APPENDIX A

Stantec

Memo

To:	Christina Corsello	From:	Elena Nuno, Senior Air Quality Scientist
	City of Vacaville Planning Department		Fresno (Shaw Ave) CA Office
File:	Ashton Place Unit 3 Project	Date:	October 17, 2016

Reference: Ashton Place Unit 3 Project – Air Quality and Greenhouse Gas Assumptions Memorandum

This memorandum provides the air quality and greenhouse gas modeling assumptions used in determining the air quality and greenhouse gas impacts from construction and operation of the Ashton Place Unit 3 Project.

AIR DISTRICT THRESHOLDS

The project site is located wholly within the Yolo Solano Air Quality Management District (YSAQMD) boundaries and is therefore under the jurisdiction of the YSAQMD. Accordingly, the YSAQMD's Thresholds of Significance would be the most appropriate to use. The Bay Area Air Quality Management District's (BAAQMD) boundaries are located to the south of the project area. In certain instances when large development projects have been located near the BAAQMD boundaries, the YSAQMD has recommended evaluating the projects using the BAAQMD Thresholds of Significance because they are more restrictive in terms of total emissions allowed than the YSAQMD Thresholds of Significance.

The YSAQMD Handbook for Assessing and Mitigating Air Quality Impacts (2007) does not have a screening threshold for construction emissions, but does have a screening threshold for operational emissions. The YSAQMD Handbook states that a single-family residential development would need to exceed 325 dwelling units in the year 2010 to have the potential to exceed emissions of reactive organic gases (ROG), oxides of nitrogen (NOx), and particulate matter 10 microns or smaller (PM10). Based on that preliminary screening criteria the project would not need to conduct a quantitative analysis, however, in order to provide a complete evaluation a quantitative analysis was provided in the Initial Study.

The BAAQMD has preliminary screening thresholds for determining if a project has the potential to have significant air quality impacts. The preliminary screening method provided in the BAAQMD's 2010 Guidelines for construction-related impacts associated with criteria air pollutants and precursors is used to indicate whether a project's construction-related air pollutants or precursors could potentially exceed the BAAQMD's thresholds of significance. The construction of the project would result in a less than significant impact to air quality if the following screening criteria are met:

1. The project is below the applicable screening level (see Table 1).

2. All Basic Construction Standard Conditions would be included in the project design and implemented during construction.

3. Construction-related activities would not include any of the following:

a. Demolition activities inconsistent with BAAQMD Regulation 11, Rule 2: Asbestos Demolition, Renovation and Manufacturing;

b. Simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously);

c. Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site) (not applicable to high density infill development);

d. Extensive site preparation (i.e., greater than default assumptions used by the Urban Land Use Emissions Model [URBEMIS] for grading, cut/fill, or earth movement); or

e. Extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity.

Table 1: BAAQMD Criteria Air Pollutant and Precursors Screening for Construction Emissions

Land Use	Screening Size	Project Size
Single-Family Residential	114 DU	15 DU

Note:
DU = dwelling units
Source: BAAQMD 2010

The project is a single-family development with 15 dwelling units. The project would be less than the screening level shown in Table 1. All Basic Construction Standard Conditions would be incorporated into the project construction through Mitigation Measure AIR-1. The project does not involve demolition. The project will not involve simultaneous occurrences of more than two construction phases or more than one land use type. Extensive site preparation or material transport will not be a characteristic of this project as well. Since the project meets the BAAQMD screening criteria with incorporation of Mitigation Measure AIR-1, construction impacts are less than significant.

The BAAQMD's preliminary operational screening criteria from its 2010 CEQA Guidelines is provided in Table 2. As shown in Table 2, the project's proposed land use is less than the BAAQMD's screening size for operational criteria air pollutants and precursors (ROG, NOx, PM10, PM2.5, CO). Therefore, the project would have a less than significant impact with respect to criteria pollutants and ozone precursors.

Table 2: BAAQMD Operational Screening Level for Criteria Air Pollutants and Precursors

Land Use	Screening Size	Project Size
Single-Family Residential	325 DU	15 DU

Note:
DU = dwelling units
Source: BAAQMD 2010

The BAAQMD's preliminary operational screening level for greenhouse gases from its 2010 CEQA Guidelines is provided in Table 3. This screening size was established as the level that would have the potential to exceed the 1,100 $MTCO_2e$ operational threshold and thus require additional analysis. As shown in Table 3, the project would not exceed the screening level, accordingly it would not have the potential to exceed 1,100 $MTCO_2e$. Therefore, according to the BAAQMD CEQA Guidelines the project would result in a less than significant cumulative impact to global climate change.

Table 3: BAAQMD Operational Greenhouse Gas Screening Level

Land Use	Screening Size	Project Size
Single-Family Residential	56 DU	15 DU
Note: DU = dwelling units Source: BAAQMD 2010		

SOUTH TOWN EIR AND VANDEN MEADOWS EIR AIR QUALITY ANALYSES

The South Town EIR was prepared in 2003 when the current air quality model was the Urban Emissions Model (URBEMIS). The Vanden Meadows air quality analysis was prepared in February 2012, when many Air Districts in California were transitioning from URBEMIS to the California Emissions Estimator Model (CalEEMod).

The URBEMIS User Guide (URBEMIS 2007) states that the presence of local-serving retail can be expected to bring a two percent trip reduction benefit. This trip reduction would reduce the vehicle miles traveled (VMT) of the projects. However, neither the South Town EIR nor the Vanden Meadows air quality analyses utilized the local-serving retail mitigation measure within the URBEMIS model to reduce vehicle trips and hence VMT and emissions from the project. The results presented in their respective EIRs do not claim any VMT or emission reductions for the local-serving project design feature. As such, removing local-serving retail from the South Town area or near the Vanden Meadows area would not result in an increase in VMT or emissions beyond what was previously disclosed.

Since the adoption of the EIRs for South Town and Vanden Meadows, the City has adopted a new General Plan that includes a focus on reducing VMT by developing a mix of land uses, such that there would be local-serving retail to serve residences nearby and thus reduce VMT.

In order to provide a comparative estimate of the potential increase in VMT as a result of removing the local-serving commercial uses from the project site, a CalEEMod scenario was run for the total estimated dwelling units in the Southtown Project (1,597 dwelling units) with and without a diversity of uses included (note local-serving retail alone is not a mitigation measure within CalEEMod). Because the project is located within the South Town area, only the South Town residences were evaluated. The unmitigated results show the VMT without a diversity of uses and the mitigated results show VMT with a diversity of uses.

Table 4: Southtown Residential Vehicle Miles Traveled

Scenario	Annual VMT
Unmitigated (no diversity of uses)	40,844,228
Mitigated (with commercial diversity of uses)	38,802,016
Difference	2,042,212
Percent Increase in VMT	5.3 percent

The percent increase in VMT was developed utilizing the same emissions model for the both the Southtown Project EIR, and the proposed project, resulting in an approximately five percent increase from the CalEEMod scenarios. However, the actual VMT increase is estimated at two percent (see Section 3.16 Transportation and Traffic and Transportation and Traffic Memorandum for additional VMT discussion). The baseline (i.e. existing condition) does not include a commercial use; therefore, the potential for a five percent emission increase is already being experienced. The implementation of the proposed project with the land use change would reduce the City's ability to reduce future emissions in the cumulative context. However, the 5.3 percent increase in VMT would not alter the conclusions of the Southtown Project EIR, or result in a new impact exceeding an air quality standard because the original South Town Project did not utilize local-serving retail as a mechanism for achieving vehicle trip reductions and thus VMT and emission reductions. The emissions estimates presented in the South Town EIR would not be increased through the removal of the commercial use of the site.

CALEEMOD ASSUMPTIONS

PROPOSED PROJECT – 15 RESIDENTIAL HOMES

Construction

Construction is assumed to begin in April 2017 and be completed by March 2018.

The default construction equipment list is provided in Table 5.

Table 5: Construction Equipment Assumptions

Phase	Equipment	Unit Amount	Hours per Day	Horsepower	Load Factor
Site Preparation	Graders	1	8	174	0.41
	Rubber Tired Dozers	1	7	255	0.4
	Tractors/Loaders/Backhoes	1	8	97	0.37
Grading	Graders	1	6	174	0.41

	Rubber Tired Dozers	1	6	255	0.4
	Tractors/Loaders/Backhoes	1	7	97	0.37
Building Construction	Cranes	1	6	226	0.29
	Forklifts	1	6	89	0.2
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/Backhoes	1	6	97	0.37
	Welders	3	8	46	0.45
Paving	Cement and Mortar Mixers	1	6	9	0.56
	Pavers	1	6	125	0.42
	Paving Equipment	1	8	130	0.36
	Rollers	1	7	80	0.38
	Tractors/Loaders/Backhoes	1	8	97	0.37
Architectural Coating	Air Compressors	1	6	78	0.48

Operations

Motor Vehicles

Motor vehicle emissions refer to exhaust and road dust emissions from the automobiles that would travel to and from the project site. Because much of YSAQMD is located within a rural setting, CalEEMod assumes that 94 percent of the roads are paved.

Table 6: Project Trip Generation Rates

Land Use	Quantity	Units	Trip Generation Rate (trips/unit/day)		
			Weekday	Saturday[1]	Sunday[1]
Single-Family Housing	15	du	12.2	12.2	12.2

Notes:
1. The ITE Manual, 9th edition default trip generation rates for Weekdays were increased based on local conditions. The weekday rate was applied to the Saturday and Sunday rate to provide a conservative estimate because the weekend rates are lower.

Source: Stantec Traffic Impact Study Report, 2016

EXISTING LAND USE DESIGNATION

The project and the other 2-acre parcel could develop 43,516 square feet of commercial uses based on the minimum allowed Floor Area Ratio. The majority of emissions come from mobile sources traveling to and from the commercial site.

Table 7: Neighborhood Commercial Trip Generation Rates (Existing Land Use Designation)

Land Use	Quantity	Units	Trip Generation Rate (trips/ksf/day)		
			Weekday	Saturday[1]	Sunday[1]
Retail	43.516	ksf	44.32	42.04	20.43

Notes:
Ksf = 1,000 square feet

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Attachment: CalEEMod Outputs, BAAQMD Screening Guidelines

3. SCREENING CRITERIA

The screening criteria identified in this section are **not thresholds of significance**. The Air District developed screening criteria to provide lead agencies and project applicants with a conservative indication of whether the proposed project could result in potentially significant air quality impacts. If all of the screening criteria are met by a proposed project, then the lead agency or applicant would not need to perform a detailed air quality assessment of their project's air pollutant emissions. These screening levels are generally representative of new development on greenfield sites without any form of mitigation measures taken into consideration. In addition, the screening criteria in this section do not account for project design features, attributes, or local development requirements that could also result in lower emissions. For projects that are mixed-use, infill, and/or proximate to transit service and local services, emissions would be less than the greenfield type project that these screening criteria are based on.

If a project includes emissions from stationary source engines (e.g., back-up generators) and industrial sources subject to Air District Rules and Regulations, the screening criteria should not be used. The project's stationary source emissions should be analyzed separately from the land use-related indirect mobile- and area-source emissions. Stationary-source emissions are not included in the screening estimates given below and, for criteria pollutants, must be added to the indirect mobile- and area-source emissions generated by the land use development and compared to the appropriate Thresholds of Significance. Greenhouse gas emissions from permitted stationary sources should not be combined with operational emissions, but compared to a separate stationary source greenhouse gas threshold.

