Davis Medical Group, and
- the presence of nearby high-volume roadways.

Each of these reasons are described below.

Relocation. The UC Davis Medical Group is currently located at 2261 Douglas Boulevard. This location is on Douglas Boulevard between Eureka Road and East Roseville Parkway. The UC Davis Medical Group proposes to relocate to the Eureka Gateway Medical Office Building, which is approximately 0.6 miles away from their current location. As an existing land use, the UC Davis Medical Group has an established presence and it is likely that, with the relocation, patients and employees would geographically shift (i.e., divert) their travel to the new location. Because the UC Davis Medical Group at the Eureka Gateway Medical Office Building would be a relocated use, rather than a new land use, it is likely the percentage of diverted trips would be higher than average - higher than the CalEEMod default values.

High-Volume Roadways. The Eureka Gateway Medical Office Building project site is located less than a mile away from three major roadways:

- Interstate 80 (I-80) is a ten-lane interstate freeway located 0.75 miles from the project site,
- Douglas Boulevard is a six-lane arterial roadway located 0.5 miles from the project site, and
- Sunrise Avenue is a six-lane arterial roadway located 0.4 miles from the project site.

These three high-volume roadways are a substantial source of potential diverted trips to the Eureka Gateway Medical Office Building project. An example of a diverted trip would involve a driver who currently makes commute trips along I-80 even without the project. With

implementation of the Eureka Gateway Medical Office Building, this driver would divert from I-80, and make an intermediate stop at the project site on the way to or from work for a medical appointment. As shown in the CalEEMod default values, travel for an average medical office building will include some diverted trips. The key aspect to diverted trips is having a nearby major transportation corridor. The unusual aspect of Eureka Gateway Medical Office Building project is having three major transportation corridors within one mile.

Because of the presence of three major transportation corridors within one mile, the Eureka Gateway Medical Office Building project is considered to have a larger-than-average source of potential diverted trips. This larger-than-average source of diverted trips would be expected to then result in a higher-than-average percentage of diverted trips.

With the short-distance relocation of the UC Davis Medical Group and the presence of three nearby high-volume roadways, it would be reasonable to expect the percentage of diverted trips to the Eureka Gateway Medical Office Building project would be higher than average. It would be reasonable to expect diverted trip percentages consistent with those adjusted percentage presented in your E-mail message below.

Please let me know if you have any questions about this matter.

Wayne

Wayne Shijo
KD Anderson & Associates
3853 Taylor Road, Suite G
Loomis, CA 95650

Phone: 916/660-1555
Cell: 916/205-7032
Fax: 916/660-1535

From: Rod Stinson [mailto:rods@raneymanagement.com]
Sent: Tuesday, February 07, 2017 2:03 PM
To: Wayne Shijo
Subject: Eureka Road MOB

Wayne,

To recap, the default Trip Purpose Percentages have been adjusted as follows:

	Default	Adjusted
Primary	60	50
Diverted	30	40
Pass-by	10	10

Based on my discussion with you, we made these changes to better reflect the project location as well as to capture the fact that some of these trips are not “new” trips to the area. Please feel free to call if you have any questions.

Thanks!

Rod Stinson
Division Manager/Air Quality Specialist

RANEY
PLANNING & MANAGEMENT, INC.

1501 Sports Drive, Suite A
Sacramento, CA 95834
Office: 916.372.6100
Fax: 916.419.6108

KD Anderson & Associates, Inc.
Transportation Engineers

January 30, 2017

Mr. Travis Batts
Pappas Gateway LP, a California Limited Partnership
555 University Avenue, Suite 200
Sacramento, CA 95825

Subject: ***Eureka Gateway Medical Office Building Project Trip Generation Study***

Dear Mr. Batts:

On behalf of KD Anderson & Associates, I am pleased to submit this letter report on vehicle trip generation associated with the Eureka Gateway Medical Office Building project. This report presents estimates of the number of vehicle trips that would be generated by the proposed project, and estimates of the effectiveness of measures that would reduce the number of vehicle trips.

