

ROOSEVELT PARK APARTMENTS PROJECT CONSTRUCTION RISK ASSESSMENT

San Jose, CA

January 27, 2018

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Introduction

The purpose of this report is to address construction community risk impacts associated with the proposed Roosevelt Apartments project in San Jose, California. The Roosevelt Park Apartments site is located at 21 N. 21st Street, toward the western end of the Roosevelt Park Urban Village. The property, which is currently vacant, sits just north of E. Santa Clara Street and is surrounded by indoor batting cages, a roller rink, and Roosevelt Community Center. In keeping with the goals of the Urban Village Plan, Roosevelt Park Apartments would be an 80-unit mixed-use, eight-story light concrete building with two levels of garage parking on the basement and first level, six levels of residential units on the second through seventh levels, and one level of commercial office space on the eighth level. Project impacts related to increased community risk can occur by project construction affecting nearby sensitive receptors. The Bay Area Air Quality Management District (BAAQMD) recommends using a 1,000-foot screening radius around a project site for purposes of identifying potentially significant community health risk.

Setting

The project is located in Santa Clara County, which is in the San Francisco Bay Area Air Basin.

Toxic Air Contaminants

Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy duty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations. In 2008, CARB approved a new regulation to reduce emissions of DPM and nitrogen oxides from existing on-road heavy-duty diesel fueled vehicles.¹ The regulation requires affected vehicles to meet specific performance requirements between 2014 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by 2023. These requirements are phased in over the compliance period and depend on the model year of the vehicle.

¹ Available online: <http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm>. Accessed: November 21, 2014.

The BAAQMD is the regional agency tasked with managing air quality in the region. At the State level, the CARB (a part of the California Environmental Protection Agency [EPA]) oversees regional air district activities and regulates air quality at the State level. The BAAQMD has published California Environmental Quality Act (CEQA) Air Quality Guidelines that are used in this assessment to evaluate air quality impacts of projects.²

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. The closest sensitive receptors to the project site are residences located to the east and south.

Significance Thresholds

The BAAQMD includes significance thresholds for exposure to TACs and fine particulate matter (PM_{2.5}) as part of its May 2017 CEQA Air Quality Guidelines. In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The BAAQMD's adoption of significance thresholds contained in the 2011 *CEQA Air Quality Guidelines* was called into question by an order issued March 5, 2012, in California Building Industry Association (CBIA) v. BAAQMD (Alameda Superior Court Case No. RGI0548693). In December 2015, the Supreme Court determined that an analysis of the impacts of the environment on a project – known as “CEQA-in-reverse” – is only required under two limited circumstances: (1) when a statute provides an express legislative directive to consider such impacts; and (2) when a proposed project risks exacerbating environmental hazards or conditions that already exist (Cal. Supreme Court Case No. S213478). Because the Supreme Court's holding concerns the effects of the environment on a project (as contrasted to the effects of a proposed project on the environment), and not the science behind the thresholds, the significance thresholds contained in the BAAQMD CEQA Air Quality Guidelines are applied to this project. The following are the significance criteria that are used to judge this project's impacts:

Single Source Impacts

If emissions of TACs or PM_{2.5} exceed any of the thresholds of significance listed below, the proposed project would result in a significant impact and mitigation would be required:

- An excess cancer risk level of more than 10.0 in 1 million, or a non-cancer (chronic or acute) hazard index greater than 1.0.
- An incremental increase of more than 0.3 micrograms per cubic meter (µg/m³) annual average PM_{2.5}.

² Bay Area Air Quality Management District. 2017. *BAAQMD CEQA Air Quality Guidelines*. May.

Cumulative Source Impacts

A project would have a cumulatively considerable impact if the combined total of all sources within a 1,000-foot radius of the fence line of a source or from the location of a receptor, plus the contribution from the project, exceeds the following thresholds:

- An excess cancer risk levels of more than 100 in one million or a chronic non-cancer hazard index (from all local sources) greater than 10.0.
- An incremental increase of more than 0.8 $\mu\text{g}/\text{m}^3$ annual average $\text{PM}_{2.5}$.

Project Construction Activity

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. Construction exhaust emissions may still pose health risks for sensitive receptors such as surrounding residents. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to $\text{PM}_{2.5}$. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects of sensitive receptors at these nearby residences from construction emissions of DPM and $\text{PM}_{2.5}$.³ The closest sensitive receptors to the project site are residences located to the east and south. Dispersion modeling was conducted to predict the off-site concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

Construction activity is anticipated to include demolition, grading and site preparation, building construction, and paving. Construction period emissions were modeled using the California Emissions Estimator Model, Version 2016.3.2 (CalEEMod). A build-out construction schedule including equipment usage assumptions was developed based on information provided by the project applicant and CalEEMod defaults for a project of this type and size. The proposed project land uses were input into CalEEMod, which included 80 dwelling units entered as “Apartments Mid Rise” 10,490 square feet (sf) entered as “Office Building,” and 80 spaces entered as “Enclosed Parking Structure” on a 0.47-acre site. In addition, 6,800 tons of soil export is anticipated and was entered into the model. During demolition, 629 tons of building and pavement demolition is estimated and was entered. Additionally, 580 asphalt truck round trips are anticipated during paving.

Construction Emissions

The CalEEMod model provided total construction period PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and exhaust emissions from on-road vehicles (haul trucks, vendor trucks, and worker vehicles) of 0.1023 tons (205 pounds) over the construction period. A trip length of one-half mile was used to represent vehicle travel while at or near the construction site. For modeling purposes, it was assumed that these emissions from on-road vehicles would occur at the construction site. Fugitive dust $\text{PM}_{2.5}$ emissions were also computed and included in this analysis. The model predicts emissions of 0.0127 tons (25 pounds) of fugitive $\text{PM}_{2.5}$ over the construction period.

³ DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and PM_{2.5} at sensitive receptors (residences) in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.⁴ For the one year construction period the AERMOD modeling utilized two area sources to represent the on-site construction emissions, one for exhaust emissions and one for fugitive dust emissions. To represent the construction equipment exhaust emissions, an emission release height of 6 meters (19.7 feet) was used for the area source. The elevated source height reflects the height of the equipment exhaust pipes plus an additional distance for the height of the exhaust plume above the exhaust pipes to account for plume rise of the exhaust gases. For modeling fugitive PM_{2.5} emissions, a near-ground level release height of 2 meters (6.6 feet) was used for the area source. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources. Construction emissions were modeled as occurring daily between 7 a.m. to 4 p.m., when the majority of construction activity would occur.

The modeling used a 5-year meteorological data set (2006-2010) from the San Jose Airport prepared for use with the AERMOD model by the BAAQMD. Annual DPM and PM_{2.5} concentrations from construction activities during the 2018-2019 period were calculated using the model. DPM and PM_{2.5} concentrations were calculated at nearby sensitive receptor locations. Receptor heights of 1.5 meters (4.9 feet) and 4.5 meters (14.7 feet) were used to represent the breathing heights of residents in nearby single family homes and for residences on the second floor level of apartments and townhomes.

The maximum-modeled DPM and PM_{2.5} concentrations occurred at the second floor level of a residence on Santa Clara Street, southeast of the project site, as shown in Figure 1 for the maximally exposed individual (MEI). Using the maximum annual modeled DPM concentrations, the maximum increased cancer risk at the location of the maximally exposed individual (MEI) was calculated using BAAQMD-recommended methods. The cancer risk calculations are based on applying the BAAQMD-recommended age sensitivity factors to the TAC concentrations. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. BAAQMD-recommended exposure parameters were used for the cancer risk calculations, as described in *Attachment 1*. Due to the anticipated duration of project construction activities, infant exposures were assumed in calculating cancer risks for residential exposures. Because an infant (0 to 2 years of age) has a breathing rate that is greater than the breathing rate for the 3rd trimester, the contribution to total cancer risk from an infant exposure is greater than if the initial exposure assumed for the 3rd trimester is assumed. It was conservatively assumed that an infant exposure to construction emissions would occur over the entire construction period.

Cancer Risks

Results of this assessment indicate that the maximum excess residential cancer risks would be 32.3 in one million for an infant exposure and 0.6 in one million for an adult exposure. The maximum residential excess cancer risk would be greater than the BAAQMD significance

⁴ Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0*. May.

threshold of 10 in one million. *Implementation of Mitigation Measures 1 and 2 would reduce this impact to a level of less than significant.*

Predicted Annual PM_{2.5} Concentration

The maximum-modeled annual PM_{2.5} concentration, which is based on combined exhaust and fugitive dust emissions, was 0.22 µg/m³, occurring at the residential MEI. The maximum annual PM_{2.5} concentration at the MEI residential receptor location would not exceed the BAAQMD significance threshold of 0.3 µg/m³.

Non-Cancer Hazards

The maximum modeled annual residential DPM concentration (i.e., from construction exhaust) was 0.196 µg/m³. The maximum computed HI based on this DPM concentration is 0.04, which is much lower than the BAAQMD significance criterion of a HI greater than 1.0. *Attachment 2* includes the emission calculations and source information used in the modeling and the cancer risk calculations.

Mitigation Measure 1: Include basic measures to control dust and exhaust during construction.

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less than significant level. The contractor shall implement the following best management practices that are required of all projects:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measure 2: Selection of equipment during construction to minimize emissions. Such equipment selection would include the following.