3.1. OPERATIONAL-RELATED IMPACTS

3.1.1. Criteria Air Pollutants and Precursors

The screening criteria developed for criteria pollutants and precursors were derived using the default assumptions used by the Urban Land Use Emissions Model (URBEMIS). If the project has sources of emissions not evaluated in the URBEMIS program the screening criteria should not be used. If the project meets the screening criteria in Table 3-1, the project would not result in the generation of operational-related criteria air pollutants and/or precursors that exceed the *Thresholds of Significance* shown in Table 2-2. Operation of the proposed project would therefore result in a less-than-significant cumulative impact to air quality from criteria air pollutant and precursor emissions.

3.1.2. Greenhouse Gases

The screening criteria developed for greenhouse gases were derived using the default emission assumptions in URBEMIS and using off-model GHG estimates for indirect emissions from electrical generation, solid waste and water conveyance. If the project has other significant sources of GHG emissions not accounted for in the methodology described above, then the screening criteria should not be used. Projects below the applicable screening criteria shown in Table 3-1 would not exceed the 1,100 MT of CO_2e/yr GHG threshold of significance for projects other than permitted stationary sources.

If a project, including stationary sources, is located in a community with an adopted qualified GHG Reduction Strategy, the project may be considered less than significant if it is consistent with the GHG Reduction Strategy. A project must demonstrate its consistency by identifying and implementing all applicable feasible measures and policies from the GHG Reduction Strategy into the project.

Table 3-1 Operational-Related Criteria Air Pollutant and Precursor Screening Level Sizes			
Land Use Type	Operational Criteria Pollutant Screening Size	Operational GHG Screening Size	Construction-Related Screening Size
Single-family	325 du (NOX)	56 du	114 du (ROG)
Apartment, low-rise	451 du (ROG)	78 du	240 du (ROG)
Apartment, mid-rise	494 du (ROG)	87 du	240 du (ROG)
Apartment, high-rise	510 du (ROG)	91 du	249 du (ROG)
Condo/townhouse, general	451 du (ROG)	78 du	240 du (ROG)
Condo/townhouse, high-rise	511 du (ROG)	92 du	252 du (ROG)
Mobile home park	450 du (ROG)	82 du	114 du (ROG)
Retirement community	487 du (ROG)	94 du	114 du (ROG)
Congregate care facility	657 du (ROG)	143 du	240 du (ROG)
Day-care center	53 ksf (NOX)	11 ksf	277 ksf (ROG)
Elementary school	271 ksf (NOX)	44 ksf	277 ksf (ROG)
Elementary school	2747 students (ROG)	-	3904 students (ROG)
Junior high school	285 ksf (NOX)	-	277 ksf (ROG)
Junior high school	2460 students (NOX)	46 ksf	3261 students (ROG)
High school	311 ksf (NOX)	49 ksf	277 ksf (ROG)
High school	2390 students (NOX)	-	3012 students (ROG)
Junior college (2 years)	152 ksf (NOX)	28 ksf	277 ksf (ROG)
Junior college (2 years)	2865 students (ROG)	-	3012 students (ROG)
University/college (4 years)	1760 students (NOX)	320 students	3012 students (ROG)
Library	78 ksf (NOX)	15 ksf	277 ksf (ROG)
Place of worship	439 ksf (NOX)	61 ksf	277 ksf (ROG)
City park	2613 acres (ROG)	600 acres	67 acres (PM10)
Racquet club	291 ksf (NOX)	46 ksf	277 ksf (ROG)
Racquetball/health	128 ksf (NOX)	24 ksf	277 ksf (ROG)
Quality restaurant	47 ksf (NOX)	9 ksf	277 ksf (ROG)
High turnover restaurant	33 ksf (NOX)	7 ksf	277 ksf (ROG)
Fast food rest. w/ drive thru	6 ksf (NOX)	1 ksf	277 ksf (ROG)
Fast food rest. w/o drive thru	8 ksf (NOX)	1 ksf	277 ksf (ROG)
Hotel	489 rooms (NOX)	83 rooms	554 rooms (ROG)
Motel	688 rooms (NOX)	106 rooms	554 rooms (ROG)
Free-standing discount store	76 ksf (NOX)	15 ksf	277 ksf (ROG)
Free-standing discount superstore	87 ksf (NOX)	17 ksf	277 ksf (ROG)
Discount club	102 ksf (NOX)	20 ksf	277 ksf (ROG)
Regional shopping center	99 ksf (NOX)	19 ksf	277 ksf (ROG)
Electronic Superstore	95 ksf (NOX)	18 ksf	277 ksf (ROG)
Home improvement superstore	142 ksf (NOX)	26 ksf	277 ksf (ROG)
Strip mall	99 ksf (NOX)	19 ksf	277 ksf (ROG)
Hardware/paint store	83 ksf (NOX)	16 ksf	277 ksf (ROG)
Supermarket	42 ksf (NOX)	8 ksf	277 ksf (ROG)
Convenience market (24 hour)	5 ksf (NOX)	1 ksf	277 ksf (ROG)
Convenience market with gas pumps	4 ksf (NOX)	1 ksf	277 ksf (ROG)
Bank (with drive-through)	17 ksf (NOX)	3 ksf	277 ksf (ROG)
General office building	346 ksf (NOX)	53 ksf	277 ksf (ROG)

Ashton Place

Yolo/Solano AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	15.00	Dwelling Unit	1.76	20,223.00	43

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - site plan

Construction Phase - based on applicant provided schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT - Assumed mobilization/demobilization of equipment required an average of 1 truck per 2 pieces of equipment

Grading - site acreage

Vehicle Trips - Based on Traffic Study

Woodstoves - assumed EPA certified wood burning devices

Water And Wastewater - based on UWMP

Road Dust -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	213.00
tblFireplaces	NumberNoFireplace	10.35	0.00
tblFireplaces	NumberWood	4.65	0.00
tblGrading	AcresOfGrading	1.50	1.76
tblLandUse	LandUseSquareFeet	27,000.00	20,223.00
tblLandUse	LotAcreage	4.87	1.76
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblVehicleTrips	ST_TR	10.08	12.20
tblVehicleTrips	SU_TR	8.77	12.20
tblVehicleTrips	WD_TR	9.57	12.20
tblWater	IndoorWaterUseRate	977,310.38	2,098,740.38
tblWoodstoves	NumberCatalytic	0.38	15.00
tblWoodstoves	NumberNoncatalytic	0.38	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

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

2017	0.2894	1.8895	1.4481	2.2200e-003	0.5354	0.1196	0.6550	0.0607	0.1152	0.1759	0.0000	186.5657	186.5657	0.0381	0.0000	187.3660
2018	0.1648	0.2727	0.2295	3.7000e-004	0.1287	0.0165	0.1451	0.0130	0.0158	0.0288	0.0000	30.9737	30.9737	6.4300e-003	0.0000	31.1088
Total	**0.4541**	**2.1621**	**1.6776**	**2.5900e-003**	**0.6641**	**0.1360**	**0.8001**	**0.0738**	**0.1310**	**0.2047**	**0.0000**	**217.5394**	**217.5394**	**0.0445**	**0.0000**	**218.4748**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.2894	1.8895	1.4481	2.2200e-003	0.0208	0.1196	0.1403	9.3900e-003	0.1152	0.1246	0.0000	186.5655	186.5655	0.0381	0.0000	187.3658
2018	0.1648	0.2727	0.2295	3.7000e-004	1.2200e-003	0.0165	0.0177	3.3000e-004	0.0158	0.0161	0.0000	30.9737	30.9737	6.4300e-003	0.0000	31.1087
Total	**0.4541**	**2.1621**	**1.6776**	**2.5900e-003**	**0.0220**	**0.1360**	**0.1580**	**9.7200e-003**	**0.1310**	**0.1407**	**0.0000**	**217.5392**	**217.5392**	**0.0445**	**0.0000**	**218.4745**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**96.69**	**0.00**	**80.25**	**86.83**	**0.00**	**31.30**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3550	0.0360	1.9212	6.9400e-003		0.3540	0.3540		0.3540	0.3540	46.3965	0.1819	46.5784	0.1825	0.0000	50.4109
Energy	2.8500e-003	0.0244	0.0104	1.6000e-004		1.9700e-003	1.9700e-003		1.9700e-003	1.9700e-003	0.0000	59.1065	59.1065	1.9400e-003	8.1000e-004	59.3972

Mobile	0.1474	0.4603	1.7448	3.1900e-003	11.8932	6.0600e-003	11.8993	1.2159	5.5800e-003	1.2215	0.0000	250.2731	250.2731	9.9500e-003	0.0000	250.4821
Waste						0.0000	0.0000		0.0000	0.0000	3.4042	0.0000	3.4042	0.2012	0.0000	7.6289
Water						0.0000	0.0000		0.0000	0.0000	0.6658	3.9310	4.5968	0.0686	1.6500e-003	6.5487
Total	**0.5052**	**0.5207**	**3.6764**	**0.0103**	**11.8932**	**0.3621**	**12.2553**	**1.2159**	**0.3616**	**1.5775**	**50.4665**	**313.4925**	**363.9590**	**0.4641**	**2.4600e-003**	**374.4679**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3550	0.0360	1.9212	6.9400e-003		0.3540	0.3540		0.3540	0.3540	46.3965	0.1819	46.5784	0.1825	0.0000	50.4109
Energy	2.8500e-003	0.0244	0.0104	1.6000e-004		1.9700e-003	1.9700e-003		1.9700e-003	1.9700e-003	0.0000	59.1065	59.1065	1.9400e-003	8.1000e-004	59.3972
Mobile	0.1474	0.4603	1.7448	3.1900e-003	11.8932	6.0600e-003	11.8993	1.2159	5.5800e-003	1.2215	0.0000	250.2731	250.2731	9.9500e-003	0.0000	250.4821
Waste						0.0000	0.0000		0.0000	0.0000	3.4042	0.0000	3.4042	0.2012	0.0000	7.6289
Water						0.0000	0.0000		0.0000	0.0000	0.6658	3.9310	4.5968	0.0686	1.6500e-003	6.5476
Total	**0.5052**	**0.5207**	**3.6764**	**0.0103**	**11.8932**	**0.3621**	**12.2553**	**1.2159**	**0.3616**	**1.5775**	**50.4665**	**313.4925**	**363.9590**	**0.4641**	**2.4600e-003**	**374.4668**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description

1	Site Preparation	Site Preparation	4/3/2017	4/4/2017	5	2	
2	Grading	Grading	4/5/2017	4/10/2017	5	4	
3	Building Construction	Building Construction	4/11/2017	2/1/2018	5	213	
4	Paving	Paving	2/2/2018	2/15/2018	5	10	
5	Architectural Coating	Architectural Coating	2/16/2018	3/1/2018	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.76

Acres of Paving: 0

Residential Indoor: 40,952; Residential Outdoor: 13,651; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	5.00	2.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3100e-003	0.0242	0.0159	2.0000e-005		1.3100e-003	1.3100e-003		1.2000e-003	1.2000e-003	0.0000	1.5895	1.5895	4.9000e-004	0.0000	1.5997
Total	**2.3100e-003**	**0.0242**	**0.0159**	**2.0000e-005**	**5.8000e-003**	**1.3100e-003**	**7.1100e-003**	**2.9500e-003**	**1.2000e-003**	**4.1500e-003**	**0.0000**	**1.5895**	**1.5895**	**4.9000e-004**	**0.0000**	**1.5997**

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	5.0000e-005	4.7000e-004	5.5000e-004	0.0000	3.0300e-003	1.0000e-005	3.0400e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	0.1342	0.1342	0.0000	0.0000	0.1342
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	4.0000e-005	3.6000e-004	0.0000	6.5400e-003	0.0000	6.5400e-003	6.6000e-004	0.0000	6.6000e-004	0.0000	0.0570	0.0570	0.0000	0.0000	0.0571
Total	**8.0000e-005**	**5.1000e-004**	**9.1000e-004**	**0.0000**	**9.5700e-003**	**1.0000e-005**	**9.5800e-003**	**9.7000e-004**	**1.0000e-005**	**9.7000e-004**	**0.0000**	**0.1912**	**0.1912**	**0.0000**	**0.0000**	**0.1913**