Executive Summary

This letter report presents an estimate of the effectiveness of potential measures to reduce the number of vehicle trips generated by the Eureka Gateway Medical Office Building project. Overall, these measures may be expected to reduce vehicle trips by:

- 13.0 percent for the daily period,
- 30.2 percent for inbound trips during the a.m. peak hour,
- 10.2percent for outbound trips during the a.m. peak hour,
- 12.2 percent for inbound trips during the p.m. peak hour, and
- 22.6 percent for outbound trips during the p.m. peak hour.

The enclosed **Table 1** presents a summary of the vehicle trip reduction percentages.

Project Understanding

Our understanding is the Eureka Gateway Medical Office Building project involves a structure with a maximum building size of 75,000 square feet of medical office land uses. The project site is 5.7 acres in size located northeast of Eureka Road and southeast of Rocky Ridge Drive in the City of Roseville. The current project site plan anticipates 453 parking stalls.

A traffic impact study has been prepared for the Eureka Gateway Medical Office Building project. The traffic impact study uses trip generation estimates based on the Institute of Transportation Engineers (ITE) *Trip Generation Manual*. While the ITE *Trip Generation*

Manual is an industry-standard reference document, it reflects nationwide average trip generation rates, and does not reflect application of specific trip reduction measures. Trip reduction measures, also referred to as Transportation Systems Management (TSM) measures, may be considered for the Eureka Gateway Medical Office Building project.

Several TSM measures which would reduce the number of vehicle trips generated by the Eureka Gateway Medical Office Building project are being contemplated. The following is a brief description of measures being contemplated for the proposed project.

- Short-term and long-term bicycle parking facilities would be installed. Bicycle parking facilities would be installed adjacent to the east and west building entrances. The project site plan includes 24 bicycle parking spaces.

- Designated carpool, vanpool and Clean Air vehicle parking spaces would be provided.

- The project will work the City of Roseville towards producing a TSM Plan. This integrated and cooperative approach will promote alternative transportation options to reduce traffic congestion and improve air quality.

- Seating areas will be provided at the main entrance of the building, for Dial-a-Ride and other ride share services for passenger pick up. (Dial-A-Ride is a shared ride transit service that operates within the city limits of Roseville).

- An electric vehicle charging station will be provided.

- An existing pad for a future transit bus stop is located on the southeast side of Rocky Ridge Drive, approximately 125 feet from one of the project site driveways.

- The northern corner of the Eureka Gateway Medical Office Building project site is located approximately 230 feet from the eastern corner of the existing Rosemeade at Olympus Pointe site. Rosemeade at Olympus Pointe includes 465 multiple family dwelling units. The Eureka Gateway Medical Office Building project site and the Rosemeade at Olympus Pointe site are connected by an existing sidewalk and an existing bicycle lane along Rocky Ridge Drive.

- The Eureka Gateway Medical Office Building project site is walkable from other existing and planned commercial uses. Existing restaurants and retail centers are present to the north, south, and west of the project site. Pedestrian connectivity from the street and a designated path along landscaped areas would be provided.

- The current project site plan anticipates 453 parking stalls, which would be 9.4 percent less than the 500 spaces that would be calculated using the Roseville Municipal Code rate of one space per 150 building square feet applied to the maximum 75,000 square feet building size. The reduced number of parking spaces would encourage carpooling and public transit use.

Baseline Trip Generation Estimates

The enclosed **Table 2** and **Table 3** present trip generation estimates for the Eureka Gateway Medical Office Building project. These estimates are for a baseline condition – these estimates do not include any reductions associated with TSM measures. The estimates presented in **Table 2** and **Table 3** are based on the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9th Edition*. While the *Trip Generation Manual, 9th Edition* is an industry-standard reference document, it reflects nationwide average trip generation rates, and does not reflect application of specific trip reduction measures.

As shown in **Table 3**, the Eureka Gateway Medical Office Building project would generate:

- 2,710 trips per day,
- 179 trips during the a.m. peak hour, and
- 268 trips during the p.m. peak hour.

Information Sources

Trip reduction estimates presented in this letter report are based on information from several sources. These sources are described below.