The project shall develop a plan demonstrating that the off-road equipment used on-site to construct the project would achieve a fleet-wide average 70 percent reduction in DPM exhaust emissions or more. One feasible plan to achieve this reduction would include the following:

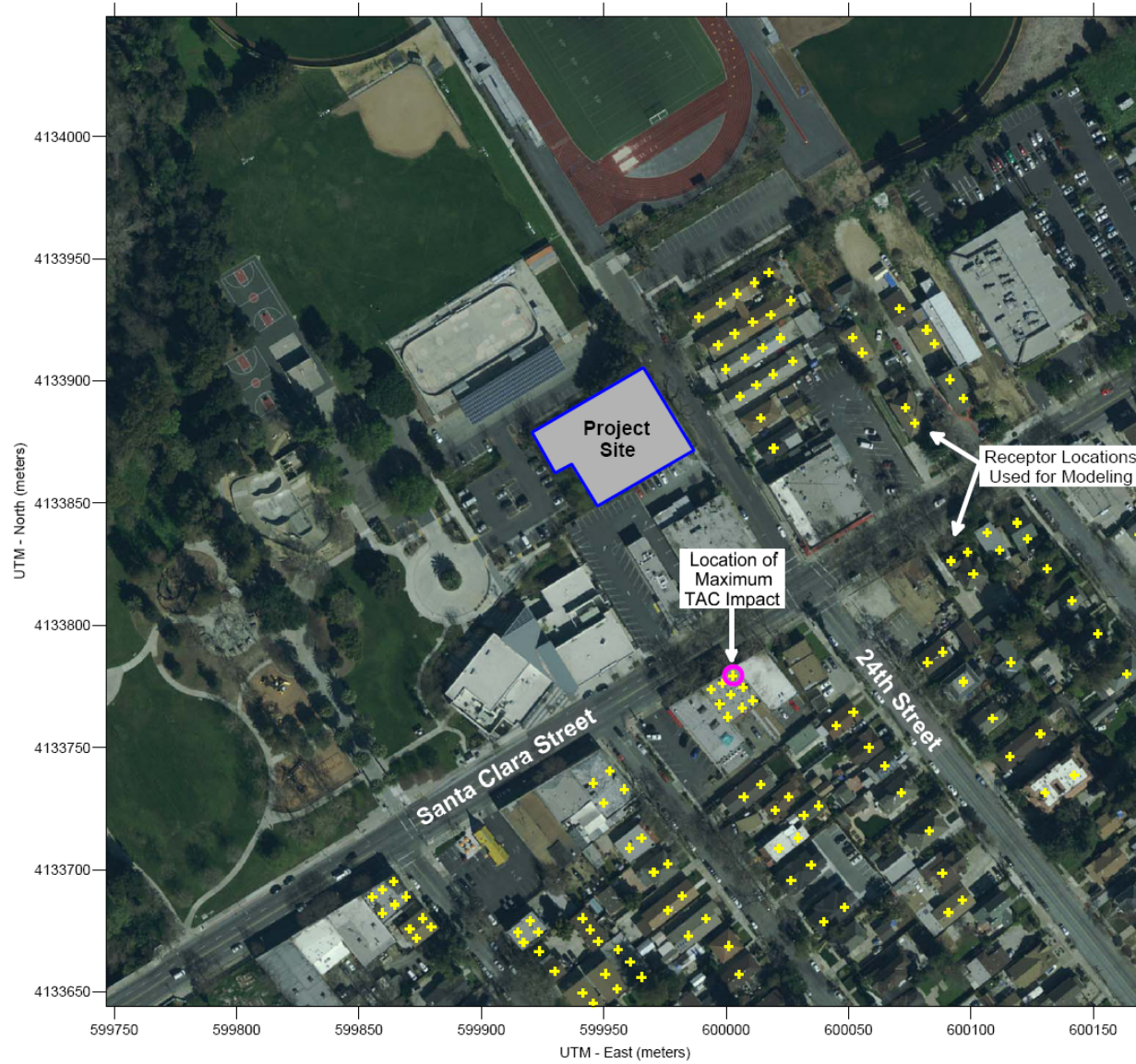
All mobile diesel-powered off-road equipment larger than 25 horsepower and operating on the site for more than two days shall meet, at a minimum, U.S. EPA particulate matter emissions standards for Tier 4 engines or equivalent. Note that the construction contractor could use other measures to minimize construction period DPM emission to reduce the predicted cancer risk below the thresholds. The use of equipment that includes Tier 2 engines and CARB-certified Level 3 Diesel Particulate Filters (DPF),⁵ or alternatively-fueled equipment (i.e., non-diesel) would meet this requirement. Other measures may be the use of added exhaust devices, or a combination of measures, provided that these measures are approved by the City and demonstrated to reduce community risk impacts to less than significant.

Effectiveness of Mitigation Measures 1 and 2

Implementation of Mitigation Measure 1 is considered to reduce exhaust emissions by 5 percent. Implementation of Mitigation Measures 2 would further reduce on-site diesel exhaust emissions. This would reduce the cancer risk such that the mitigated risk would be less than 5.7 in one million (with use of Tier 4, for example – use of Tier 2/DPF Level 3 would be even more effective). After implementation of these mitigation measures, the project would have a *less-than-significant* impact with respect to community risk caused by construction activities.

⁵ See <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>

Figure 1. Project Construction Site and Locations of Off-Site Sensitive Receptors and TAC Impacts



Attachment 1: Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.¹ These guidelines incorporate substantial changes designed to provide for enhanced protection of children, as required by State law, compared to previous published risk assessment guidelines. CARB has provided additional guidance on implementing OEHHA's recommended methods.² This HRA used the recent 2015 OEHHA risk assessment guidelines and CARB guidance. The BAAQMD has adopted recommended procedures for applying the newest OEHHA guidelines as part of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.³ Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

Potential increased cancer risk from inhalation of TACs are calculated based on the TAC concentration over the period of exposure, inhalation dose, the TAC cancer potency factor, and an age sensitivity factor to reflect the greater sensitivity of infants and children to cancer causing TACs. The inhalation dose depends on a person's breathing rate, exposure time and frequency of exposure, and the exposure duration. These parameters vary depending on the age, or age range, of the persons being exposed and whether the exposure is considered to occur at a residential location or other sensitive receptor location.

The current OEHHA guidance recommends that cancer risk be calculated by age groups to account for different breathing rates and sensitivity to TACs. Specifically, they recommend evaluating risks for the third trimester of pregnancy to age zero, ages zero to less than two (infant exposure), ages two to less than 16 (child exposure), and ages 16 to 70 (adult exposure). Age sensitivity factors (ASFs) associated with the different types of exposure are an ASF of 10 for the third trimester and infant exposures, an ASF of 3 for a child exposure, and an ASF of 1 for an adult exposure. Also associated with each exposure type are different breathing rates, expressed as liters per kilogram of body weight per day (L/kg-day). As recommended by the BAAQMD, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of 30 years for sources with long-term emissions (e.g., roadways).

¹ OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.

² CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.

³ BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. January 2016.

Under previous OEHHA and BAAQMD HRA guidance, residential receptors are assumed to be at their home 24 hours a day, or 100 percent of the time. In the 2015 Risk Assessment Guidance, OEHHA includes adjustments to exposure duration to account for the fraction of time at home (FAH), which can be less than 100 percent of the time, based on updated population and activity statistics. The FAH factors are age-specific and are: 0.85 for third trimester of pregnancy to less than 2 years old, 0.72 for ages 2 to less than 16 years, and 0.73 for ages 16 to 70 years. Use of the FAH factors is allowed by the BAAQMD if there are no schools in the project vicinity that would have a cancer risk of one in a million or greater assuming 100 percent exposure (FAH = 1.0).

Functionally, cancer risk is calculated using the following parameters and formulas:

$$\text{Cancer Risk (per million)} = CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 10^6$$

Where:

- CPF = Cancer potency factor (mg/kg-day)⁻¹
- ASF = Age sensitivity factor for specified age group
- ED = Exposure duration (years)
- AT = Averaging time for lifetime cancer risk (years)
- FAH = Fraction of time spent at home (unitless)

$$\text{Inhalation Dose} = C_{\text{air}} \times DBR \times A \times (EF/365) \times 10^{-6}$$

Where:

- C_{air} = concentration in air (µg/m³)
- DBR = daily breathing rate (L/kg body weight-day)
- A = Inhalation absorption factor
- EF = Exposure frequency (days/year)
- 10⁻⁶ = Conversion factor

The health risk parameters used in this evaluation are summarized as follows:

Parameter	Exposure Type →	Infant		Child		Adult
	Age Range →	3 rd Trimester	0<2	2 < 9	2 < 16	16 - 30
DPM Cancer Potency Factor (mg/kg-day) ⁻¹		1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day)*		361	1,090	631	572	261
Inhalation Absorption Factor		1	1	1	1	1
Averaging Time (years)		70	70	70	70	70
Exposure Duration (years)		0.25	2	14	14	14
Exposure Frequency (days/year)		350	350	350	350	350
Age Sensitivity Factor		10	10	3	3	1
Fraction of Time at Home		0.85-1.0	0.85-1.0	0.72-1.0	0.72-1.0	0.73

* 95th percentile breathing rates for 3rd trimester and infants and 80th percentile for children and adults

Non-Cancer Hazards

Potential non-cancer health hazards from TAC exposure are expressed in terms of a hazard index (HI), which is the ratio of the TAC concentration to a reference exposure level (REL). OEHHA has defined acceptable concentration levels for contaminants that pose non-cancer health hazards. TAC concentrations below the REL are not expected to cause adverse health impacts, even for sensitive individuals. The total HI is calculated as the sum of the HIs for each TAC evaluated and the total HI is compared to the BAAQMD significance thresholds to determine whether a significant non-cancer health impact from a project would occur.