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					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3100e-003	0.0242	0.0159	2.0000e-005		1.3100e-003	1.3100e-003		1.2000e-003	1.2000e-003	0.0000	1.5895	1.5895	4.9000e-004	0.0000	1.5997
Total	**2.3100e-003**	**0.0242**	**0.0159**	**2.0000e-005**	**5.8000e-003**	**1.3100e-003**	**7.1100e-003**	**2.9500e-003**	**1.2000e-003**	**4.1500e-003**	**0.0000**	**1.5895**	**1.5895**	**4.9000e-004**	**0.0000**	**1.5997**

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	5.0000e-005	4.7000e-004	5.5000e-004	0.0000	3.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1342	0.1342	0.0000	0.0000	0.1342
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	4.0000e-005	3.6000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0570	0.0570	0.0000	0.0000	0.0571

Total	**8.0000e-005**	**5.1000e-004**	**9.1000e-004**	**0.0000**	**9.0000e-005**	**1.0000e-005**	**1.0000e-004**	**3.0000e-005**	**1.0000e-005**	**4.0000e-005**	**0.0000**	**0.1912**	**0.1912**	**0.0000**	**0.0000**	**0.1913**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.9700e-003	0.0000	9.9700e-003	5.0700e-003	0.0000	5.0700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7700e-003	0.0396	0.0264	3.0000e-005		2.1300e-003	2.1300e-003		1.9600e-003	1.9600e-003	0.0000	2.6112	2.6112	8.0000e-004	0.0000	2.6280
Total	**3.7700e-003**	**0.0396**	**0.0264**	**3.0000e-005**	**9.9700e-003**	**2.1300e-003**	**0.0121**	**5.0700e-003**	**1.9600e-003**	**7.0300e-003**	**0.0000**	**2.6112**	**2.6112**	**8.0000e-004**	**0.0000**	**2.6280**

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	5.0000e-005	4.7000e-004	5.5000e-004	0.0000	3.0300e-003	1.0000e-005	3.0400e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	0.1342	0.1342	0.0000	0.0000	0.1342
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	8.0000e-005	7.2000e-004	0.0000	0.0131	0.0000	0.0131	1.3300e-003	0.0000	1.3300e-003	0.0000	0.1140	0.1140	1.0000e-005	0.0000	0.1141
Total	**1.0000e-004**	**5.5000e-004**	**1.2700e-003**	**0.0000**	**0.0161**	**1.0000e-005**	**0.0161**	**1.6400e-003**	**1.0000e-005**	**1.6400e-003**	**0.0000**	**0.2482**	**0.2482**	**1.0000e-005**	**0.0000**	**0.2483**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.9700e-003	0.0000	9.9700e-003	5.0700e-003	0.0000	5.0700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7700e-003	0.0396	0.0264	3.0000e-005		2.1300e-003	2.1300e-003		1.9600e-003	1.9600e-003	0.0000	2.6112	2.6112	8.0000e-004	0.0000	2.6280
Total	**3.7700e-003**	**0.0396**	**0.0264**	**3.0000e-005**	**9.9700e-003**	**2.1300e-003**	**0.0121**	**5.0700e-003**	**1.9600e-003**	**7.0300e-003**	**0.0000**	**2.6112**	**2.6112**	**8.0000e-004**	**0.0000**	**2.6280**

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	5.0000e-005	4.7000e-004	5.5000e-004	0.0000	3.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1342	0.1342	0.0000	0.0000	0.1342
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	8.0000e-005	7.2000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1140	0.1140	1.0000e-005	0.0000	0.1141
Total	**1.0000e-004**	**5.5000e-004**	**1.2700e-003**	**0.0000**	**1.5000e-004**	**1.0000e-005**	**1.6000e-004**	**4.0000e-005**	**1.0000e-005**	**5.0000e-005**	**0.0000**	**0.2482**	**0.2482**	**1.0000e-005**	**0.0000**	**0.2483**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

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

Off-Road	0.2792	1.8058	1.3524	2.0700e-003		0.1158	0.1158		0.1117	0.1117	0.0000	174.3972	174.3972	0.0366	0.0000	175.1657
Total	**0.2792**	**1.8058**	**1.3524**	**2.0700e-003**		**0.1158**	**0.1158**		**0.1117**	**0.1117**	**0.0000**	**174.3972**	**174.3972**	**0.0366**	**0.0000**	**175.1657**

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	4.0000e-005	4.2000e-004	4.9000e-004	0.0000	3.0300e-003	1.0000e-005	3.0400e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	0.1191	0.1191	0.0000	0.0000	0.1191
Vendor	2.3800e-003	0.0162	0.0296	5.0000e-005	0.1047	2.5000e-004	0.1049	0.0107	2.3000e-004	0.0109	0.0000	4.0433	4.0433	3.0000e-005	0.0000	4.0439
Worker	1.4800e-003	2.2200e-003	0.0212	5.0000e-005	0.3863	3.0000e-005	0.3863	0.0391	3.0000e-005	0.0392	0.0000	3.3660	3.3660	1.9000e-004	0.0000	3.3699
Total	**3.9000e-003**	**0.0188**	**0.0512**	**1.0000e-004**	**0.4940**	**2.9000e-004**	**0.4943**	**0.0501**	**2.7000e-004**	**0.0504**	**0.0000**	**7.5284**	**7.5284**	**2.2000e-004**	**0.0000**	**7.5330**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2792	1.8058	1.3524	2.0700e-003		0.1158	0.1158		0.1117	0.1117	0.0000	174.3970	174.3970	0.0366	0.0000	175.1655
Total	**0.2792**	**1.8058**	**1.3524**	**2.0700e-003**		**0.1158**	**0.1158**		**0.1117**	**0.1117**	**0.0000**	**174.3970**	**174.3970**	**0.0366**	**0.0000**	**175.1655**

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	4.0000e-005	4.2000e-004	4.9000e-004	0.0000	3.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	0.0000	0.1191	0.1191	0.0000	0.0000	0.1191
Vendor	2.3800e-003	0.0162	0.0296	5.0000e-005	1.1800e-003	2.5000e-004	1.4300e-003	3.4000e-004	2.3000e-004	5.7000e-004	0.0000	4.0433	4.0433	3.0000e-005	0.0000	4.0439
Worker	1.4800e-003	2.2200e-003	0.0212	5.0000e-005	3.5600e-003	3.0000e-005	3.5900e-003	9.5000e-004	3.0000e-005	9.8000e-004	0.0000	3.3660	3.3660	1.9000e-004	0.0000	3.3699
Total	**3.9000e-003**	**0.0188**	**0.0512**	**1.0000e-004**	**4.7700e-003**	**2.9000e-004**	**5.0600e-003**	**1.3000e-003**	**2.7000e-004**	**1.5600e-003**	**0.0000**	**7.5284**	**7.5284**	**2.2000e-004**	**0.0000**	**7.5330**

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0310	0.2078	0.1660	2.6000e-004		0.0126	0.0126		0.0122	0.0122	0.0000	22.0056	22.0056	4.4200e-003	0.0000	22.0983
Total	**0.0310**	**0.2078**	**0.1660**	**2.6000e-004**		**0.0126**	**0.0126**		**0.0122**	**0.0122**	**0.0000**	**22.0056**	**22.0056**	**4.4200e-003**	**0.0000**	**22.0983**

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	5.0000e-005	6.0000e-005	0.0000	3.0200e-003	0.0000	3.0300e-003	3.1000e-004	0.0000	3.1000e-004	0.0000	0.0149	0.0149	0.0000	0.0000	0.0149
Vendor	2.7000e-004	1.8500e-003	3.4900e-003	1.0000e-005	0.0133	3.0000e-005	0.0133	1.3500e-003	3.0000e-005	1.3800e-003	0.0000	0.5044	0.5044	0.0000	0.0000	0.5045
Worker	1.7000e-004	2.6000e-004	2.4100e-003	1.0000e-005	0.0491	0.0000	0.0491	4.9700e-003	0.0000	4.9700e-003	0.0000	0.4114	0.4114	2.0000e-005	0.0000	0.4118
Total	**4.4000e-004**	**2.1600e-003**	**5.9600e-003**	**2.0000e-005**	**0.0654**	**3.0000e-005**	**0.0654**	**6.6300e-003**	**3.0000e-005**	**6.6600e-003**	**0.0000**	**0.9306**	**0.9306**	**2.0000e-005**	**0.0000**	**0.9312**

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	0.0310	0.2078	0.1660	2.6000e-004		0.0126	0.0126		0.0122	0.0122	0.0000	22.0055	22.0055	4.4200e-003	0.0000	22.0983
Total	**0.0310**	**0.2078**	**0.1660**	**2.6000e-004**		**0.0126**	**0.0126**		**0.0122**	**0.0122**	**0.0000**	**22.0055**	**22.0055**	**4.4200e-003**	**0.0000**	**22.0983**

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	5.0000e-005	6.0000e-005	0.0000	2.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0149	0.0149	0.0000	0.0000	0.0149
Vendor	2.7000e-004	1.8500e-003	3.4900e-003	1.0000e-005	1.5000e-004	3.0000e-005	1.8000e-004	4.0000e-005	3.0000e-005	7.0000e-005	0.0000	0.5044	0.5044	0.0000	0.0000	0.5045
Worker	1.7000e-004	2.6000e-004	2.4100e-003	1.0000e-005	4.5000e-004	0.0000	4.6000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4114	0.4114	2.0000e-005	0.0000	0.4118

Total	**4.4000e-004**	**2.1600e-003**	**5.9600e-003**	**2.0000e-005**	**6.2000e-004**	**3.0000e-005**	**6.7000e-004**	**1.7000e-004**	**3.0000e-005**	**2.0000e-004**	**0.0000**	**0.9306**	**0.9306**	**2.0000e-005**	**0.0000**	**0.9312**

3.5 Paving - 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	5.0300e-003	0.0515	0.0444	7.0000e-005		3.0100e-003	3.0100e-003		2.7800e-003	2.7800e-003	0.0000	6.0173	6.0173	1.8400e-003	0.0000	6.0558
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.0300e-003**	**0.0515**	**0.0444**	**7.0000e-005**		**3.0100e-003**	**3.0100e-003**		**2.7800e-003**	**2.7800e-003**	**0.0000**	**6.0173**	**6.0173**	**1.8400e-003**	**0.0000**	**6.0558**

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	4.0000e-005	4.2000e-004	5.2000e-004	0.0000	3.0300e-003	1.0000e-005	3.0400e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	0.1319	0.1319	0.0000	0.0000	0.1319
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	1.8000e-004	2.8000e-004	2.6100e-003	1.0000e-005	0.0531	0.0000	0.0531	5.3800e-003	0.0000	5.3900e-003	0.0000	0.4456	0.4456	2.0000e-005	0.0000	0.4461
Total	**2.2000e-004**	**7.0000e-004**	**3.1300e-003**	**1.0000e-005**	**0.0562**	**1.0000e-005**	**0.0562**	**5.6900e-003**	**1.0000e-005**	**5.7000e-003**	**0.0000**	**0.5775**	**0.5775**	**2.0000e-005**	**0.0000**	**0.5780**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.0300e-003	0.0515	0.0444	7.0000e-005		3.0100e-003	3.0100e-003		2.7800e-003	2.7800e-003	0.0000	6.0172	6.0172	1.8400e-003	0.0000	6.0558
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.0300e-003**	**0.0515**	**0.0444**	**7.0000e-005**		**3.0100e-003**	**3.0100e-003**		**2.7800e-003**	**2.7800e-003**	**0.0000**	**6.0172**	**6.0172**	**1.8400e-003**	**0.0000**	**6.0558**