Mixed Land Use Internal Trips. The Eureka Gateway Medical Office Building project and the Rosemeade at Olympus Pointe residential complex east of the project site are separate projects. However, the proposed project and residential complex are in close proximity to each other. In addition, the two areas are connected by an existing sidewalk and existing bicycle lane along Rocky Ridge Drive. Both the Eureka Gateway Medical Office Building and the Rosemeade at Olympus Pointe residential complex have vehicle access points along Rocky Ridge Drive. As a result, some travel would occur between the proposed project site and the residential complex.

Travel between the Eureka Gateway Medical Office Building site and the Rosemeade at Olympus Pointe complex was estimated using methods presented in the August 2010 ITE Journal article *Improved Estimation of Internal Trip Capture for Mixed Use Development*.

Individual Transportation Systems Management Measures. As noted above, baseline trip generation estimates based on the ITE *Trip Generation Manual* do not include the effect of TSM measures. This letter report presents estimates of the effectiveness of TSM measures contemplated for the Eureka Gateway Medical Office Building project.

The estimates of the effectiveness of TSM measures are based on methods presented in the California Air Pollution Control Officers Association (CAPCOA) report *Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures*. The CAPCOA report provides methods for quantifying emission reductions from a specified list of mitigation measures, primarily focused on project-level mitigation.

A list of transportation measures from the CAPCOA report was provided for your review. Based on this review, a list of potential TSM measures was identified for the Eureka Gateway Medical Office Building project, and an assessment of these measures is presented in this letter report.

Transportation Systems Management Plans. The City of Roseville Transportation Systems Management Ordinance established the City's TSM Program. The TSM Program requires the preparation of TSM Plans for development projects anticipated to employ 50 or more employees at the work location.

As noted above, a TSM Plan will be prepared for the Eureka Gateway Medical Office Building project. TSM Plans previously prepared for two projects were reviewed for this letter report:

- the TSM Plan for the Sutter Roseville Medical Center – One Medical Plaza; and
- the TSM Plan for the Kaiser Permanente Medical Campus, Medical Office Buildings and Hospitals – 1600 Eureka Road and the Riverside Medical Offices – 1001 Riverside Avenue.

Both of these projects include land use types similar to the Eureka Gateway Medical Office Building project, and are considered possible prototypes for the Eureka Gateway Medical Office Building project TSM Plan.

Mixed Land Use Internal Trips

Methods presented in the previously-cited article *Improved Estimation of Internal Trip Capture for Mixed Use Development* were used to estimate the number of trips that would occur between the Eureka Gateway Medical Office Building project site and the Rosemeade at Olympus Pointe residential complex east of the project site. Because these trips would be made between the proposed project site and the adjacent residential area, these trips would be localized to the immediately adjacent roadways. Expressed as a percentage of baseline trips generated by the proposed project, these trips would be:

- 3% of inbound trips and 0% of outbound trips during the a.m. peak hour, and
- 2% of inbound trips and 0% of outbound trips during the p.m. peak hour.

The article *Improved Estimation of Internal Trip Capture for Mixed Use Development* does not provide a method for estimating mixed land use internal trips during the daily period. However,

based on the a.m. peak hour and p.m. peak hour estimates, it would be reasonable to expect 2% of inbound trips and 0% of outbound trips over the daily period would be made between the project site and the residential neighborhood.

The percent reduction estimates described above are shown in **Table 1**.

Increase Location Efficiency

As noted above, the CAPCOA report provides methods for quantifying the effectiveness of TSM measures. Some of the measures presented in the report are grouped together. Some measures are sub-measures intended to be components of other measures. The Increase Location Efficiency measure (CAPCOA measure number LUT-2) is one such measure.

The CAPCOA report notes the Increase Location Efficiency is "not intended as a separate strategy, rather a documentation of empirical data to justify the 'cap' for all land use/location strategies." That is, the Increase Location Efficiency measure sets the maximum overall amount of reduction for a group of component measures. For projects in suburban areas, the CAPCOA report sets a maximum overall reduction of 10 percent for all land use/location measures.

For the Eureka Gateway Medical Office Building project, the 10 percent maximum is applied to the following three measures:

- Locate Project near Bike Path/Bike Lane (CAPCOA measure number LUT-8),
- Improve Design of Development (CAPCOA measure number LUT-9), and
- Provide Bike Parking in Non-Residential Projects (CAPCOA measure number SDT-6).