Typically, for residential projects located near roadways with substantial TAC emissions, the primary TAC of concern with non-cancer health effects is diesel particulate matter (DPM). For DPM, the chronic inhalation REL is 5 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

Annual PM_{2.5} Concentrations

While not a TAC, fine particulate matter (PM_{2.5}) has been identified by the BAAQMD as a pollutant with potential non-cancer health effects that should be included when evaluating potential community health impacts under the California Environmental Quality Act (CEQA). The thresholds of significance for PM_{2.5} (project level and cumulative) are in terms of an increase in the annual average concentration. When considering PM_{2.5} impacts, the contribution from all sources of PM_{2.5} emissions should be included. For projects with potential impacts from nearby local roadways, the PM_{2.5} impacts should include those from vehicle exhaust emissions, PM_{2.5} generated from vehicle tire and brake wear, and fugitive emissions from re-suspended dust on the roads.

Attachment 2: Construction Schedule, CalEEMod Output and Health Risk Calculations

Project Name:		Roosevelt Park Apts											
	Project Size	80		Dwelling Units	0.47	total project acres disturbed							
		56,680		s.f. residential									
				s.f. retail									
		10,490		s.f. office/commercial									
		19,566		s.f. other, specify:	Common								
		31,000		s.f. parking garage	80	spaces							
				s.f. parking lot		spaces							
	Construction Hours	7:00		am to	5.3	pm							
Qty	Description	HP	Load Factor	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Annual Hours	Comments				
	Demolition	Start Date:		6/1/2018	Total phase:	20			Overall Import/Export Volumes				
		End Date:		6/28/2018									
1	Concrete/Industrial Saws	81	0.73	0.73	8	20	8.0	160	Demolition Volume				
									Square footage of buildings to be demolished				
1	Rubber-Tired Dozers	247	0.4	0.4	8	20	8.0	160	(or total tons to be hauled)				
3	Tractors/Loaders/Backhoes	97	0.37	0.37	8	20	8.0	480	18,142 square feet or				
									621 tons off haul				
	Site Preparation	Start Date:		6/29/2018	Total phase:	3			Any pavement demolished and hauled? 8 tons				
		End Date:		7/3/2018									
1	Graders	187	0.41	0.41	8	3	8.0	24					
1	Scrapers	367	0.48	0.48	8	3	8.0	24					
1	Tractors/Loaders/Backhoes	97	0.37	0.37	7	3	7.0	21					
	Grading / Excavation	Start Date:		7/4/2018	Total phase:	6			Soil Hauling Volume				
		End Date:		7/11/2018					Export volume = 6,800 tons?				
1	Excavators	158	0.38	0.38	8	20	26.7	160					
1	Graders	187	0.41	0.41	8	6	8.0	48					
1	Rubber Tired Dozers	247	0.4	0.4	8	6	8.0	48					
2	Tractors/Loaders/Backhoes	97	0.37	0.37	7	6	7.0	84					
	Building - Exterior	Start Date:		7/12/2018	Total phase:	220			Cement Trucks? <u>?</u> Total Round-Trips				
		End Date:		5/15/2019									
1	Cranes	226	0.29	0.29	8	220	8.0	1760	Electric? (Y) Otherwise assumed diesel				
2	Forklifts	89	0.2	0.2	7	220	7.0	3080	Liquid Propane (LPG)? (Y) Otherwise Assumed diesel				
1	Generator Sets	84	0.74	0.74	8	220	8.0	1760	temporary line power?				
1	Tractors/Loaders/Backhoes	97	0.37	0.37	6	220	6.0	1320					
3	Welders	46	0.45	0.45	8	220	8.0	5280					
	Building - Interior/Architectural Coating	Start Date:		5/30/2019	Total phase:	10							
		End Date:		6/12/2019									
1	Air Compressors	78	0.48	0.48	6	10	6.0	60					
	Paving	Start Date:		5/16/2019	Total phase:	10							
		Start Date:		5/29/2019									
1	Cement and Mortar Mixers	9	0.56	0.56	8	10	8.0	80					
1	Pavers	130	0.42	0.42	8	10	8.0	80	4,000 Concrete cubic yards or 580 round trips?				
1	Paving Equipment	132	0.36	0.36	8	10	8.0	80					
2	Rollers	80	0.38	0.38	8	10	8.0	160					
1	Tractors/Loaders/Backhoes	97	0.37	0.37	8	10	8.0	80					

Roosevelt Apts, San Jose - Construction TAC - Santa Clara County, Annual

**Roosevelt Apts, San Jose - Construction TAC, Tier 4
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	80.00	Dwelling Unit	0.47	76,246.00	229
Government Office Building	10.49	1000sqft	0.00	10,490.00	0
Enclosed Parking Structure	80.00	Space	0.00	31,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project information from construction spreadsheet and project plans 9/15/17. Residential and common use sf assigned to Apartments land use.

Construction Phase - Anticipated schedule provided by applicant

Off-road Equipment - Proposed equipment list provided by applicant

Off-road Equipment - Proposed equipment list provided by applicant

Off-road Equipment - Proposed equipment list provided by applicant

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	100.00	220.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	2.00	6.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	1.00	3.00
tblConstructionPhase	PhaseEndDate	11/20/2018	6/12/2019
tblConstructionPhase	PhaseEndDate	11/6/2018	5/15/2019
tblConstructionPhase	PhaseEndDate	6/14/2018	6/28/2018
tblConstructionPhase	PhaseEndDate	6/19/2018	7/11/2018
tblConstructionPhase	PhaseEndDate	11/13/2018	5/29/2019
tblConstructionPhase	PhaseEndDate	6/15/2018	7/3/2018
tblConstructionPhase	PhaseStartDate	11/14/2018	5/30/2019
tblConstructionPhase	PhaseStartDate	6/20/2018	7/12/2018
tblConstructionPhase	PhaseStartDate	6/16/2018	7/4/2018
tblConstructionPhase	PhaseStartDate	11/7/2018	5/16/2019
tblConstructionPhase	PhaseStartDate	6/15/2018	6/29/2018
tblGrading	MaterialExported	0.00	6,800.00
tblLandUse	LandUseSquareFeet	80,000.00	76,246.00
tblLandUse	LandUseSquareFeet	32,000.00	31,000.00
tblLandUse	LotAcreage	2.11	0.47
tblLandUse	LotAcreage	0.24	0.00
tblLandUse	LotAcreage	0.72	0.00
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Graders

tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripNumber	0.00	1,160.00
tblTripsAndVMT	VendorTripLength	7.30	0.50
tblTripsAndVMT	VendorTripLength	7.30	0.50
tblTripsAndVMT	VendorTripLength	7.30	0.50

tblTripsAndVMT	VendorTripLength	7.30	0.50
tblTripsAndVMT	VendorTripLength	7.30	0.50
tblTripsAndVMT	VendorTripLength	7.30	0.50
tblTripsAndVMT	WorkerTripLength	10.80	0.50
tblTripsAndVMT	WorkerTripLength	10.80	0.50
tblTripsAndVMT	WorkerTripLength	10.80	0.50
tblTripsAndVMT	WorkerTripLength	10.80	0.50
tblTripsAndVMT	WorkerTripLength	10.80	0.50
tblTripsAndVMT	WorkerTripLength	10.80	0.50

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					
2018	0.1706	1.1711	0.9756	1.5500e-003	0.0315	0.0667	0.0981	0.0121	0.0645	0.0766	0.0000	130.7320	130.7320	0.0246	0.0000	131.3461
2019	0.6983	0.6852	0.6429	1.0500e-003	2.0100e-003	0.0356	0.0376	5.5000e-004	0.0349	0.0354	0.0000	87.3910	87.3910	0.0137	0.0000	87.7323
Maximum	0.6983	1.1711	0.9756	1.5500e-003	0.0315	0.0667	0.0981	0.0121	0.0645	0.0766	0.0000	130.7320	130.7320	0.0246	0.0000	131.3461

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
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Year	tons/yr										MT/yr					
	0.0344	0.7545	0.9442	1.5500e-003	8.9300e-003	0.0102	0.0192	3.2200e-003	0.0102	0.0134	0.0000	130.7318	130.7318	0.0246	0.0000	131.3460
2018	0.0344	0.7545	0.9442	1.5500e-003	8.9300e-003	0.0102	0.0192	3.2200e-003	0.0102	0.0134	0.0000	130.7318	130.7318	0.0246	0.0000	131.3460
2019	0.6216	0.5582	0.6224	1.0500e-003	2.0100e-003	7.8200e-003	9.8300e-003	5.5000e-004	7.8100e-003	8.3600e-003	0.0000	87.3909	87.3909	0.0137	0.0000	87.7322
Maximum	0.6216	0.7545	0.9442	1.5500e-003	8.9300e-003	0.0102	0.0192	3.2200e-003	0.0102	0.0134	0.0000	130.7318	130.7318	0.0246	0.0000	131.3460