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	4.0000e-005	4.2000e-004	5.2000e-004	0.0000	3.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1319	0.1319	0.0000	0.0000	0.1319
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	1.8000e-004	2.8000e-004	2.6100e-003	1.0000e-005	4.9000e-004	0.0000	4.9000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4456	0.4456	2.0000e-005	0.0000	0.4461
Total	**2.2000e-004**	**7.0000e-004**	**3.1300e-003**	**1.0000e-005**	**5.2000e-004**	**1.0000e-005**	**5.3000e-004**	**1.4000e-004**	**1.0000e-005**	**1.5000e-004**	**0.0000**	**0.5775**	**0.5775**	**2.0000e-005**	**0.0000**	**0.5780**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

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

Archit. Coating	0.1265					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4900e-003	0.0100	9.2700e-003	1.0000e-005		7.5000e-004	7.5000e-004		7.5000e-004	7.5000e-004	0.0000	1.2766	1.2766	1.2000e-004	0.0000	1.2792
Total	**0.1280**	**0.0100**	**9.2700e-003**	**1.0000e-005**		**7.5000e-004**	**7.5000e-004**		**7.5000e-004**	**7.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.2000e-004**	**0.0000**	**1.2792**

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	4.0000e-005	4.2000e-004	5.2000e-004	0.0000	3.0300e-003	1.0000e-005	3.0400e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	0.1319	0.1319	0.0000	0.0000	0.1319
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	2.0000e-005	2.0000e-004	0.0000	4.0900e-003	0.0000	4.0900e-003	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0343	0.0343	0.0000	0.0000	0.0343
Total	**5.0000e-005**	**4.4000e-004**	**7.2000e-004**	**0.0000**	**7.1200e-003**	**1.0000e-005**	**7.1300e-003**	**7.2000e-004**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**0.1661**	**0.1661**	**0.0000**	**0.0000**	**0.1662**

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	0.1265					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4900e-003	0.0100	9.2700e-003	1.0000e-005		7.5000e-004	7.5000e-004		7.5000e-004	7.5000e-004	0.0000	1.2766	1.2766	1.2000e-004	0.0000	1.2792
Total	**0.1280**	**0.0100**	**9.2700e-003**	**1.0000e-005**		**7.5000e-004**	**7.5000e-004**		**7.5000e-004**	**7.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.2000e-004**	**0.0000**	**1.2792**

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	4.0000e-005	4.2000e-004	5.2000e-004	0.0000	3.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1319	0.1319	0.0000	0.0000	0.1319
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	2.0000e-005	2.0000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0343	0.0343	0.0000	0.0000	0.0343
Total	**5.0000e-005**	**4.4000e-004**	**7.2000e-004**	**0.0000**	**7.0000e-005**	**1.0000e-005**	**8.0000e-005**	**2.0000e-005**	**1.0000e-005**	**3.0000e-005**	**0.0000**	**0.1661**	**0.1661**	**0.0000**	**0.0000**	**0.1662**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1474	0.4603	1.7448	3.1900e-003	11.8932	6.0600e-003	11.8993	1.2159	5.5800e-003	1.2215	0.0000	250.2731	250.2731	9.9500e-003	0.0000	250.4821
Unmitigated	0.1474	0.4603	1.7448	3.1900e-003	11.8932	6.0600e-003	11.8993	1.2159	5.5800e-003	1.2215	0.0000	250.2731	250.2731	9.9500e-003	0.0000	250.4821

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Single Family Housing	183.00	183.00	183.00	524,211	524,211
Total	183.00	183.00	183.00	524,211	524,211

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711	0.054898	0.001011	0.001367	0.008332	0.000508	0.002928

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	30.8640	30.8640	1.4000e-003	2.9000e-004	30.9828
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	30.8640	30.8640	1.4000e-003	2.9000e-004	30.9828
NaturalGas Mitigated	2.8500e-003	0.0244	0.0104	1.6000e-004		1.9700e-003	1.9700e-003		1.9700e-003	1.9700e-003	0.0000	28.2425	28.2425	5.4000e-004	5.2000e-004	28.4144
NaturalGas Unmitigated	2.8500e-003	0.0244	0.0104	1.6000e-004		1.9700e-003	1.9700e-003		1.9700e-003	1.9700e-003	0.0000	28.2425	28.2425	5.4000e-004	5.2000e-004	28.4144

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	529244	2.8500e-003	0.0244	0.0104	1.6000e-004		1.9700e-003	1.9700e-003		1.9700e-003	1.9700e-003	0.0000	28.2425	28.2425	5.4000e-004	5.2000e-004	28.4144
Total		**2.8500e-003**	**0.0244**	**0.0104**	**1.6000e-004**		**1.9700e-003**	**1.9700e-003**		**1.9700e-003**	**1.9700e-003**	**0.0000**	**28.2425**	**28.2425**	**5.4000e-004**	**5.2000e-004**	**28.4144**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	529244	2.8500e-003	0.0244	0.0104	1.6000e-004		1.9700e-003	1.9700e-003		1.9700e-003	1.9700e-003	0.0000	28.2425	28.2425	5.4000e-004	5.2000e-004	28.4144
Total		**2.8500e-003**	**0.0244**	**0.0104**	**1.6000e-004**		**1.9700e-003**	**1.9700e-003**		**1.9700e-003**	**1.9700e-003**	**0.0000**	**28.2425**	**28.2425**	**5.4000e-004**	**5.2000e-004**	**28.4144**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	106094	30.8640	1.4000e-003	2.9000e-004	30.9828

Total		**30.8640**	**1.4000e-003**	**2.9000e-004**	**30.9828**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	106094	30.8640	1.4000e-003	2.9000e-004	30.9828
Total		**30.8640**	**1.4000e-003**	**2.9000e-004**	**30.9828**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3550	0.0360	1.9212	6.9400e-003		0.3540	0.3540		0.3540	0.3540	46.3965	0.1819	46.5784	0.1825	0.0000	50.4109
Unmitigated	0.3550	0.0360	1.9212	6.9400e-003		0.3540	0.3540		0.3540	0.3540	46.3965	0.1819	46.5784	0.1825	0.0000	50.4109

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0127					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0790					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2599	0.0347	1.8087	6.9300e-003		0.3534	0.3534		0.3534	0.3534	46.3965	0.0000	46.3965	0.1823	0.0000	50.2252
Landscaping	3.5000e-003	1.3100e-003	0.1125	1.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	0.1819	0.1819	1.8000e-004	0.0000	0.1858
Total	**0.3550**	**0.0360**	**1.9212**	**6.9400e-003**		**0.3540**	**0.3540**		**0.3540**	**0.3540**	**46.3965**	**0.1819**	**46.5784**	**0.1825**	**0.0000**	**50.4109**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Consumer Products	0.0790					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2599	0.0347	1.8087	6.9300e-003		0.3534	0.3534		0.3534	0.3534	46.3965	0.0000	46.3965	0.1823	0.0000	50.2252
Landscaping	3.5000e-003	1.3100e-003	0.1125	1.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	0.1819	0.1819	1.8000e-004	0.0000	0.1858
Architectural Coating	0.0127					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3550**	**0.0360**	**1.9212**	**6.9400e-003**		**0.3540**	**0.3540**		**0.3540**	**0.3540**	**46.3965**	**0.1819**	**46.5784**	**0.1825**	**0.0000**	**50.4109**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.5968	0.0686	1.6500e-003	6.5476
Unmitigated	4.5968	0.0686	1.6500e-003	6.5487

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	2.09874 / 0.61613	4.5968	0.0686	1.6500e-003	6.5487
Total		**4.5968**	**0.0686**	**1.6500e-003**	**6.5487**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	2.09874 / 0.61613	4.5968	0.0686	1.6500e-003	6.5476

Total		**4.5968**	**0.0686**	**1.6500e-003**	**6.5476**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.4042	0.2012	0.0000	7.6289
Unmitigated	3.4042	0.2012	0.0000	7.6289

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	16.77	3.4042	0.2012	0.0000	7.6289
Total		**3.4042**	**0.2012**	**0.0000**	**7.6289**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	16.77	3.4042	0.2012	0.0000	7.6289
Total		**3.4042**	**0.2012**	**0.0000**	**7.6289**

9.0 Operational Offroad

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

10.0 Vegetation

Ashton Place

Yolo/Solano AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	15.00	Dwelling Unit	1.76	20,223.00	43

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - site plan

Construction Phase - based on applicant provided schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT - Assumed mobilization/demobilization of equipment required an average of 1 truck per 2 pieces of equipment

Grading - site acreage

Vehicle Trips - Based on Traffic Study

Woodstoves - assumed EPA certified wood burning devices

Water And Wastewater - based on UWMP

Road Dust -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	213.00
tblFireplaces	NumberNoFireplace	10.35	0.00
tblFireplaces	NumberWood	4.65	0.00
tblGrading	AcresOfGrading	1.50	1.76
tblLandUse	LandUseSquareFeet	27,000.00	20,223.00
tblLandUse	LotAcreage	4.87	1.76
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblVehicleTrips	ST_TR	10.08	12.20
tblVehicleTrips	SU_TR	8.77	12.20
tblVehicleTrips	WD_TR	9.57	12.20
tblWater	IndoorWaterUseRate	977,310.38	2,098,740.38
tblWoodstoves	NumberCatalytic	0.38	15.00
tblWoodstoves	NumberNoncatalytic	0.38	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					

2017	3.0016	24.7488	17.0408	0.0229	17.0573	1.3141	18.3714	4.0932	1.2090	5.3022	0.0000	2,120.9147	2,120.9147	0.5414	0.0000	2,132.2831
2018	25.6195	17.5018	14.4542	0.0229	13.2127	1.0561	13.8175	1.3364	1.0198	1.8937	0.0000	2,105.7526	2,105.7526	0.4106	0.0000	2,114.3746
Total	**28.6211**	**42.2506**	**31.4950**	**0.0458**	**30.2700**	**2.3702**	**32.1889**	**5.4296**	**2.2288**	**7.1959**	**0.0000**	**4,226.6673**	**4,226.6673**	**0.9519**	**0.0000**	**4,246.6578**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	3.0016	24.7488	17.0408	0.0229	5.8952	1.3141	7.2094	2.9795	1.2090	4.1885	0.0000	2,120.9147	2,120.9147	0.5414	0.0000	2,132.2831
2018	25.6195	17.5018	14.4542	0.0229	0.1079	1.0561	1.1099	0.0288	1.0198	1.0344	0.0000	2,105.7526	2,105.7526	0.4106	0.0000	2,114.3746
Total	**28.6211**	**42.2506**	**31.4950**	**0.0458**	**6.0031**	**2.3702**	**8.3193**	**3.0083**	**2.2288**	**5.2229**	**0.0000**	**4,226.6673**	**4,226.6673**	**0.9519**	**0.0000**	**4,246.6578**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**80.17**	**0.00**	**74.15**	**44.59**	**0.00**	**27.42**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.8794	0.8597	45.3654	0.1691		8.6270	8.6270		8.6270	8.6270	1,247.4000	2.2283	1,249.6283	4.9039	0.0000	1,352.6111
Energy	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108		170.5864	170.5864	3.2700e-003	3.1300e-003	171.6246