As shown in **Table 1**, these three measures are estimated to result in a combined 7.2 percent reduction (0.6 + 6 + 0.6 = 7.2). This combine reduction is consistent with the overall 10 percent maximum. The following describes the three measures listed above in more detail.

Locate Project near Bike Path/Bike Lane

The CAPCOA report notes the measure Locate Project near Bike Path/Bike Lane (CAPCOA measure number LUT-8) applies to projects with access to existing or planned bicycle facilities. The measure specifically applies to projects within one-half mile of bicycle paths (referred to as Class I facilities) or bicycle lanes (Class II facilities), and specifically applies to projects with access to a network of offsite facilities.

Bicycle lanes currently are present along both sides of Rocky Ridge Drive and Eureka Road adjacent to the project site. Bicycle lanes currently are also present along both sides of East Roseville Parkway and Lead Hill Boulevard, which provide access to other nearby land uses (e.g., the Rosemeade at Olympus Pointe complex). In addition, the Eureka Gateway Medical Office Building project site is across Rocky Ridge Drive from the Stone Point Master Plan area, which includes a system of bicycle lanes and bicycle trails throughout the Master Plan area.

The CAPCOA report estimates this measure would result in a 0.625 percent reduction in vehicle travel. This amount is shown as 0.6 percent in **Table 1**.

Improve Design of Development

In describing the measure Improve Design of Development (CAPCOA measure number LUT-9), the CAPCOA report notes,

> "Improved street network characteristics within a neighborhood include street accessibility, usually measured in terms of average block size, proportion of fourway intersections, or number of intersections per square mile. Design is also measured in terms of sidewalk coverage, building setbacks, street widths, pedestrian crossings, presence of street trees, and a host of other physical variables that differentiate pedestrian-oriented environments from auto-oriented environments."

As noted earlier in this letter report, the northern corner of the Eureka Gateway Medical Office Building project site is located approximately 230 feet from the eastern corner of the existing Rosemeade at Olympus Pointe site. The project site and Rosemeade at Olympus Pointe are connected by an existing sidewalk and an existing bicycle lane along Rocky Ridge Drive.

The Eureka Gateway Medical Office Building project site is walkable from other existing and planned commercial uses. Existing restaurants and retail centers are present to the north, south, and west of the project site. Existing pedestrian crosswalks are provided at the following intersections:

- Rocky Ridge Drive & Eureka Road,
- Lead Hill Boulevard & Eureka Road, and
- Rocky Ridge Road & Stone Point Drive.

In addition, pedestrian-protected right turn islands are provided on all four corners of the first two intersections listed above.

The Eureka Gateway Medical Office Building project site provides pedestrian connectivity from the adjacent roadways and a designated path along landscaped areas.

Based on methods presented in the CAPCOA report, this measure is estimated to result in a 6 percent reduction in vehicle travel. This amount is shown in **Table 1**.

Provide Bike Parking in Non-Residential Projects

The Eureka Gateway Medical Office Building project would include short-term and long-term bicycle parking facilities. As noted earlier in this letter report, the project would provide 24 bicycle parking spaces adjacent to the east and west building entrances.

The measure Provide Bike Parking in Non-Residential Projects (CAPCOA measure number SDT-6) would work in conjunction with other TSM measures, for example the Locate Project near Bike Path/Bike Lane measure (CAPCOA measure number LUT-8).

The CAPCOA report estimates this measure would result in a 0.625 percent reduction in vehicle travel. This amount is shown as 0.6 percent in **Table 1**.

Provide Pedestrian Network Improvements

In describing the measure Provide Pedestrian Network Improvements (CAPCOA measure number SDT-1), the CAPCOA report notes the measure applies where, "The project will provide a pedestrian access network that internally links all uses and connects to all existing or planned external streets and pedestrian facilities contiguous with the project site."

As shown in the project site plan, the proposed project includes sidewalks along project site frontages on Rocky Ridge Drive and Eureka Road. In addition, on-site pedestrian features (e.g., walkways and trees) and the pedestrian access connections to adjacent uses west and southeast of the project site would provide a pedestrian-oriented environment.

Based on methods presented in the CAPCOA report, this measure is estimated to result in a 2 percent reduction in vehicle travel. This amount is shown in **Table 1**.