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	24.51	29.29	3.21	0.00	67.31	82.36	78.65	70.15	81.87	80.54	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	6-1-2018	8-31-2018	0.7219	0.3626
2	9-1-2018	11-30-2018	0.4662	0.3195
3	12-1-2018	2-28-2019	0.4390	0.3147
4	3-1-2019	5-31-2019	0.5786	0.4543
5	6-1-2019	8-31-2019	0.5216	0.5174
		Highest	0.7219	0.5174

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2018	6/28/2018	5	20	
2	Site Preparation	Site Preparation	6/29/2018	7/3/2018	5	3	
3	Grading	Grading	7/4/2018	7/11/2018	5	6	
4	Building Construction	Building Construction	7/12/2018	5/15/2019	5	220	
5	Paving	Paving	5/16/2019	5/29/2019	5	10	
6	Architectural Coating	Architectural Coating	5/30/2019	6/12/2019	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 154,398; Residential Outdoor: 51,466; Non-Residential Indoor: 15,735; Non-Residential Outdoor: 5,245; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Scrapers	1	8.00	367	0.48
Grading	Excavators	1	26.70	158	0.38
Grading	Graders	1	8.00	187	0.41
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Welders	3	8.00	46	0.45
Paving	Paving Equipment	1	8.00	132	0.36

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	62.00	0.50	0.50	0.50	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	0.50	0.50	0.50	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	672.00	0.50	0.50	0.50	LD_Mix	HDT_Mix	HHDT
Building Construction	5	74.00	15.00	0.00	0.50	0.50	0.50	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	1,160.00	0.50	0.50	0.50	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	15.00	0.00	0.00	0.50	0.50	0.50	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 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					
Fugitive Dust					6.7300e-003	0.0000	6.7300e-003	1.0200e-003	0.0000	1.0200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.2436	0.1511	2.4000e-004		0.0144	0.0144		0.0134	0.0134	0.0000	21.6923	21.6923	5.5000e-003	0.0000	21.8297
Total	0.0248	0.2436	0.1511	2.4000e-004	6.7300e-003	0.0144	0.0211	1.0200e-003	0.0134	0.0145	0.0000	21.6923	21.6923	5.5000e-003	0.0000	21.8297

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	8.0000e-005	3.2400e-003	5.7000e-004	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.3487	0.3487	5.0000e-005	0.0000	0.3499
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	7.0000e-005	9.3000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0700	0.0700	0.0000	0.0000	0.0702
Total	2.4000e-004	3.3100e-003	1.5000e-003	0.0000	6.0000e-005	0.0000	7.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.4187	0.4187	5.0000e-005	0.0000	0.4201

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					1.5100e-003	0.0000	1.5100e-003	2.3000e-004	0.0000	2.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6300e-003	0.0854	0.1542	2.4000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	21.6923	21.6923	5.5000e-003	0.0000	21.8297
Total	4.6300e-003	0.0854	0.1542	2.4000e-004	1.5100e-003	3.7000e-004	1.8800e-003	2.3000e-004	3.7000e-004	6.0000e-004	0.0000	21.6923	21.6923	5.5000e-003	0.0000	21.8297

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	8.0000e-005	3.2400e-003	5.7000e-004	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.3487	0.3487	5.0000e-005	0.0000	0.3499
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	7.0000e-005	9.3000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0700	0.0700	0.0000	0.0000	0.0702
Total	2.4000e-004	3.3100e-003	1.5000e-003	0.0000	6.0000e-005	0.0000	7.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.4187	0.4187	5.0000e-005	0.0000	0.4201

3.3 Site Preparation - 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					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8500e-003	0.0354	0.0191	4.0000e-005		1.4300e-003	1.4300e-003		1.3200e-003	1.3200e-003	0.0000	3.3590	3.3590	1.0500e-003	0.0000	3.3851
Total	2.8500e-003	0.0354	0.0191	4.0000e-005	2.3900e-003	1.4300e-003	3.8200e-003	2.6000e-004	1.3200e-003	1.5800e-003	0.0000	3.3590	3.3590	1.0500e-003	0.0000	3.3851

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	6.4700e-003	6.4700e-003	0.0000	0.0000	6.4800e-003

Total	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	6.4700e-003	6.4700e-003	0.0000	0.0000	6.4800e-003
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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					5.4000e-004	0.0000	5.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3000e-004	0.0104	0.0205	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.3590	3.3590	1.0500e-003	0.0000	3.3851
Total	6.3000e-004	0.0104	0.0205	4.0000e-005	5.4000e-004	6.0000e-005	6.0000e-004	6.0000e-005	6.0000e-005	1.2000e-004	0.0000	3.3590	3.3590	1.0500e-003	0.0000	3.3851

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	6.4700e-003	6.4700e-003	0.0000	0.0000	6.4800e-003
Total	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	6.4700e-003	6.4700e-003	0.0000	0.0000	6.4800e-003

3.4 Grading - 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					
Fugitive Dust					0.0200	0.0000	0.0200	0.0102	0.0000	0.0102	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.3500e-003	0.1039	0.0639	1.1000e-004		5.0100e-003	5.0100e-003		4.6100e-003	4.6100e-003	0.0000	10.3734	10.3734	3.2300e-003	0.0000	10.4542
Total	9.3500e-003	0.1039	0.0639	1.1000e-004	0.0200	5.0100e-003	0.0250	0.0102	4.6100e-003	0.0148	0.0000	10.3734	10.3734	3.2300e-003	0.0000	10.4542

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	8.2000e-004	0.0351	6.1600e-003	4.0000e-005	1.5000e-004	4.0000e-005	1.9000e-004	4.0000e-005	4.0000e-005	8.0000e-005	0.0000	3.7795	3.7795	5.2000e-004	0.0000	3.7924
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	5.0000e-005	2.0000e-005	2.8000e-004	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0210	0.0210	0.0000	0.0000	0.0211
Total	8.7000e-004	0.0351	6.4400e-003	4.0000e-005	1.6000e-004	4.0000e-005	2.1000e-004	4.0000e-005	4.0000e-005	8.0000e-005	0.0000	3.8005	3.8005	5.2000e-004	0.0000	3.8135

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					4.4900e-003	0.0000	4.4900e-003	2.2800e-003	0.0000	2.2800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7400e-003	0.0419	0.0757	1.1000e-004		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	10.3734	10.3734	3.2300e-003	0.0000	10.4542
Total	1.7400e-003	0.0419	0.0757	1.1000e-004	4.4900e-003	1.9000e-004	4.6800e-003	2.2800e-003	1.9000e-004	2.4700e-003	0.0000	10.3734	10.3734	3.2300e-003	0.0000	10.4542

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	8.2000e-004	0.0351	6.1600e-003	4.0000e-005	1.5000e-004	4.0000e-005	1.9000e-004	4.0000e-005	4.0000e-005	8.0000e-005	0.0000	3.7795	3.7795	5.2000e-004	0.0000	3.7924
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	5.0000e-005	2.0000e-005	2.8000e-004	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0210	0.0210	0.0000	0.0000	0.0211
Total	8.7000e-004	0.0351	6.4400e-003	4.0000e-005	1.6000e-004	4.0000e-005	2.1000e-004	4.0000e-005	4.0000e-005	8.0000e-005	0.0000	3.8005	3.8005	5.2000e-004	0.0000	3.8135

3.5 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	0.1249	0.6846	0.6812	1.0200e-003		0.0457	0.0457		0.0450	0.0450	0.0000	82.5747	82.5747	0.0132	0.0000	82.9058
Total	0.1249	0.6846	0.6812	1.0200e-003		0.0457	0.0457		0.0450	0.0450	0.0000	82.5747	82.5747	0.0132	0.0000	82.9058

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	2.0000e-003	0.0626	0.0196	6.0000e-005	4.4000e-004	1.2000e-004	5.6000e-004	1.3000e-004	1.2000e-004	2.5000e-004	0.0000	6.0548	6.0548	8.1000e-004	0.0000	6.0750
Worker	5.6100e-003	2.4800e-003	0.0327	3.0000e-005	1.7100e-003	4.0000e-005	1.7500e-003	4.6000e-004	4.0000e-005	5.0000e-004	0.0000	2.4520	2.4520	1.7000e-004	0.0000	2.4564
Total	7.6100e-003	0.0651	0.0522	9.0000e-005	2.1500e-003	1.6000e-004	2.3100e-003	5.9000e-004	1.6000e-004	7.5000e-004	0.0000	8.5068	8.5068	9.8000e-004	0.0000	8.5314

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	0.0187	0.5133	0.6337	1.0200e-003		9.3900e-003	9.3900e-003		9.3900e-003	9.3900e-003	0.0000	82.5746	82.5746	0.0132	0.0000	82.9057
Total	0.0187	0.5133	0.6337	1.0200e-003		9.3900e-003	9.3900e-003		9.3900e-003	9.3900e-003	0.0000	82.5746	82.5746	0.0132	0.0000	82.9057

Mitigated Construction Off-Site

Vendor	1.4300e-003	0.0480	0.0140	5.0000e-005	3.5000e-004	8.0000e-005	4.3000e-004	1.0000e-004	8.0000e-005	1.8000e-004	0.0000	4.7787	4.7787	6.0000e-004	0.0000	4.7937
Worker	3.9600e-003	1.6900e-003	0.0228	2.0000e-005	1.3500e-003	3.0000e-005	1.3800e-003	3.6000e-004	3.0000e-005	3.9000e-004	0.0000	1.8786	1.8786	1.2000e-004	0.0000	1.8815
Total	5.3900e-003	0.0497	0.0367	7.0000e-005	1.7000e-003	1.1000e-004	1.8100e-003	4.6000e-004	1.1000e-004	5.7000e-004	0.0000	6.6572	6.6572	7.2000e-004	0.0000	6.6752