Mobile	0.8797	2.6532	11.1398	0.0173	65.3809	0.0335	65.4144	6.6893	0.0308	6.7200		1,492.3082	1,492.3082	0.0604		1,493.5768
Total	**7.7748**	**3.6465**	**56.5620**	**0.1872**	**65.3809**	**8.6713**	**74.0522**	**6.6893**	**8.6686**	**15.3579**	**1,247.4000**	**1,665.1229**	**2,912.5229**	**4.9676**	**3.1300e-003**	**3,017.8124**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.8794	0.8597	45.3654	0.1691		8.6270	8.6270		8.6270	8.6270	1,247.4000	2.2283	1,249.6283	4.9039	0.0000	1,352.6111
Energy	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108		170.5864	170.5864	3.2700e-003	3.1300e-003	171.6246
Mobile	0.8797	2.6532	11.1398	0.0173	65.3809	0.0335	65.4144	6.6893	0.0308	6.7200		1,492.3082	1,492.3082	0.0604		1,493.5768
Total	**7.7748**	**3.6465**	**56.5620**	**0.1872**	**65.3809**	**8.6713**	**74.0522**	**6.6893**	**8.6686**	**15.3579**	**1,247.4000**	**1,665.1229**	**2,912.5229**	**4.9676**	**3.1300e-003**	**3,017.8124**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/3/2017	4/4/2017	5	2	
2	Grading	Grading	4/5/2017	4/10/2017	5	4	
3	Building Construction	Building Construction	4/11/2017	2/1/2018	5	213	
4	Paving	Paving	2/2/2018	2/15/2018	5	10	
5	Architectural Coating	Architectural Coating	2/16/2018	3/1/2018	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.76

Acres of Paving: 0

Residential Indoor: 40,952; Residential Outdoor: 13,651; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Grading	3	8.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	5.00	2.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.3109	24.2288	15.9299	0.0171		1.3067	1.3067		1.2022	1.2022		1,752.1239	1,752.1239	0.5369		1,763.3977
Total	**2.3109**	**24.2288**	**15.9299**	**0.0171**	**5.7996**	**1.3067**	**7.1063**	**2.9537**	**1.2022**	**4.1559**		**1,752.1239**	**1,752.1239**	**0.5369**		**1,763.3977**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0526	0.4777	0.7361	1.4900e-003	3.5656	6.9300e-003	3.5726	0.3616	6.3700e-003	0.3680		147.7429	147.7429	1.0200e-003		147.7643
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0262	0.0424	0.3749	7.7000e-004	7.6920	4.8000e-004	7.6925	0.7779	4.4000e-004	0.7783		61.2578	61.2578	3.4900e-003		61.3310

Total	**0.0787**	**0.5200**	**1.1109**	**2.2600e-003**	**11.2577**	**7.4100e-003**	**11.2651**	**1.1395**	**6.8100e-003**	**1.1463**		**209.0007**	**209.0007**	**4.5100e-003**		**209.0953**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.3109	24.2288	15.9299	0.0171		1.3067	1.3067		1.2022	1.2022	0.0000	1,752.1239	1,752.1239	0.5369		1,763.3977
Total	**2.3109**	**24.2288**	**15.9299**	**0.0171**	**5.7996**	**1.3067**	**7.1063**	**2.9537**	**1.2022**	**4.1559**	**0.0000**	**1,752.1239**	**1,752.1239**	**0.5369**		**1,763.3977**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0526	0.4777	0.7361	1.4900e-003	0.0334	6.9300e-003	0.0403	9.1800e-003	6.3700e-003	0.0156		147.7429	147.7429	1.0200e-003		147.7643
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0262	0.0424	0.3749	7.7000e-004	0.0623	4.8000e-004	0.0628	0.0166	4.4000e-004	0.0170		61.2578	61.2578	3.4900e-003		61.3310
Total	**0.0787**	**0.5200**	**1.1109**	**2.2600e-003**	**0.0956**	**7.4100e-003**	**0.1031**	**0.0258**	**6.8100e-003**	**0.0326**		**209.0007**	**209.0007**	**4.5100e-003**		**209.0953**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9832	0.0000	4.9832	2.5331	0.0000	2.5331			0.0000			0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808		1,439.1894	1,439.1894	0.4410		1,448.4496
Total	**1.8844**	**19.7889**	**13.1786**	**0.0141**	**4.9832**	**1.0661**	**6.0493**	**2.5331**	**0.9808**	**3.5139**		**1,439.1894**	**1,439.1894**	**0.4410**		**1,448.4496**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0263	0.2388	0.3680	7.5000e-004	1.7828	3.4600e-003	1.7863	0.1808	3.1900e-003	0.1840		73.8715	73.8715	5.1000e-004		73.8821
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0262	0.0424	0.3749	7.7000e-004	7.6920	4.8000e-004	7.6925	0.7779	4.4000e-004	0.7783		61.2578	61.2578	3.4900e-003		61.3310
Total	**0.0525**	**0.2812**	**0.7429**	**1.5200e-003**	**9.4749**	**3.9400e-003**	**9.4788**	**0.9587**	**3.6300e-003**	**0.9623**		**135.1292**	**135.1292**	**4.0000e-003**		**135.2132**

Mitigated Construction On-Site

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

Fugitive Dust					4.9832	0.0000	4.9832	2.5331	0.0000	2.5331			0.0000			0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808	0.0000	1,439.1894	1,439.1894	0.4410		1,448.4496
Total	**1.8844**	**19.7889**	**13.1786**	**0.0141**	**4.9832**	**1.0661**	**6.0493**	**2.5331**	**0.9808**	**3.5139**	**0.0000**	**1,439.1894**	**1,439.1894**	**0.4410**		**1,448.4496**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0263	0.2388	0.3680	7.5000e-004	0.0167	3.4600e-003	0.0201	4.5900e-003	3.1900e-003	7.7800e-003		73.8715	73.8715	5.1000e-004		73.8821
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0262	0.0424	0.3749	7.7000e-004	0.0623	4.8000e-004	0.0628	0.0166	4.4000e-004	0.0170		61.2578	61.2578	3.4900e-003		61.3310
Total	**0.0525**	**0.2812**	**0.7429**	**1.5200e-003**	**0.0790**	**3.9400e-003**	**0.0829**	**0.0212**	**3.6300e-003**	**0.0248**		**135.1292**	**135.1292**	**4.0000e-003**		**135.2132**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823		2,034.2860	2,034.2860	0.4268		2,043.2497
Total	**2.9546**	**19.1088**	**14.3110**	**0.0220**		**1.2257**	**1.2257**		**1.1823**	**1.1823**		**2,034.2860**	**2,034.2860**	**0.4268**		**2,043.2497**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.9000e-004	4.4900e-003	6.9100e-003	1.0000e-005	0.0377	7.0000e-005	0.0378	3.8200e-003	6.0000e-005	3.8800e-003		1.3873	1.3873	1.0000e-005		1.3875
Vendor	0.0302	0.1744	0.4284	4.8000e-004	1.3021	2.7000e-003	1.3048	0.1323	2.4800e-003	0.1348		46.9553	46.9553	3.7000e-004		46.9630
Worker	0.0164	0.0265	0.2343	4.8000e-004	4.8075	3.0000e-004	4.8078	0.4862	2.7000e-004	0.4865		38.2861	38.2861	2.1800e-003		38.3319
Total	**0.0470**	**0.2053**	**0.6696**	**9.7000e-004**	**6.1473**	**3.0700e-003**	**6.1504**	**0.6223**	**2.8100e-003**	**0.6251**		**86.6287**	**86.6287**	**2.5600e-003**		**86.6824**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823	0.0000	2,034.2860	2,034.2860	0.4268		2,043.2497
Total	**2.9546**	**19.1088**	**14.3110**	**0.0220**		**1.2257**	**1.2257**		**1.1823**	**1.1823**	**0.0000**	**2,034.2860**	**2,034.2860**	**0.4268**		**2,043.2497**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	4.9000e-004	4.4900e-003	6.9100e-003	1.0000e-005	3.4000e-004	7.0000e-005	4.1000e-004	9.0000e-005	6.0000e-005	1.5000e-004		1.3873	1.3873	1.0000e-005		1.3875
Vendor	0.0302	0.1744	0.4284	4.8000e-004	0.0128	2.7000e-003	0.0155	3.6800e-003	2.4800e-003	6.1600e-003		46.9553	46.9553	3.7000e-004		46.9630
Worker	0.0164	0.0265	0.2343	4.8000e-004	0.0389	3.0000e-004	0.0392	0.0104	2.7000e-004	0.0106		38.2861	38.2861	2.1800e-003		38.3319
Total	**0.0470**	**0.2053**	**0.6696**	**9.7000e-004**	**0.0521**	**3.0700e-003**	**0.0551**	**0.0141**	**2.8100e-003**	**0.0170**		**86.6287**	**86.6287**	**2.5600e-003**		**86.6824**

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5826	17.3173	13.8357	0.0220		1.0532	1.0532		1.0172	1.0172		2,021.4136	2,021.4136	0.4059		2,029.9373
Total	**2.5826**	**17.3173**	**13.8357**	**0.0220**		**1.0532**	**1.0532**		**1.0172**	**1.0172**		**2,021.4136**	**2,021.4136**	**0.4059**		**2,029.9373**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.5000e-004	4.0000e-003	6.5800e-003	1.0000e-005	0.2965	6.0000e-005	0.2966	0.0299	6.0000e-005	0.0300		1.3629	1.3629	1.0000e-005		1.3631
Vendor	0.0264	0.1566	0.4027	4.8000e-004	1.3021	2.4800e-003	1.3046	0.1323	2.2800e-003	0.1346		46.1307	46.1307	3.6000e-004		46.1382
Worker	0.0145	0.0240	0.2093	4.8000e-004	4.8075	2.9000e-004	4.8078	0.4862	2.7000e-004	0.4865		36.8454	36.8454	2.0200e-003		36.8878

Total	**0.0413**	**0.1846**	**0.6185**	**9.7000e-004**	**6.4061**	**2.8300e-003**	**6.4090**	**0.6484**	**2.6100e-003**	**0.6510**		**84.3390**	**84.3390**	**2.3900e-003**		**84.3891**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5826	17.3173	13.8357	0.0220		1.0532	1.0532		1.0172	1.0172	0.0000	2,021.4136	2,021.4136	0.4059		2,029.9373
Total	**2.5826**	**17.3173**	**13.8357**	**0.0220**		**1.0532**	**1.0532**		**1.0172**	**1.0172**	**0.0000**	**2,021.4136**	**2,021.4136**	**0.4059**		**2,029.9373**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.5000e-004	4.0000e-003	6.5800e-003	1.0000e-005	2.1500e-003	6.0000e-005	2.2100e-003	5.4000e-004	6.0000e-005	6.0000e-004		1.3629	1.3629	1.0000e-005		1.3631
Vendor	0.0264	0.1566	0.4027	4.8000e-004	0.0128	2.4800e-003	0.0153	3.6800e-003	2.2800e-003	5.9700e-003		46.1307	46.1307	3.6000e-004		46.1382
Worker	0.0145	0.0240	0.2093	4.8000e-004	0.0389	2.9000e-004	0.0392	0.0104	2.7000e-004	0.0106		36.8454	36.8454	2.0200e-003		36.8878
Total	**0.0413**	**0.1846**	**0.6185**	**9.7000e-004**	**0.0539**	**2.8300e-003**	**0.0567**	**0.0146**	**2.6100e-003**	**0.0172**		**84.3390**	**84.3390**	**2.3900e-003**		**84.3891**