Provide Traffic Calming Measures

As described in the CAPCOA report, the measure Provide Traffic Calming Measures (CAPCOA measure number SDT-2) includes marked crosswalks at intersections, and marked crosswalks across adjacent roadways. Marked crosswalks are currently present at following intersections:

- Rocky Ridge Drive & Eureka Road,
- Lead Hill Boulevard & Eureka Road, and
- Rocky Ridge Road & Stone Point Drive.

These crosswalks provide pedestrian across adjacent roadways. In addition, pedestrian-protected right turn islands are provided on all four corners of the first two intersections listed above.

Based on methods presented in the CAPCOA report, this measure is estimate to result in a 0.5 percent reduction in vehicle travel. This amount is shown in **Table 1**.

Provide Electric Vehicle Parking

In describing the measure Provide Electric Vehicle Parking (CAPCOA measure number SDT-8), the CAPCOA report notes the measure applies where, "This project will implement accessible electric vehicle parking. The project will provide conductive/inductive electric vehicle charging stations and signage prohibiting parking for non-electric vehicles."

As noted earlier in this letter report, the Eureka Gateway Medical Office Building project would provide electric vehicle charging stations.

In the CAPCOA report, the measure Provide Electric Vehicle Parking may be considered to be a part of Implement a Neighborhood Electric Vehicle (NEV) Network (CAPCOA measure number SDT-3). However, based on methods presented in the CAPCOA report, this measure with internal project site connectors, not part of an external network, is estimated to result in a 0.5 percent reduction in vehicle travel. This amount is shown in **Table 1**.

Transportation Systems Management Plans

As noted earlier in this letter report, the City of Roseville TSM Ordinance established the City's TSM Program and requires the preparation of TSM Plans for development projects anticipated to employ 50 or more employees at the work location. Therefore, a TSM Plan will be prepared for the Eureka Gateway Medical Office Building project.

The measures included in the Eureka Gateway Medical Office Building project TSM Plan are expected to be similar to those included in TSM Plans for two previous projects with similar types of land uses: the Sutter Roseville Medical Center, and the Kaiser Permanente Medical Campus.

TSM Plans prepared in compliance with the City of Roseville TSM Ordinance are required to include measures that would reduce home-to-work commuting by 20 percent.

The City of Roseville TSM Program is consistent with the measure Implement Commute Trip Reduction Program – Required Implementation/Monitoring (CAPCOA measure number TRT-2) presented in the CAPCOA report. The Eureka Gateway Medical Office Building TSM Plan is expected to include several other measures included in the CAPCOA report:

- Provide Ride-Sharing Programs (CAPCOA measure number TRT-3),
- Implement Subsidized or Discounted Transit Program (CAPCOA measure number TRT-4),
- Encourage Telecommuting and Alternative Work Schedules (CAPCOA measure number TRT-6),

- Implement Preferential Parking Permit Program (CAPCOA measure number TRT-8),

- Provide Local Shuttles (CAPCOA measure number TST-6) (The project would provide a seating area at the main entrance for City of Roseville dial-a-ride passengers.), and

In estimating the effectiveness of the TSM Plan, it is important to note the 20 percent reduction applies to home-to-work commute trips, rather than the overall number of trips generated by the proposed project. The 20 percent reduction applies to commute travel associated with employees at the project site, but does not apply to patients and visitors for example.

The number of employees that would work at the Eureka Gateway Medical Office Building project is not known at this time. However, for this letter report, data included in the Sutter Roseville Medical Center TSM Plan were used to estimate the number of employees. The Sutter Roseville Medical Center TSM Plan notes the four medical office building components would include 217,450 building square feet, and these medical office buildings would include 350 employees. This results in a ratio of approximately 621 building square feet per employee (217,450 / 350 ≈ 621). Applying this square feet per employee ratio to the Eureka Gateway Medical Office Building project with 75,000 building square feet results in an estimate of 121 employees (75,000 / 621 ≈ 121).

For baseline conditions in this letter report, each of the 121 employees is assumed to generate:

- one inbound commute trip in the a.m. peak hour,
- one outbound commute trip in the p.m. peak hour, and
- a total of two commute trips per day.