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	0.0148	0.4048	0.4997	8.0000e-004		7.4100e-003	7.4100e-003		7.4100e-003	7.4100e-003	0.0000	64.9471	64.9471	9.5300e-003	0.0000	65.1853
Total	0.0148	0.4048	0.4997	8.0000e-004		7.4100e-003	7.4100e-003		7.4100e-003	7.4100e-003	0.0000	64.9471	64.9471	9.5300e-003	0.0000	65.1853

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	1.4300e-003	0.0480	0.0140	5.0000e-005	3.5000e-004	8.0000e-005	4.3000e-004	1.0000e-004	8.0000e-005	1.8000e-004	0.0000	4.7787	4.7787	6.0000e-004	0.0000	4.7937
Worker	3.9600e-003	1.6900e-003	0.0228	2.0000e-005	1.3500e-003	3.0000e-005	1.3800e-003	3.6000e-004	3.0000e-005	3.9000e-004	0.0000	1.8786	1.8786	1.2000e-004	0.0000	1.8815
Total	5.3900e-003	0.0497	0.0367	7.0000e-005	1.7000e-003	1.1000e-004	1.8100e-003	4.6000e-004	1.1000e-004	5.7000e-004	0.0000	6.6572	6.6572	7.2000e-004	0.0000	6.6752

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.2100e-003	0.0627	0.0591	9.0000e-005		3.6400e-003	3.6400e-003		3.3600e-003	3.3600e-003	0.0000	7.8959	7.8959	2.4500e-003	0.0000	7.9572
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.2100e-003	0.0627	0.0591	9.0000e-005		3.6400e-003	3.6400e-003		3.3600e-003	3.3600e-003	0.0000	7.8959	7.8959	2.4500e-003	0.0000	7.9572

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3100e-003	0.0590	9.7000e-003	7.0000e-005	2.6000e-004	6.0000e-005	3.2000e-004	7.0000e-005	6.0000e-005	1.3000e-004	0.0000	6.5355	6.5355	8.5000e-004	0.0000	6.5567
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	8.0000e-005	4.0000e-005	4.8000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0393	0.0393	0.0000	0.0000	0.0393
Total	1.3900e-003	0.0591	0.0102	7.0000e-005	2.9000e-004	6.0000e-005	3.5000e-004	8.0000e-005	6.0000e-005	1.4000e-004	0.0000	6.5748	6.5748	8.5000e-004	0.0000	6.5960

Mitigated Construction On-Site

Off-Road	1.3300e-003	9.1800e-003	9.2100e-003	1.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	1.2766	1.2766	1.1000e-004	0.0000	1.2793
Total	0.5992	9.1800e-003	9.2100e-003	1.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	1.2766	1.2766	1.1000e-004	0.0000	1.2793

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	8.0000e-005	4.0000e-005	4.8000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0393	0.0393	0.0000	0.0000	0.0393
Total	8.0000e-005	4.0000e-005	4.8000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0393	0.0393	0.0000	0.0000	0.0393

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	0.5979					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-004	5.3000e-003	9.1600e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.2766	1.2766	1.1000e-004	0.0000	1.2793
Total	0.5982	5.3000e-003	9.1600e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.2766	1.2766	1.1000e-004	0.0000	1.2793

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	8.0000e-005	4.0000e-005	4.8000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0393	0.0393	0.0000	0.0000	0.0393
Total	8.0000e-005	4.0000e-005	4.8000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0393	0.0393	0.0000	0.0000	0.0393

Roosevelt Apts, San Jose - Construction TAC - Santa Clara County, Annual

**Roosevelt Apts, San Jose - Construction TAC, Tier 2 DPF Level 3
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	80.00	Dwelling Unit	0.47	76,246.00	229
Government Office Building	10.49	1000sqft	0.00	10,490.00	0
Enclosed Parking Structure	80.00	Space	0.00	31,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project information from construction spreadsheet and project plans 9/15/17. Residential and common use sf assigned to Apartments land use.

Construction Phase - Anticipated schedule provided by applicant

Off-road Equipment - Proposed equipment list provided by applicant

Off-road Equipment - Proposed equipment list provided by applicant

Off-road Equipment - Proposed equipment list provided by applicant

Off-road Equipment - Proposed equipment list provided by applicant. Electric cranes. LPG forklifts.

Off-road Equipment - Proposed equipment list provided by applicant

Off-road Equipment - Proposed equipment list provided by applicant

Grading - 6,800 tons soil export

Demolition - 629 tons bldg & pavement demo

Trips and VMT - Paving: 580 RT asphalt trips = 1,160 one-way trips. 0.5mi trips to calculate risk from on- and near-site vehicle travel.

Construction Off-road Equipment Mitigation - Tier 4 engines for equip > 25hp, CARB DPF Level 3. BAAQMD BMPs.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
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tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	100.00	220.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	2.00	6.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	1.00	3.00
tblConstructionPhase	PhaseEndDate	11/20/2018	6/12/2019
tblConstructionPhase	PhaseEndDate	11/6/2018	5/15/2019
tblConstructionPhase	PhaseEndDate	6/14/2018	6/28/2018
tblConstructionPhase	PhaseEndDate	6/19/2018	7/11/2018
tblConstructionPhase	PhaseEndDate	11/13/2018	5/29/2019
tblConstructionPhase	PhaseEndDate	6/15/2018	7/3/2018
tblConstructionPhase	PhaseStartDate	11/14/2018	5/30/2019
tblConstructionPhase	PhaseStartDate	6/20/2018	7/12/2018
tblConstructionPhase	PhaseStartDate	6/16/2018	7/4/2018
tblConstructionPhase	PhaseStartDate	11/7/2018	5/16/2019

tblConstructionPhase	PhaseStartDate	6/15/2018	6/29/2018
tblGrading	MaterialExported	0.00	6,800.00
tblLandUse	LandUseSquareFeet	80,000.00	76,246.00
tblLandUse	LandUseSquareFeet	32,000.00	31,000.00
tblLandUse	LotAcreage	2.11	0.47
tblLandUse	LotAcreage	0.24	0.00
tblLandUse	LotAcreage	0.72	0.00
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
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tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00

tblOffRoadEquipment	UsageHours	8.00	7.00
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripNumber	0.00	1,160.00
tblTripsAndVMT	VendorTripLength	7.30	0.50
tblTripsAndVMT	VendorTripLength	7.30	0.50
tblTripsAndVMT	VendorTripLength	7.30	0.50
tblTripsAndVMT	VendorTripLength	7.30	0.50
tblTripsAndVMT	VendorTripLength	7.30	0.50
tblTripsAndVMT	VendorTripLength	7.30	0.50
tblTripsAndVMT	VendorTripLength	7.30	0.50
tblTripsAndVMT	WorkerTripLength	10.80	0.50
tblTripsAndVMT	WorkerTripLength	10.80	0.50
tblTripsAndVMT	WorkerTripLength	10.80	0.50
tblTripsAndVMT	WorkerTripLength	10.80	0.50
tblTripsAndVMT	WorkerTripLength	10.80	0.50
tblTripsAndVMT	WorkerTripLength	10.80	0.50

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					

2018	0.1706	1.1711	0.9756	1.5500e-003	0.0315	0.0667	0.0981	0.0121	0.0645	0.0766	0.0000	130.7320	130.7320	0.0246	0.0000	131.3461
2019	0.6983	0.6852	0.6429	1.0500e-003	2.0100e-003	0.0356	0.0376	5.5000e-004	0.0349	0.0354	0.0000	87.3910	87.3910	0.0137	0.0000	87.7323
Maximum	0.6983	1.1711	0.9756	1.5500e-003	0.0315	0.0667	0.0981	0.0121	0.0645	0.0766	0.0000	130.7320	130.7320	0.0246	0.0000	131.3461

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					
2018	0.0642	1.2150	0.9442	1.5500e-003	8.9300e-003	7.4300e-003	0.0164	3.2200e-003	7.4200e-003	0.0106	0.0000	130.7318	130.7318	0.0246	0.0000	131.3460
2019	0.6422	0.8081	0.6224	1.0500e-003	2.0100e-003	5.1600e-003	7.1700e-003	5.5000e-004	5.1500e-003	5.7100e-003	0.0000	87.3909	87.3909	0.0137	0.0000	87.7322
Maximum	0.6422	1.2150	0.9442	1.5500e-003	8.9300e-003	7.4300e-003	0.0164	3.2200e-003	7.4200e-003	0.0106	0.0000	130.7318	130.7318	0.0246	0.0000	131.3460

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	18.70	-8.98	3.21	0.00	67.31	87.69	82.67	70.15	87.35	85.40	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	6-1-2018	8-31-2018	0.7219	0.6564
2	9-1-2018	11-30-2018	0.4662	0.4678
3	12-1-2018	2-28-2019	0.4390	0.4613
4	3-1-2019	5-31-2019	0.5786	0.6217
5	6-1-2019	8-31-2019	0.5216	0.5232
		Highest	0.7219	0.6564