3.5 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0052	10.3081	8.8698	0.0133		0.6027	0.6027		0.5553	0.5553		1,326.5758	1,326.5758	0.4051		1,335.0833
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0052**	**10.3081**	**8.8698**	**0.0133**		**0.6027**	**0.6027**		**0.5553**	**0.5553**		**1,326.5758**	**1,326.5758**	**0.4051**		**1,335.0833**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.4900e-003	0.0853	0.1402	3.0000e-004	0.7131	1.3500e-003	0.7145	0.0723	1.2500e-003	0.0736		29.0303	29.0303	2.0000e-004		29.0345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0376	0.0624	0.5440	1.2500e-003	12.4996	7.6000e-004	12.5003	1.2641	7.0000e-004	1.2648		95.7980	95.7980	5.2500e-003		95.9083
Total	**0.0471**	**0.1476**	**0.6842**	**1.5500e-003**	**13.2127**	**2.1100e-003**	**13.2148**	**1.3364**	**1.9500e-003**	**1.3383**		**124.8283**	**124.8283**	**5.4500e-003**		**124.9429**

Mitigated Construction On-Site

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

Off-Road	1.0052	10.3081	8.8698	0.0133		0.6027	0.6027		0.5553	0.5553	0.0000	1,326.5758	1,326.5758	0.4051		1,335.0833
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0052**	**10.3081**	**8.8698**	**0.0133**		**0.6027**	**0.6027**		**0.5553**	**0.5553**	**0.0000**	**1,326.5758**	**1,326.5758**	**0.4051**		**1,335.0833**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.4900e-003	0.0853	0.1402	3.0000e-004	6.6700e-003	1.3500e-003	8.0200e-003	1.8400e-003	1.2500e-003	3.0800e-003		29.0303	29.0303	2.0000e-004		29.0345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0376	0.0624	0.5440	1.2500e-003	0.1012	7.6000e-004	0.1020	0.0270	7.0000e-004	0.0277		95.7980	95.7980	5.2500e-003		95.9083
Total	**0.0471**	**0.1476**	**0.6842**	**1.5500e-003**	**0.1079**	**2.1100e-003**	**0.1100**	**0.0288**	**1.9500e-003**	**0.0307**		**124.8283**	**124.8283**	**5.4500e-003**		**124.9429**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	25.3085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**25.6071**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.4900e-003	0.0853	0.1402	3.0000e-004	0.7131	1.3500e-003	0.7145	0.0723	1.2500e-003	0.0736		29.0303	29.0303	2.0000e-004		29.0345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	2.8900e-003	4.8000e-003	0.0419	1.0000e-004	0.9615	6.0000e-005	0.9616	0.0972	5.0000e-005	0.0973		7.3691	7.3691	4.0000e-004		7.3776
Total	**0.0124**	**0.0901**	**0.1820**	**4.0000e-004**	**1.6746**	**1.4100e-003**	**1.6760**	**0.1696**	**1.3000e-003**	**0.1709**		**36.3994**	**36.3994**	**6.0000e-004**		**36.4121**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	25.3085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**25.6071**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	9.4900e-003	0.0853	0.1402	3.0000e-004	6.6700e-003	1.3500e-003	8.0200e-003	1.8400e-003	1.2500e-003	3.0800e-003		29.0303	29.0303	2.0000e-004		29.0345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	2.8900e-003	4.8000e-003	0.0419	1.0000e-004	7.7900e-003	6.0000e-005	7.8400e-003	2.0700e-003	5.0000e-005	2.1300e-003		7.3691	7.3691	4.0000e-004		7.3776
Total	**0.0124**	**0.0901**	**0.1820**	**4.0000e-004**	**0.0145**	**1.4100e-003**	**0.0159**	**3.9100e-003**	**1.3000e-003**	**5.2100e-003**		**36.3994**	**36.3994**	**6.0000e-004**		**36.4121**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8797	2.6532	11.1398	0.0173	65.3809	0.0335	65.4144	6.6893	0.0308	6.7200		1,492.3082	1,492.3082	0.0604		1,493.5768
Unmitigated	0.8797	2.6532	11.1398	0.0173	65.3809	0.0335	65.4144	6.6893	0.0308	6.7200		1,492.3082	1,492.3082	0.0604		1,493.5768

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	183.00	183.00	183.00	524,211	524,211
Total	183.00	183.00	183.00	524,211	524,211

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711	0.054898	0.001011	0.001367	0.008332	0.000508	0.002928

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108		170.5864	170.5864	3.2700e-003	3.1300e-003	171.6246
NaturalGas Unmitigated	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108		170.5864	170.5864	3.2700e-003	3.1300e-003	171.6246

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	1449.98	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108		170.5864	170.5864	3.2700e-003	3.1300e-003	171.6246

Total		**0.0156**	**0.1336**	**0.0569**	**8.5000e-004**		**0.0108**	**0.0108**		**0.0108**	**0.0108**		**170.5864**	**170.5864**	**3.2700e-003**	**3.1300e-003**	**171.6246**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	1.44998	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108		170.5864	170.5864	3.2700e-003	3.1300e-003	171.6246
Total		**0.0156**	**0.1336**	**0.0569**	**8.5000e-004**		**0.0108**	**0.0108**		**0.0108**	**0.0108**		**170.5864**	**170.5864**	**3.2700e-003**	**3.1300e-003**	**171.6246**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.8794	0.8597	45.3654	0.1691		8.6270	8.6270		8.6270	8.6270	1,247.4000	2.2283	1,249.6283	4.9039	0.0000	1,352.6111
Unmitigated	6.8794	0.8597	45.3654	0.1691		8.6270	8.6270		8.6270	8.6270	1,247.4000	2.2283	1,249.6283	4.9039	0.0000	1,352.6111

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0693					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4328					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	6.3384	0.8451	44.1154	0.1690		8.6202	8.6202		8.6202	8.6202	1,247.4000	0.0000	1,247.4000	4.9017	0.0000	1,350.3359
Landscaping	0.0389	0.0146	1.2500	7.0000e-005		6.7900e-003	6.7900e-003		6.7900e-003	6.7900e-003		2.2283	2.2283	2.2400e-003		2.2753
Total	**6.8794**	**0.8597**	**45.3654**	**0.1691**		**8.6270**	**8.6270**		**8.6270**	**8.6270**	**1,247.4000**	**2.2283**	**1,249.6283**	**4.9040**	**0.0000**	**1,352.6111**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	0.4328					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	6.3384	0.8451	44.1154	0.1690		8.6202	8.6202		8.6202	8.6202	1,247.4000	0.0000	1,247.4000	4.9017	0.0000	1,350.3359
Landscaping	0.0389	0.0146	1.2500	7.0000e-005		6.7900e-003	6.7900e-003		6.7900e-003	6.7900e-003		2.2283	2.2283	2.2400e-003		2.2753
Architectural Coating	0.0693					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**6.8794**	**0.8597**	**45.3654**	**0.1691**		**8.6270**	**8.6270**		**8.6270**	**8.6270**	**1,247.4000**	**2.2283**	**1,249.6283**	**4.9040**	**0.0000**	**1,352.6111**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Ashton Place

Yolo/Solano AQMD Air District, Winter Defaults changed to have 100% Paved Roads

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	15.00	Dwelling Unit	1.76	20,223.00	43

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - site plan

Construction Phase - based on applicant provided schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT - Assumed mobilization/demobilization of equipment required an average of 1 truck per 2 pieces of equipment

Grading - site acreage

Vehicle Trips - Based on Traffic Study

Woodstoves - assumed EPA certified wood burning devices

Water And Wastewater - based on UWMP

Road Dust - assumed 100

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	213.00
tblFireplaces	NumberNoFireplace	10.35	0.00
tblFireplaces	NumberWood	4.65	0.00
tblGrading	AcresOfGrading	1.50	1.76
tblLandUse	LandUseSquareFeet	27,000.00	20,223.00
tblLandUse	LotAcreage	4.87	1.76
tblProjectCharacteristics	OperationalYear	2014	2017
tblRoadDust	RoadPercentPave	94	100
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblVehicleTrips	ST_TR	10.08	12.20
tblVehicleTrips	SU_TR	8.77	12.20
tblVehicleTrips	WD_TR	9.57	12.20
tblWater	IndoorWaterUseRate	977,310.38	2,098,740.38
tblWoodstoves	NumberCatalytic	0.38	15.00
tblWoodstoves	NumberNoncatalytic	0.38	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Year	lb/day										lb/day					
2017	3.0016	24.7488	17.0408	0.0229	17.0573	1.3141	18.3714	4.0932	1.2090	5.3022	0.0000	2,120.9147	2,120.9147	0.5414	0.0000	2,132.2831
2018	25.6195	17.5018	14.4542	0.0229	13.2127	1.0561	13.8175	1.3364	1.0198	1.8937	0.0000	2,105.7526	2,105.7526	0.4106	0.0000	2,114.3746
Total	**28.6211**	**42.2506**	**31.4950**	**0.0458**	**30.2700**	**2.3702**	**32.1889**	**5.4296**	**2.2288**	**7.1959**	**0.0000**	**4,226.6673**	**4,226.6673**	**0.9519**	**0.0000**	**4,246.6578**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	3.0016	24.7488	17.0408	0.0229	5.8952	1.3141	7.2094	2.9795	1.2090	4.1885	0.0000	2,120.9147	2,120.9147	0.5414	0.0000	2,132.2831
2018	25.6195	17.5018	14.4542	0.0229	0.1079	1.0561	1.1099	0.0288	1.0198	1.0344	0.0000	2,105.7526	2,105.7526	0.4106	0.0000	2,114.3746
Total	**28.6211**	**42.2506**	**31.4950**	**0.0458**	**6.0031**	**2.3702**	**8.3193**	**3.0083**	**2.2288**	**5.2229**	**0.0000**	**4,226.6673**	**4,226.6673**	**0.9519**	**0.0000**	**4,246.6578**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**80.17**	**0.00**	**74.15**	**44.59**	**0.00**	**27.42**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.8794	0.8597	45.3654	0.1691		8.6270	8.6270		8.6270	8.6270	1,247.4000	2.2283	1,249.6283	4.9039	0.0000	1,352.6111

Energy	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108		170.5864	170.5864	3.2700e-003	3.1300e-003	171.6246
Mobile	0.8797	2.6532	11.1398	0.0173	1.1179	0.0335	1.1513	0.2993	0.0308	0.3300		1,492.3082	1,492.3082	0.0604		1,493.5768
Total	**7.7748**	**3.6465**	**56.5620**	**0.1872**	**1.1179**	**8.6713**	**9.7892**	**0.2993**	**8.6686**	**8.9679**	**1,247.4000**	**1,665.1229**	**2,912.5229**	**4.9676**	**3.1300e-003**	**3,017.8124**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.8794	0.8597	45.3654	0.1691		8.6270	8.6270		8.6270	8.6270	1,247.4000	2.2283	1,249.6283	4.9039	0.0000	1,352.6111
Energy	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108		170.5864	170.5864	3.2700e-003	3.1300e-003	171.6246
Mobile	0.8797	2.6532	11.1398	0.0173	1.1179	0.0335	1.1513	0.2993	0.0308	0.3300		1,492.3082	1,492.3082	0.0604		1,493.5768
Total	**7.7748**	**3.6465**	**56.5620**	**0.1872**	**1.1179**	**8.6713**	**9.7892**	**0.2993**	**8.6686**	**8.9679**	**1,247.4000**	**1,665.1229**	**2,912.5229**	**4.9676**	**3.1300e-003**	**3,017.8124**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/3/2017	4/4/2017	5	2	
2	Grading	Grading	4/5/2017	4/10/2017	5	4	
3	Building Construction	Building Construction	4/11/2017	2/1/2018	5	213	
4	Paving	Paving	2/2/2018	2/15/2018	5	10	

5	Architectural Coating	Architectural Coating	2/16/2018	3/1/2018	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.76

Acres of Paving: 0

Residential Indoor: 40,952; Residential Outdoor: 13,651; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class