With the TSM Plan resulting in a 20 percent reduction in commute trips, this would result in the following trip reductions:

- a reduction of 58 inbound trips in the a.m. peak hour (121 x 0.20 ≈ 24),
- a reduction of 58 outbound trips in the p.m. peak hour (121 x 0.20 ≈ 24), and
- a reduction of 48 trips per day (24 + 24 = 48).

Dividing the number of reduced trips by the number of trips generated by the proposed project shown in **Table 3** results in the following percentages:

- a reduction of 17.0 percent of inbound trips in the a.m. peak hour (24 / 141 = 0.170 = 17.0%),

- a reduction of 12.4 percent of outbound trips in the p.m. peak hour (24 / 193 = 0.124 = 12.4%), and

- a reduction of 1.8 percent over the daily period (48 / 2,710 = 0.018 = 1.8%).

The percent reductions calculated above are shown in **Table 1**.

Estimated Trip Reduction

Table 4 shows the application of trip reduction percentages presented in **Table 1** to the trip generation estimates presented in **Table 3**.

Closing

Thank you for providing KD Anderson & Associates with this opportunity to provide you with trip generation analysis services on the Eureka Gateway Medical Office Building project. We hope these services and this letter report are helpful to you and your project. Please let me know if you have any questions about this letter report or would like to discuss the results described above.

Sincerely,

KD Anderson & Associates, Inc.

Wayne Shijo
Project Manager

enclosures

KDA

Table 1. Summary of Vehicle Trip Reductions Due to TSM Measures

Trip Reduction Measure and CAPCOA Measure Number	Percent Reduction by Time Periods				
		AM Peak Hour		PM Peak Hour	
	Daily	Inbound	Outbound	Inbound	Outbound
Mixed Land Use Internal Trips	1%	3%	0%	2%	0%
Increase Location Efficiency (LUT-2)					
Locate Project near Bike Path/Bike Lane (LUT-8)	0.6%	0.6%	0.6%	0.6%	0.6%
Improve Design of Development (LUT-9)	6%	6%	6%	6%	6%
Provide Bike Parking in Non-Residential Projects (SDT-6)	0.6%	0.6%	0.6%	0.6%	0.6%
Provide Pedestrian Network Improvements (SDT-1)	2%	2%	2%	2%	2%
Provide Traffic Calming Measures (SDT-2)	0.5%	0.5%	0.5%	0.5%	0.5%
Provide Electric Vehicle Parking	0.5%	0.5%	0.5%	0.5%	0.5%
Implement Commute Trip Reduction Program - Required Implementation/Monitoring (TRT-2)					
City of Roseville TSM Plan, which includes the following: Provide Ride-Sharing Programs (TRT-3) Implement Subsidized or Discounted Transit Program (TRT-4) Encourage Telecommuting and Alternative Work Schedules (TRT-6) Implement Preferential Parking Permit Program (TRT-8) Provide Local Shuttles (TST-6)	1.8%	17.0%	0.0%	0.0%	12.4%
TOTAL	13.0%	30.2%	10.2%	12.2%	22.6%

Table 2. Trip Generation Rates

Land Use and ITE Land Use Code	Units	Trips per Unit						
		Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Medical-Dental Office Building (ITE Code 720)	1,000 Square Feet (KSF)	36.13	1.89	0.50	2.39	1.00	2.57	3.57

Source: Institute of Transportation Engineers *Trip Generation Manual 9th Edition* .
Note: Trip generation rates are based on average rates.

Table 3. Trip Generation Estimates

Land Use and ITE Land Use Code	Quantity	Trips Generated						
		Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Medical-Dental Office Building (ITE Code 720)	75 KSF	2,710	141	38	179	75	193	268

Source: Institute of Transportation Engineers *Trip Generation Manual 9th Edition* .
Total may not equal the sum of components due to rounding.

Table 4. Trip Reduction Estimates

Land Use and Trip Category	Number of Vehicle Trips						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Gross Unadjusted Vehicle Trips	2,710	141	38	179	75	193	268
Number of Trips Reduced	-352	-43	-4	-47	-9	-44	-53
Net Adjusted Vehicle Trips	2,358	98	34	132	66	149	215

Note: Total may not equal the sum of components due to rounding.