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2018	6/28/2018	5	20	
2	Site Preparation	Site Preparation	6/29/2018	7/3/2018	5	3	
3	Grading	Grading	7/4/2018	7/11/2018	5	6	
4	Building Construction	Building Construction	7/12/2018	5/15/2019	5	220	
5	Paving	Paving	5/16/2019	5/29/2019	5	10	
6	Architectural Coating	Architectural Coating	5/30/2019	6/12/2019	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 154,398; Residential Outdoor: 51,466; Non-Residential Indoor: 15,735; Non-Residential Outdoor: 5,245; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Category	tons/yr										MT/yr					
Fugitive Dust					6.7300e-003	0.0000	6.7300e-003	1.0200e-003	0.0000	1.0200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.2436	0.1511	2.4000e-004		0.0144	0.0144		0.0134	0.0134	0.0000	21.6923	21.6923	5.5000e-003	0.0000	21.8297
Total	0.0248	0.2436	0.1511	2.4000e-004	6.7300e-003	0.0144	0.0211	1.0200e-003	0.0134	0.0145	0.0000	21.6923	21.6923	5.5000e-003	0.0000	21.8297

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive 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	8.0000e-005	3.2400e-003	5.7000e-004	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.3487	0.3487	5.0000e-005	0.0000	0.3499
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	7.0000e-005	9.3000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0700	0.0700	0.0000	0.0000	0.0702
Total	2.4000e-004	3.3100e-003	1.5000e-003	0.0000	6.0000e-005	0.0000	7.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.4187	0.4187	5.0000e-005	0.0000	0.4201

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive 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					1.5100e-003	0.0000	1.5100e-003	2.3000e-004	0.0000	2.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.8600e-003	0.2121	0.1542	2.4000e-004		1.0800e-003	1.0800e-003		1.0800e-003	1.0800e-003	0.0000	21.6923	21.6923	5.5000e-003	0.0000	21.8297

Total	8.8600e-003	0.2121	0.1542	2.4000e-004	1.5100e-003	1.0800e-003	2.5900e-003	2.3000e-004	1.0800e-003	1.3100e-003	0.0000	21.6923	21.6923	5.5000e-003	0.0000	21.8297
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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	8.0000e-005	3.2400e-003	5.7000e-004	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.3487	0.3487	5.0000e-005	0.0000	0.3499
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	7.0000e-005	9.3000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0700	0.0700	0.0000	0.0000	0.0702
Total	2.4000e-004	3.3100e-003	1.5000e-003	0.0000	6.0000e-005	0.0000	7.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.4187	0.4187	5.0000e-005	0.0000	0.4201

3.3 Site Preparation - 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					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8500e-003	0.0354	0.0191	4.0000e-005		1.4300e-003	1.4300e-003		1.3200e-003	1.3200e-003	0.0000	3.3590	3.3590	1.0500e-003	0.0000	3.3851
Total	2.8500e-003	0.0354	0.0191	4.0000e-005	2.3900e-003	1.4300e-003	3.8200e-003	2.6000e-004	1.3200e-003	1.5800e-003	0.0000	3.3590	3.3590	1.0500e-003	0.0000	3.3851

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	6.4700e-003	6.4700e-003	0.0000	0.0000	6.4800e-003
Total	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	6.4700e-003	6.4700e-003	0.0000	0.0000	6.4800e-003

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					5.4000e-004	0.0000	5.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.9000e-004	0.0300	0.0205	4.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	3.3590	3.3590	1.0500e-003	0.0000	3.3851
Total	9.9000e-004	0.0300	0.0205	4.0000e-005	5.4000e-004	1.1000e-004	6.5000e-004	6.0000e-005	1.1000e-004	1.7000e-004	0.0000	3.3590	3.3590	1.0500e-003	0.0000	3.3851

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	6.4700e-003	6.4700e-003	0.0000	0.0000	6.4800e-003
Total	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	6.4700e-003	6.4700e-003	0.0000	0.0000	6.4800e-003

3.4 Grading - 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					
Fugitive Dust					0.0200	0.0000	0.0200	0.0102	0.0000	0.0102	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.3500e-003	0.1039	0.0639	1.1000e-004		5.0100e-003	5.0100e-003		4.6100e-003	4.6100e-003	0.0000	10.3734	10.3734	3.2300e-003	0.0000	10.4542
Total	9.3500e-003	0.1039	0.0639	1.1000e-004	0.0200	5.0100e-003	0.0250	0.0102	4.6100e-003	0.0148	0.0000	10.3734	10.3734	3.2300e-003	0.0000	10.4542

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	8.2000e-004	0.0351	6.1600e-003	4.0000e-005	1.5000e-004	4.0000e-005	1.9000e-004	4.0000e-005	4.0000e-005	8.0000e-005	0.0000	3.7795	3.7795	5.2000e-004	0.0000	3.7924
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	5.0000e-005	2.0000e-005	2.8000e-004	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0210	0.0210	0.0000	0.0000	0.0211
Total	8.7000e-004	0.0351	6.4400e-003	4.0000e-005	1.6000e-004	4.0000e-005	2.1000e-004	4.0000e-005	4.0000e-005	8.0000e-005	0.0000	3.8005	3.8005	5.2000e-004	0.0000	3.8135

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					4.4900e-003	0.0000	4.4900e-003	2.2800e-003	0.0000	2.2800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8900e-003	0.0985	0.0757	1.1000e-004		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	10.3734	10.3734	3.2300e-003	0.0000	10.4542
Total	3.8900e-003	0.0985	0.0757	1.1000e-004	4.4900e-003	4.2000e-004	4.9100e-003	2.2800e-003	4.2000e-004	2.7000e-003	0.0000	10.3734	10.3734	3.2300e-003	0.0000	10.4542

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	8.2000e-004	0.0351	6.1600e-003	4.0000e-005	1.5000e-004	4.0000e-005	1.9000e-004	4.0000e-005	4.0000e-005	8.0000e-005	0.0000	3.7795	3.7795	5.2000e-004	0.0000	3.7924
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	5.0000e-005	2.0000e-005	2.8000e-004	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0210	0.0210	0.0000	0.0000	0.0211
Total	8.7000e-004	0.0351	6.4400e-003	4.0000e-005	1.6000e-004	4.0000e-005	2.1000e-004	4.0000e-005	4.0000e-005	8.0000e-005	0.0000	3.8005	3.8005	5.2000e-004	0.0000	3.8135

3.5 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	0.1249	0.6846	0.6812	1.0200e-003		0.0457	0.0457		0.0450	0.0450	0.0000	82.5747	82.5747	0.0132	0.0000	82.9058
Total	0.1249	0.6846	0.6812	1.0200e-003		0.0457	0.0457		0.0450	0.0450	0.0000	82.5747	82.5747	0.0132	0.0000	82.9058

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	2.0000e-003	0.0626	0.0196	6.0000e-005	4.4000e-004	1.2000e-004	5.6000e-004	1.3000e-004	1.2000e-004	2.5000e-004	0.0000	6.0548	6.0548	8.1000e-004	0.0000	6.0750
Worker	5.6100e-003	2.4800e-003	0.0327	3.0000e-005	1.7100e-003	4.0000e-005	1.7500e-003	4.6000e-004	4.0000e-005	5.0000e-004	0.0000	2.4520	2.4520	1.7000e-004	0.0000	2.4564
Total	7.6100e-003	0.0651	0.0522	9.0000e-005	2.1500e-003	1.6000e-004	2.3100e-003	5.9000e-004	1.6000e-004	7.5000e-004	0.0000	8.5068	8.5068	9.8000e-004	0.0000	8.5314

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	0.0418	0.7708	0.6337	1.0200e-003		5.6100e-003	5.6100e-003		5.6100e-003	5.6100e-003	0.0000	82.5746	82.5746	0.0132	0.0000	82.9057

Total	0.0418	0.7708	0.6337	1.0200e-003		5.6100e-003	5.6100e-003		5.6100e-003	5.6100e-003	0.0000	82.5746	82.5746	0.0132	0.0000	82.9057
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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	2.0000e-003	0.0626	0.0196	6.0000e-005	4.4000e-004	1.2000e-004	5.6000e-004	1.3000e-004	1.2000e-004	2.5000e-004	0.0000	6.0548	6.0548	8.1000e-004	0.0000	6.0750
Worker	5.6100e-003	2.4800e-003	0.0327	3.0000e-005	1.7100e-003	4.0000e-005	1.7500e-003	4.6000e-004	4.0000e-005	5.0000e-004	0.0000	2.4520	2.4520	1.7000e-004	0.0000	2.4564
Total	7.6100e-003	0.0651	0.0522	9.0000e-005	2.1500e-003	1.6000e-004	2.3100e-003	5.9000e-004	1.6000e-004	7.5000e-004	0.0000	8.5068	8.5068	9.8000e-004	0.0000	8.5314

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0860	0.5046	0.5273	8.0000e-004		0.0311	0.0311		0.0307	0.0307	0.0000	64.9472	64.9472	9.5300e-003	0.0000	65.1853
Total	0.0860	0.5046	0.5273	8.0000e-004		0.0311	0.0311		0.0307	0.0307	0.0000	64.9472	64.9472	9.5300e-003	0.0000	65.1853