Site Preparation	3	8.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	5.00	2.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.3109	24.2288	15.9299	0.0171		1.3067	1.3067		1.2022	1.2022		1,752.1239	1,752.1239	0.5369		1,763.3977
Total	**2.3109**	**24.2288**	**15.9299**	**0.0171**	**5.7996**	**1.3067**	**7.1063**	**2.9537**	**1.2022**	**4.1559**		**1,752.1239**	**1,752.1239**	**0.5369**		**1,763.3977**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0526	0.4777	0.7361	1.4900e-003	3.5656	6.9300e-003	3.5726	0.3616	6.3700e-003	0.3680		147.7429	147.7429	1.0200e-003		147.7643
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0262	0.0424	0.3749	7.7000e-004	7.6920	4.8000e-004	7.6925	0.7779	4.4000e-004	0.7783		61.2578	61.2578	3.4900e-003		61.3310
Total	**0.0787**	**0.5200**	**1.1109**	**2.2600e-003**	**11.2577**	**7.4100e-003**	**11.2651**	**1.1395**	**6.8100e-003**	**1.1463**		**209.0007**	**209.0007**	**4.5100e-003**		**209.0953**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.3109	24.2288	15.9299	0.0171		1.3067	1.3067		1.2022	1.2022	0.0000	1,752.1239	1,752.1239	0.5369		1,763.3977
Total	**2.3109**	**24.2288**	**15.9299**	**0.0171**	**5.7996**	**1.3067**	**7.1063**	**2.9537**	**1.2022**	**4.1559**	**0.0000**	**1,752.1239**	**1,752.1239**	**0.5369**		**1,763.3977**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0526	0.4777	0.7361	1.4900e-003	0.0334	6.9300e-003	0.0403	9.1800e-003	6.3700e-003	0.0156		147.7429	147.7429	1.0200e-003		147.7643
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0262	0.0424	0.3749	7.7000e-004	0.0623	4.8000e-004	0.0628	0.0166	4.4000e-004	0.0170		61.2578	61.2578	3.4900e-003		61.3310
Total	**0.0787**	**0.5200**	**1.1109**	**2.2600e-003**	**0.0956**	**7.4100e-003**	**0.1031**	**0.0258**	**6.8100e-003**	**0.0326**		**209.0007**	**209.0007**	**4.5100e-003**		**209.0953**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9832	0.0000	4.9832	2.5331	0.0000	2.5331			0.0000			0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808		1,439.1894	1,439.1894	0.4410		1,448.4496
Total	**1.8844**	**19.7889**	**13.1786**	**0.0141**	**4.9832**	**1.0661**	**6.0493**	**2.5331**	**0.9808**	**3.5139**		**1,439.1894**	**1,439.1894**	**0.4410**		**1,448.4496**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0263	0.2388	0.3680	7.5000e-004	1.7828	3.4600e-003	1.7863	0.1808	3.1900e-003	0.1840		73.8715	73.8715	5.1000e-004		73.8821
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0262	0.0424	0.3749	7.7000e-004	7.6920	4.8000e-004	7.6925	0.7779	4.4000e-004	0.7783		61.2578	61.2578	3.4900e-003		61.3310
Total	**0.0525**	**0.2812**	**0.7429**	**1.5200e-003**	**9.4749**	**3.9400e-003**	**9.4788**	**0.9587**	**3.6300e-003**	**0.9623**		**135.1292**	**135.1292**	**4.0000e-003**		**135.2132**

Mitigated Construction On-Site

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

Fugitive Dust					4.9832	0.0000	4.9832	2.5331	0.0000	2.5331			0.0000			0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808	0.0000	1,439.1894	1,439.1894	0.4410		1,448.4496
Total	**1.8844**	**19.7889**	**13.1786**	**0.0141**	**4.9832**	**1.0661**	**6.0493**	**2.5331**	**0.9808**	**3.5139**	**0.0000**	**1,439.1894**	**1,439.1894**	**0.4410**		**1,448.4496**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0263	0.2388	0.3680	7.5000e-004	0.0167	3.4600e-003	0.0201	4.5900e-003	3.1900e-003	7.7800e-003		73.8715	73.8715	5.1000e-004		73.8821
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0262	0.0424	0.3749	7.7000e-004	0.0623	4.8000e-004	0.0628	0.0166	4.4000e-004	0.0170		61.2578	61.2578	3.4900e-003		61.3310
Total	**0.0525**	**0.2812**	**0.7429**	**1.5200e-003**	**0.0790**	**3.9400e-003**	**0.0829**	**0.0212**	**3.6300e-003**	**0.0248**		**135.1292**	**135.1292**	**4.0000e-003**		**135.2132**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823		2,034.2860	2,034.2860	0.4268		2,043.2497
Total	**2.9546**	**19.1088**	**14.3110**	**0.0220**		**1.2257**	**1.2257**		**1.1823**	**1.1823**		**2,034.2860**	**2,034.2860**	**0.4268**		**2,043.2497**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.9000e-004	4.4900e-003	6.9100e-003	1.0000e-005	0.0377	7.0000e-005	0.0378	3.8200e-003	6.0000e-005	3.8800e-003		1.3873	1.3873	1.0000e-005		1.3875
Vendor	0.0302	0.1744	0.4284	4.8000e-004	1.3021	2.7000e-003	1.3048	0.1323	2.4800e-003	0.1348		46.9553	46.9553	3.7000e-004		46.9630
Worker	0.0164	0.0265	0.2343	4.8000e-004	4.8075	3.0000e-004	4.8078	0.4862	2.7000e-004	0.4865		38.2861	38.2861	2.1800e-003		38.3319
Total	**0.0470**	**0.2053**	**0.6696**	**9.7000e-004**	**6.1473**	**3.0700e-003**	**6.1504**	**0.6223**	**2.8100e-003**	**0.6251**		**86.6287**	**86.6287**	**2.5600e-003**		**86.6824**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823	0.0000	2,034.2860	2,034.2860	0.4268		2,043.2497
Total	**2.9546**	**19.1088**	**14.3110**	**0.0220**		**1.2257**	**1.2257**		**1.1823**	**1.1823**	**0.0000**	**2,034.2860**	**2,034.2860**	**0.4268**		**2,043.2497**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	4.9000e-004	4.4900e-003	6.9100e-003	1.0000e-005	3.4000e-004	7.0000e-005	4.1000e-004	9.0000e-005	6.0000e-005	1.5000e-004		1.3873	1.3873	1.0000e-005		1.3875
Vendor	0.0302	0.1744	0.4284	4.8000e-004	0.0128	2.7000e-003	0.0155	3.6800e-003	2.4800e-003	6.1600e-003		46.9553	46.9553	3.7000e-004		46.9630
Worker	0.0164	0.0265	0.2343	4.8000e-004	0.0389	3.0000e-004	0.0392	0.0104	2.7000e-004	0.0106		38.2861	38.2861	2.1800e-003		38.3319
Total	**0.0470**	**0.2053**	**0.6696**	**9.7000e-004**	**0.0521**	**3.0700e-003**	**0.0551**	**0.0141**	**2.8100e-003**	**0.0170**		**86.6287**	**86.6287**	**2.5600e-003**		**86.6824**

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5826	17.3173	13.8357	0.0220		1.0532	1.0532		1.0172	1.0172		2,021.4136	2,021.4136	0.4059		2,029.9373
Total	**2.5826**	**17.3173**	**13.8357**	**0.0220**		**1.0532**	**1.0532**		**1.0172**	**1.0172**		**2,021.4136**	**2,021.4136**	**0.4059**		**2,029.9373**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.5000e-004	4.0000e-003	6.5800e-003	1.0000e-005	0.2965	6.0000e-005	0.2966	0.0299	6.0000e-005	0.0300		1.3629	1.3629	1.0000e-005		1.3631
Vendor	0.0264	0.1566	0.4027	4.8000e-004	1.3021	2.4800e-003	1.3046	0.1323	2.2800e-003	0.1346		46.1307	46.1307	3.6000e-004		46.1382
Worker	0.0145	0.0240	0.2093	4.8000e-004	4.8075	2.9000e-004	4.8078	0.4862	2.7000e-004	0.4865		36.8454	36.8454	2.0200e-003		36.8878

Total	**0.0413**	**0.1846**	**0.6185**	**9.7000e-004**	**6.4061**	**2.8300e-003**	**6.4090**	**0.6484**	**2.6100e-003**	**0.6510**		**84.3390**	**84.3390**	**2.3900e-003**		**84.3891**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5826	17.3173	13.8357	0.0220		1.0532	1.0532		1.0172	1.0172	0.0000	2,021.4136	2,021.4136	0.4059		2,029.9373
Total	**2.5826**	**17.3173**	**13.8357**	**0.0220**		**1.0532**	**1.0532**		**1.0172**	**1.0172**	**0.0000**	**2,021.4136**	**2,021.4136**	**0.4059**		**2,029.9373**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.5000e-004	4.0000e-003	6.5800e-003	1.0000e-005	2.1500e-003	6.0000e-005	2.2100e-003	5.4000e-004	6.0000e-005	6.0000e-004		1.3629	1.3629	1.0000e-005		1.3631
Vendor	0.0264	0.1566	0.4027	4.8000e-004	0.0128	2.4800e-003	0.0153	3.6800e-003	2.2800e-003	5.9700e-003		46.1307	46.1307	3.6000e-004		46.1382
Worker	0.0145	0.0240	0.2093	4.8000e-004	0.0389	2.9000e-004	0.0392	0.0104	2.7000e-004	0.0106		36.8454	36.8454	2.0200e-003		36.8878
Total	**0.0413**	**0.1846**	**0.6185**	**9.7000e-004**	**0.0539**	**2.8300e-003**	**0.0567**	**0.0146**	**2.6100e-003**	**0.0172**		**84.3390**	**84.3390**	**2.3900e-003**		**84.3891**

3.5 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0052	10.3081	8.8698	0.0133		0.6027	0.6027		0.5553	0.5553		1,326.5758	1,326.5758	0.4051		1,335.0833
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0052**	**10.3081**	**8.8698**	**0.0133**		**0.6027**	**0.6027**		**0.5553**	**0.5553**		**1,326.5758**	**1,326.5758**	**0.4051**		**1,335.0833**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.4900e-003	0.0853	0.1402	3.0000e-004	0.7131	1.3500e-003	0.7145	0.0723	1.2500e-003	0.0736		29.0303	29.0303	2.0000e-004		29.0345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0376	0.0624	0.5440	1.2500e-003	12.4996	7.6000e-004	12.5003	1.2641	7.0000e-004	1.2648		95.7980	95.7980	5.2500e-003		95.9083
Total	**0.0471**	**0.1476**	**0.6842**	**1.5500e-003**	**13.2127**	**2.1100e-003**	**13.2148**	**1.3364**	**1.9500e-003**	**1.3383**		**124.8283**	**124.8283**	**5.4500e-003**		**124.9429**