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	1.4300e-003	0.0480	0.0140	5.0000e-005	3.5000e-004	8.0000e-005	4.3000e-004	1.0000e-004	8.0000e-005	1.8000e-004	0.0000	4.7787	4.7787	6.0000e-004	0.0000	4.7937
Worker	3.9600e-003	1.6900e-003	0.0228	2.0000e-005	1.3500e-003	3.0000e-005	1.3800e-003	3.6000e-004	3.0000e-005	3.9000e-004	0.0000	1.8786	1.8786	1.2000e-004	0.0000	1.8815
Total	5.3900e-003	0.0497	0.0367	7.0000e-005	1.7000e-003	1.1000e-004	1.8100e-003	4.6000e-004	1.1000e-004	5.7000e-004	0.0000	6.6572	6.6572	7.2000e-004	0.0000	6.6752

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	0.0329	0.6079	0.4997	8.0000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003	0.0000	64.9471	64.9471	9.5300e-003	0.0000	65.1853
Total	0.0329	0.6079	0.4997	8.0000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003	0.0000	64.9471	64.9471	9.5300e-003	0.0000	65.1853

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	1.4300e-003	0.0480	0.0140	5.0000e-005	3.5000e-004	8.0000e-005	4.3000e-004	1.0000e-004	8.0000e-005	1.8000e-004	0.0000	4.7787	4.7787	6.0000e-004	0.0000	4.7937
Worker	3.9600e-003	1.6900e-003	0.0228	2.0000e-005	1.3500e-003	3.0000e-005	1.3800e-003	3.6000e-004	3.0000e-005	3.9000e-004	0.0000	1.8786	1.8786	1.2000e-004	0.0000	1.8815
Total	5.3900e-003	0.0497	0.0367	7.0000e-005	1.7000e-003	1.1000e-004	1.8100e-003	4.6000e-004	1.1000e-004	5.7000e-004	0.0000	6.6572	6.6572	7.2000e-004	0.0000	6.6752

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.2100e-003	0.0627	0.0591	9.0000e-005		3.6400e-003	3.6400e-003		3.3600e-003	3.3600e-003	0.0000	7.8959	7.8959	2.4500e-003	0.0000	7.9572
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.2100e-003	0.0627	0.0591	9.0000e-005		3.6400e-003	3.6400e-003		3.3600e-003	3.3600e-003	0.0000	7.8959	7.8959	2.4500e-003	0.0000	7.9572

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3100e-003	0.0590	9.7000e-003	7.0000e-005	2.6000e-004	6.0000e-005	3.2000e-004	7.0000e-005	6.0000e-005	1.3000e-004	0.0000	6.5355	6.5355	8.5000e-004	0.0000	6.5567
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	8.0000e-005	4.0000e-005	4.8000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0393	0.0393	0.0000	0.0000	0.0393
Total	1.3900e-003	0.0591	0.0102	7.0000e-005	2.9000e-004	6.0000e-005	3.5000e-004	8.0000e-005	6.0000e-005	1.4000e-004	0.0000	6.5748	6.5748	8.5000e-004	0.0000	6.5960

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	3.9600e-003	0.0797	0.0662	9.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	7.8959	7.8959	2.4500e-003	0.0000	7.9572
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.9600e-003	0.0797	0.0662	9.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	7.8959	7.8959	2.4500e-003	0.0000	7.9572

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3100e-003	0.0590	9.7000e-003	7.0000e-005	2.6000e-004	6.0000e-005	3.2000e-004	7.0000e-005	6.0000e-005	1.3000e-004	0.0000	6.5355	6.5355	8.5000e-004	0.0000	6.5567
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	8.0000e-005	4.0000e-005	4.8000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0393	0.0393	0.0000	0.0000	0.0393
Total	1.3900e-003	0.0591	0.0102	7.0000e-005	2.9000e-004	6.0000e-005	3.5000e-004	8.0000e-005	6.0000e-005	1.4000e-004	0.0000	6.5748	6.5748	8.5000e-004	0.0000	6.5960

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

Off-Road	5.7000e-004	0.0118	9.1600e-003	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.2766	1.2766	1.1000e-004	0.0000	1.2793
Total	0.5985	0.0118	9.1600e-003	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.2766	1.2766	1.1000e-004	0.0000	1.2793

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	8.0000e-005	4.0000e-005	4.8000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0393	0.0393	0.0000	0.0000	0.0393
Total	8.0000e-005	4.0000e-005	4.8000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0393	0.0393	0.0000	0.0000	0.0393

Roosevelt Apartments - San Jose, CA

DPM Emissions and Modeling Emission Rates

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions			Modeled Area (m ²)	DPM Emission Rate (g/s/m ²)
				(lb/yr)	(lb/hr)	(g/s)		
2018-2019	Construction	0.1023	CON_DPM	204.6	0.06228	7.85E-03	1,942	4.04E-06

Operation Hours

hr/day = 9 (7am - 4pm)
 days/yr = 365
 hours/year = 3285

PM2.5 Fugitive Dust Emissions for Modeling

Construction Year	Activity	Area Source	Area (ton/year)	PM2.5 Emissions			Modeled Area (m ²)	PM2.5 Emission Rate (g/s/m ²)
				(lb/yr)	(lb/hr)	(g/s)		
2018-2019	Construction	CON_FUG	0.01265	25.3	0.00770	9.70E-04	1,942	5.00E-07

Operation Hours

hr/day = 9 (7am - 4pm)
 days/yr = 365
 hours/year = 3285

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions			Modeled Area (m ²)	DPM Emission Rate (g/s/m ²)
				(lb/yr)	(lb/hr)	(g/s)		
2018-2019	Construction	0.0126	CON_DPM	25.2	0.00767	9.66E-04	1,942	4.97E-07

Construction Hours

hr/day = 10 (7am - 4pm)
 days/yr = 365
 hours/year = 3285

PM2.5 Fugitive Dust Construction Emissions for Modeling - With Mitigation

Construction Year	Activity	Area Source	Area (ton/year)	PM2.5 Emissions			Modeled Area (m ²)	PM2.5 Emission Rate (g/s/m ²)
				(lb/yr)	(lb/hr)	(g/s)		
2018-2019	Construction	CON_FUG	0.00377	7.5	0.00230	2.89E-04	1,942	1.49E-07

Construction Hours

hr/day = 9 (7am - 4pm)
 days/yr = 365
 hours/year = 3285

Roosevelt Apartments - San Jose, CA - Construction Health Impact Summary

Maximum Impacts at MEI Location - Unmitigated

Emissions Year	Maximum Concentrations		Cancer Risk (per million)		Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu\text{g}/\text{m}^3$)
	Exhaust PM10/DPM ($\mu\text{g}/\text{m}^3$)	Fugitive PM2.5 ($\mu\text{g}/\text{m}^3$)	Infant/Child	Adult		
	2018-2019	0.1962	0.0268	32.2	0.6	0.039

Maximum Impacts at MEI Location - With Mitigation

Emissions Year	Maximum Concentrations		Cancer Risk (per million)		Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu\text{g}/\text{m}^3$)
	Exhaust PM10/DPM ($\mu\text{g}/\text{m}^3$)	Fugitive PM2.5 ($\mu\text{g}/\text{m}^3$)	Infant/Child	Adult		
	2018-2019	0.0346	0.0080	5.7	0.1	0.007

**Roosevelt Apartments - San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 1.5 meter receptor height**

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

- Where: CPF = Cancer potency factor (mg/kg-day)⁻¹
 ASF = Age sensitivity factor for specified age group
 ED = Exposure duration (years)
 AT = Averaging time for lifetime cancer risk (years)
 FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10⁻⁶

- Where: C_{air} = concentration in air (µg/m³)
 DBR = daily breathing rate (L/kg body weight-day)
 A = Inhalation absorption factor
 EF = Exposure frequency (days/year)
 10⁻⁶ = Conversion factor

Values

Parameter	Infant/Child				Adult
	3rd Trimester	0 - 2	2 - 9	2 - 16	16 - 30
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	Fugitive PM2.5	Total PM2.5
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled DPM Conc (ug/m3)		Age Sensitivity Factor			
			Year	Annual	Factor		Year	Annual	Factor			
0	0.25	-0.25 - 0*	-	-	10	-	-	-	-	-	-	-
1	1	0 - 1	2018-2019	0.1896	10	31.14	2018-2019	0.1896	1	0.54	0.0323	0.222
2	1	1 - 2	2020	0.0000	10	0.00	2020	0.0000	1	0.00		
3	1	2 - 3	2021	0.0000	3	0.00	2021	0.0000	1	0.00		
4	1	3 - 4	2022	0.0000	3	0.00	2022	0.0000	1	0.00		
5	1	4 - 5	2023	0.0000	3	0.00	2023	0.0000	1	0.00		
6	1	5 - 6	2024	0.0000	3	0.00	2024	0.0000	1	0.00		
7	1	6 - 7	2025	0.0000	3	0.00	2025	0.0000	1	0.00		
8	1	7 - 8	2026	0.0000	3	0.00	2026	0.0000	1	0.00		
9	1	8 - 9	2027	0.0000	3	0.00	2027	0.0000	1	0.00		
10	1	9 - 10	2028	0.0000	3	0.00	2028	0.0000	1	0.00		
11	1	10 - 11	2029	0.0000	3	0.00	2029	0.0000	1	0.00		
12	1	11 - 12	2030	0.0000	3	0.00	2030	0.0000	1	0.00		
13	1	12 - 13	2031	0.0000	3	0.00	2031	0.0000	1	0.00		
14	1	13 - 14	2032	0.0000	3	0.00	2032	0.0000	1	0.00		
15	1	14 - 15	2033	0.0000	3	0.00	2033	0.0000	1	0.00		
16	1	15 - 16	2034	0.0000	3	0.00	2034	0.0000	1	0.00		
17	1	16-17	2035	0.0000	1	0.00	2035	0.0000	1	0.00		
18	1	17-18	2036	0.0000	1	0.00	2036	0.0000	1	0.00		
19	1	18-19	2037	0.0000	1	0.00	2037	0.0000	1	0.00		
20	1	19-20	2038	0.0000	1	0.00	2038	0.0000	1	0.00		
21	1	20-21	2039	0.0000	1	0.00	2039	0.0000	1	0.00		
22	1	21-22	2040	0.0000	1	0.00	2040	0.0000	1	0.00		
23	1	22-23	2041	0.0000	1	0.00	2041	0.0000	1	0.00		
24	1	23-24	2042	0.0000	1	0.00	2042	0.0000	1	0.00		
25	1	24-25	2043	0.0000	1	0.00	2043	0.0000	1	0.00		
26	1	25-26	2044	0.0000	1	0.00	2044	0.0000	1	0.00		
27	1	26-27	2045	0.0000	1	0.00	2045	0.0000	1	0.00		
28	1	27-28	2046	0.0000	1	0.00	2046	0.0000	1	0.00		
29	1	28-29	2047	0.0000	1	0.00	2047	0.0000	1	0.00		
30	1	29-30	2048	0.0000	1	0.00	2048	0.0000	1	0.00		
Total Increased Cancer Risk						31.1				0.54		

* Third trimester of pregnancy

**Roosevelt Apartments - San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 4.5 meter receptor height**

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

- Where: CPF = Cancer potency factor (mg/kg-day)⁻¹
 ASF = Age sensitivity factor for specified age group
 ED = Exposure duration (years)
 AT = Averaging time for lifetime cancer risk (years)
 FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10⁻⁶

- Where: C_{air} = concentration in air (µg/m³)
 DBR = daily breathing rate (L/kg body weight-day)
 A = Inhalation absorption factor
 EF = Exposure frequency (days/year)
 10⁻⁶ = Conversion factor

Values

Parameter	Infant/Child				Adult
	3rd Trimester	0 - 2	2 - 9	2 - 16	16 - 30
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Fugitive PM2.5	Total PM2.5	
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled DPM Conc (ug/m3)		Age Sensitivity Factor			Adult Cancer Risk (per million)
			Year	Annual	Factor		Year	Annual	Factor			
0	0.25	-0.25 - 0*	-	-	10	-	-	-	-	-	-	
1	1	0 - 1	2018-2019	0.1962	10	32.23	2018-2019	0.1962	1	0.56	0.0268	0.223
2	1	1 - 2	2020	0.0000	10	0.00	2020	0.0000	1	0.00		
3	1	2 - 3	2021	0.0000	3	0.00	2021	0.0000	1	0.00		
4	1	3 - 4	2022	0.0000	3	0.00	2022	0.0000	1	0.00		
5	1	4 - 5	2023	0.0000	3	0.00	2023	0.0000	1	0.00		
6	1	5 - 6	2024	0.0000	3	0.00	2024	0.0000	1	0.00		
7	1	6 - 7	2025	0.0000	3	0.00	2025	0.0000	1	0.00		
8	1	7 - 8	2026	0.0000	3	0.00	2026	0.0000	1	0.00		
9	1	8 - 9	2027	0.0000	3	0.00	2027	0.0000	1	0.00		
10	1	9 - 10	2028	0.0000	3	0.00	2028	0.0000	1	0.00		
11	1	10 - 11	2029	0.0000	3	0.00	2029	0.0000	1	0.00		
12	1	11 - 12	2030	0.0000	3	0.00	2030	0.0000	1	0.00		
13	1	12 - 13	2031	0.0000	3	0.00	2031	0.0000	1	0.00		
14	1	13 - 14	2032	0.0000	3	0.00	2032	0.0000	1	0.00		
15	1	14 - 15	2033	0.0000	3	0.00	2033	0.0000	1	0.00		
16	1	15 - 16	2034	0.0000	3	0.00	2034	0.0000	1	0.00		
17	1	16-17	2035	0.0000	1	0.00	2035	0.0000	1	0.00		
18	1	17-18	2036	0.0000	1	0.00	2036	0.0000	1	0.00		
19	1	18-19	2037	0.0000	1	0.00	2037	0.0000	1	0.00		
20	1	19-20	2038	0.0000	1	0.00	2038	0.0000	1	0.00		
21	1	20-21	2039	0.0000	1	0.00	2039	0.0000	1	0.00		
22	1	21-22	2040	0.0000	1	0.00	2040	0.0000	1	0.00		
23	1	22-23	2041	0.0000	1	0.00	2041	0.0000	1	0.00		
24	1	23-24	2042	0.0000	1	0.00	2042	0.0000	1	0.00		
25	1	24-25	2043	0.0000	1	0.00	2043	0.0000	1	0.00		
26	1	25-26	2044	0.0000	1	0.00	2044	0.0000	1	0.00		
27	1	26-27	2045	0.0000	1	0.00	2045	0.0000	1	0.00		
28	1	27-28	2046	0.0000	1	0.00	2046	0.0000	1	0.00		
29	1	28-29	2047	0.0000	1	0.00	2047	0.0000	1	0.00		
30	1	29-30	2048	0.0000	1	0.00	2048	0.0000	1	0.00		
Total Increased Cancer Risk						32.2				0.56		

* Third trimester of pregnancy

**Roosevelt Apartments - San Jose, CA - Construction Impacts - With Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 4.5 meter receptor height**

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

- Where: CPF = Cancer potency factor (mg/kg-day)⁻¹
- ASF = Age sensitivity factor for specified age group
- ED = Exposure duration (years)
- AT = Averaging time for lifetime cancer risk (years)
- FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10⁻⁶

- Where: C_{air} = concentration in air (µg/m³)
- DBR = daily breathing rate (L/kg body weight-day)
- A = Inhalation absorption factor
- EF = Exposure frequency (days/year)
- 10⁻⁶ = Conversion factor

Values

Age --> Parameter	Infant/Child				Adult
	3rd Trimester	0 - 2	2 - 9	2 - 16	16 - 30
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	Fugitive PM2.5	Total PM2.5
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled		Age Sensitivity Factor			
			Year	Annual			Year	Annual				
0	0.25	-0.25 - 0*	-	-	10	-	-	-	-	-	-	-
1	1	0 - 1	2018-2019	0.0346	10	5.68	2018-2019	0.0346	1	0.10	0.008	0.043
2	1	1 - 2	2017	0.0000	10	0.00	2017	0.0000	1	0.00		
3	1	2 - 3	2018	0.0000	3	0.00	2018	0.0000	1	0.00		
4	1	3 - 4	2019	0.0000	3	0.00	2019	0.0000	1	0.00		
5	1	4 - 5	2020	0.0000	3	0.00	2020	0.0000	1	0.00		
6	1	5 - 6	2021	0.0000	3	0.00	2021	0.0000	1	0.00		
7	1	6 - 7	2022	0.0000	3	0.00	2022	0.0000	1	0.00		
8	1	7 - 8	2023	0.0000	3	0.00	2023	0.0000	1	0.00		
9	1	8 - 9	2024	0.0000	3	0.00	2024	0.0000	1	0.00		
10	1	9 - 10	2025	0.0000	3	0.00	2025	0.0000	1	0.00		
11	1	10 - 11	2026	0.0000	3	0.00	2026	0.0000	1	0.00		
12	1	11 - 12	2027	0.0000	3	0.00	2027	0.0000	1	0.00		
13	1	12 - 13	2028	0.0000	3	0.00	2028	0.0000	1	0.00		
14	1	13 - 14	2029	0.0000	3	0.00	2029	0.0000	1	0.00		
15	1	14 - 15	2030	0.0000	3	0.00	2030	0.0000	1	0.00		
16	1	15 - 16	2031	0.0000	3	0.00	2031	0.0000	1	0.00		
17	1	16-17	2032	0.0000	1	0.00	2032	0.0000	1	0.00		
18	1	17-18	2033	0.0000	1	0.00	2033	0.0000	1	0.00		
19	1	18-19	2034	0.0000	1	0.00	2034	0.0000	1	0.00		
20	1	19-20	2035	0.0000	1	0.00	2035	0.0000	1	0.00		
21	1	20-21	2036	0.0000	1	0.00	2036	0.0000	1	0.00		
22	1	21-22	2037	0.0000	1	0.00	2037	0.0000	1	0.00		
23	1	22-23	2038	0.0000	1	0.00	2038	0.0000	1	0.00		
24	1	23-24	2039	0.0000	1	0.00	2039	0.0000	1	0.00		
25	1	24-25	2040	0.0000	1	0.00	2040	0.0000	1	0.00		
26	1	25-26	2041	0.0000	1	0.00	2041	0.0000	1	0.00		
27	1	26-27	2042	0.0000	1	0.00	2042	0.0000	1	0.00		
28	1	27-28	2043	0.0000	1	0.00	2043	0.0000	1	0.00		
29	1	28-29	2044	0.0000	1	0.00	2044	0.0000	1	0.00		
30	1	29-30	2045	0.0000	1	0.00	2045	0.0000	1	0.00		
Total Increased Cancer Risk						5.7				0.10		

* Third trimester of pregnancy