Mitigated Construction On-Site

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

Off-Road	1.0052	10.3081	8.8698	0.0133		0.6027	0.6027		0.5553	0.5553	0.0000	1,326.5758	1,326.5758	0.4051		1,335.0833
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0052**	**10.3081**	**8.8698**	**0.0133**		**0.6027**	**0.6027**		**0.5553**	**0.5553**	**0.0000**	**1,326.5758**	**1,326.5758**	**0.4051**		**1,335.0833**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.4900e-003	0.0853	0.1402	3.0000e-004	6.6700e-003	1.3500e-003	8.0200e-003	1.8400e-003	1.2500e-003	3.0800e-003		29.0303	29.0303	2.0000e-004		29.0345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0376	0.0624	0.5440	1.2500e-003	0.1012	7.6000e-004	0.1020	0.0270	7.0000e-004	0.0277		95.7980	95.7980	5.2500e-003		95.9083
Total	**0.0471**	**0.1476**	**0.6842**	**1.5500e-003**	**0.1079**	**2.1100e-003**	**0.1100**	**0.0288**	**1.9500e-003**	**0.0307**		**124.8283**	**124.8283**	**5.4500e-003**		**124.9429**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	25.3085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**25.6071**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.4900e-003	0.0853	0.1402	3.0000e-004	0.7131	1.3500e-003	0.7145	0.0723	1.2500e-003	0.0736		29.0303	29.0303	2.0000e-004		29.0345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	2.8900e-003	4.8000e-003	0.0419	1.0000e-004	0.9615	6.0000e-005	0.9616	0.0972	5.0000e-005	0.0973		7.3691	7.3691	4.0000e-004		7.3776
Total	**0.0124**	**0.0901**	**0.1820**	**4.0000e-004**	**1.6746**	**1.4100e-003**	**1.6760**	**0.1696**	**1.3000e-003**	**0.1709**		**36.3994**	**36.3994**	**6.0000e-004**		**36.4121**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	25.3085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**25.6071**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	9.4900e-003	0.0853	0.1402	3.0000e-004	6.6700e-003	1.3500e-003	8.0200e-003	1.8400e-003	1.2500e-003	3.0800e-003		29.0303	29.0303	2.0000e-004		29.0345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	2.8900e-003	4.8000e-003	0.0419	1.0000e-004	7.7900e-003	6.0000e-005	7.8400e-003	2.0700e-003	5.0000e-005	2.1300e-003		7.3691	7.3691	4.0000e-004		7.3776
Total	**0.0124**	**0.0901**	**0.1820**	**4.0000e-004**	**0.0145**	**1.4100e-003**	**0.0159**	**3.9100e-003**	**1.3000e-003**	**5.2100e-003**		**36.3994**	**36.3994**	**6.0000e-004**		**36.4121**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8797	2.6532	11.1398	0.0173	1.1179	0.0335	1.1513	0.2993	0.0308	0.3300		1,492.3082	1,492.3082	0.0604		1,493.5768
Unmitigated	0.8797	2.6532	11.1398	0.0173	1.1179	0.0335	1.1513	0.2993	0.0308	0.3300		1,492.3082	1,492.3082	0.0604		1,493.5768

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	183.00	183.00	183.00	524,211	524,211
Total	183.00	183.00	183.00	524,211	524,211

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711	0.054898	0.001011	0.001367	0.008332	0.000508	0.002928

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108		170.5864	170.5864	3.2700e-003	3.1300e-003	171.6246
NaturalGas Unmitigated	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108		170.5864	170.5864	3.2700e-003	3.1300e-003	171.6246

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	1449.98	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108		170.5864	170.5864	3.2700e-003	3.1300e-003	171.6246

Total		**0.0156**	**0.1336**	**0.0569**	**8.5000e-004**		**0.0108**	**0.0108**		**0.0108**	**0.0108**		**170.5864**	**170.5864**	**3.2700e-003**	**3.1300e-003**	**171.6246**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	1.44998	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108		170.5864	170.5864	3.2700e-003	3.1300e-003	171.6246
Total		**0.0156**	**0.1336**	**0.0569**	**8.5000e-004**		**0.0108**	**0.0108**		**0.0108**	**0.0108**		**170.5864**	**170.5864**	**3.2700e-003**	**3.1300e-003**	**171.6246**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.8794	0.8597	45.3654	0.1691		8.6270	8.6270		8.6270	8.6270	1,247.4000	2.2283	1,249.6283	4.9039	0.0000	1,352.6111
Unmitigated	6.8794	0.8597	45.3654	0.1691		8.6270	8.6270		8.6270	8.6270	1,247.4000	2.2283	1,249.6283	4.9039	0.0000	1,352.6111

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0693					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4328					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	6.3384	0.8451	44.1154	0.1690		8.6202	8.6202		8.6202	8.6202	1,247.4000	0.0000	1,247.4000	4.9017	0.0000	1,350.3359
Landscaping	0.0389	0.0146	1.2500	7.0000e-005		6.7900e-003	6.7900e-003		6.7900e-003	6.7900e-003		2.2283	2.2283	2.2400e-003		2.2753
Total	**6.8794**	**0.8597**	**45.3654**	**0.1691**		**8.6270**	**8.6270**		**8.6270**	**8.6270**	**1,247.4000**	**2.2283**	**1,249.6283**	**4.9040**	**0.0000**	**1,352.6111**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	0.4328					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	6.3384	0.8451	44.1154	0.1690		8.6202	8.6202		8.6202	8.6202	1,247.4000	0.0000	1,247.4000	4.9017	0.0000	1,350.3359
Landscaping	0.0389	0.0146	1.2500	7.0000e-005		6.7900e-003	6.7900e-003		6.7900e-003	6.7900e-003		2.2283	2.2283	2.2400e-003		2.2753
Architectural Coating	0.0693					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**6.8794**	**0.8597**	**45.3654**	**0.1691**		**8.6270**	**8.6270**		**8.6270**	**8.6270**	**1,247.4000**	**2.2283**	**1,249.6283**	**4.9040**	**0.0000**	**1,352.6111**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Ashton Place

Yolo/Solano AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	15.00	Dwelling Unit	1.76	20,223.00	43

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - site plan

Construction Phase - based on applicant provided schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT - Assumed mobilization/demobilization of equipment required an average of 1 truck per 2 pieces of equipment

Grading - site acreage

Vehicle Trips - Based on Traffic Study

Woodstoves - assumed EPA certified wood burning devices

Water And Wastewater - based on UWMP

Road Dust -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	213.00
tblFireplaces	NumberNoFireplace	10.35	0.00
tblFireplaces	NumberWood	4.65	0.00
tblGrading	AcresOfGrading	1.50	1.76
tblLandUse	LandUseSquareFeet	27,000.00	20,223.00
tblLandUse	LotAcreage	4.87	1.76
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblVehicleTrips	ST_TR	10.08	12.20
tblVehicleTrips	SU_TR	8.77	12.20
tblVehicleTrips	WD_TR	9.57	12.20
tblWater	IndoorWaterUseRate	977,310.38	2,098,740.38
tblWoodstoves	NumberCatalytic	0.38	15.00
tblWoodstoves	NumberNoncatalytic	0.38	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					

2017	2.9957	24.7048	16.7743	0.0230	17.0573	1.3141	18.3714	4.0932	1.2090	5.3022	0.0000	2,126.0775	2,126.0775	0.5413	0.0000	2,137.4455
2018	25.6180	17.4866	14.2869	0.0230	13.2127	1.0560	13.8175	1.3364	1.0198	1.8936	0.0000	2,110.7349	2,110.7349	0.4106	0.0000	2,119.3569
Total	**28.6137**	**42.1914**	**31.0612**	**0.0460**	**30.2700**	**2.3702**	**32.1888**	**5.4296**	**2.2288**	**7.1959**	**0.0000**	**4,236.8124**	**4,236.8124**	**0.9519**	**0.0000**	**4,256.8024**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	2.9957	24.7048	16.7743	0.0230	5.8952	1.3141	7.2093	2.9795	1.2090	4.1885	0.0000	2,126.0775	2,126.0775	0.5413	0.0000	2,137.4455
2018	25.6180	17.4866	14.2869	0.0230	0.1079	1.0560	1.1099	0.0288	1.0198	1.0344	0.0000	2,110.7349	2,110.7349	0.4106	0.0000	2,119.3569
Total	**28.6137**	**42.1914**	**31.0612**	**0.0460**	**6.0031**	**2.3702**	**8.3192**	**3.0083**	**2.2288**	**5.2228**	**0.0000**	**4,236.8124**	**4,236.8124**	**0.9519**	**0.0000**	**4,256.8024**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**80.17**	**0.00**	**74.15**	**44.59**	**0.00**	**27.42**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.8794	0.8597	45.3654	0.1691		8.6270	8.6270		8.6270	8.6270	1,247.4000	2.2283	1,249.6283	4.9039	0.0000	1,352.6111
Energy	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108		170.5864	170.5864	3.2700e-003	3.1300e-003	171.6246

Mobile	0.8567	2.3587	9.4787	0.0187	65.3809	0.0333	65.4142	6.6893	0.0306	6.7199		1,611.9966	1,611.9966	0.0603		1,613.2633
Total	**7.7517**	**3.3521**	**54.9009**	**0.1887**	**65.3809**	**8.6711**	**74.0520**	**6.6893**	**8.6684**	**15.3577**	**1,247.4000**	**1,784.8113**	**3,032.2113**	**4.9675**	**3.1300e-003**	**3,137.4990**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.8794	0.8597	45.3654	0.1691		8.6270	8.6270		8.6270	8.6270	1,247.4000	2.2283	1,249.6283	4.9039	0.0000	1,352.6111
Energy	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108		170.5864	170.5864	3.2700e-003	3.1300e-003	171.6246
Mobile	0.8567	2.3587	9.4787	0.0187	65.3809	0.0333	65.4142	6.6893	0.0306	6.7199		1,611.9966	1,611.9966	0.0603		1,613.2633
Total	**7.7517**	**3.3521**	**54.9009**	**0.1887**	**65.3809**	**8.6711**	**74.0520**	**6.6893**	**8.6684**	**15.3577**	**1,247.4000**	**1,784.8113**	**3,032.2113**	**4.9675**	**3.1300e-003**	**3,137.4990**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/3/2017	4/4/2017	5	2	
2	Grading	Grading	4/5/2017	4/10/2017	5	4	
3	Building Construction	Building Construction	4/11/2017	2/1/2018	5	213	
4	Paving	Paving	2/2/2018	2/15/2018	5	10	
5	Architectural Coating	Architectural Coating	2/16/2018	3/1/2018	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.76

Acres of Paving: 0

Residential Indoor: 40,952; Residential Outdoor: 13,651; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Grading	3	8.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	5.00	2.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.3109	24.2288	15.9299	0.0171		1.3067	1.3067		1.2022	1.2022		1,752.1239	1,752.1239	0.5369		1,763.3977
Total	**2.3109**	**24.2288**	**15.9299**	**0.0171**	**5.7996**	**1.3067**	**7.1063**	**2.9537**	**1.2022**	**4.1559**		**1,752.1239**	**1,752.1239**	**0.5369**		**1,763.3977**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0414	0.4425	0.4397	1.4900e-003	3.5656	6.9100e-003	3.5726	0.3616	6.3500e-003	0.3680		148.0905	148.0905	1.0000e-003		148.1115
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0291	0.0335	0.4047	8.7000e-004	7.6920	4.8000e-004	7.6925	0.7779	4.4000e-004	0.7783		68.9383	68.9383	3.4900e-003		69.0116

Total	**0.0705**	**0.4760**	**0.8444**	**2.3600e-003**	**11.2577**	**7.3900e-003**	**11.2651**	**1.1395**	**6.7900e-003**	**1.1463**		**217.0289**	**217.0289**	**4.4900e-003**		**217.1231**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.3109	24.2288	15.9299	0.0171		1.3067	1.3067		1.2022	1.2022	0.0000	1,752.1239	1,752.1239	0.5369		1,763.3977
Total	**2.3109**	**24.2288**	**15.9299**	**0.0171**	**5.7996**	**1.3067**	**7.1063**	**2.9537**	**1.2022**	**4.1559**	**0.0000**	**1,752.1239**	**1,752.1239**	**0.5369**		**1,763.3977**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0414	0.4425	0.4397	1.4900e-003	0.0334	6.9100e-003	0.0403	9.1800e-003	6.3500e-003	0.0155		148.0905	148.0905	1.0000e-003		148.1115
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0291	0.0335	0.4047	8.7000e-004	0.0623	4.8000e-004	0.0628	0.0166	4.4000e-004	0.0170		68.9383	68.9383	3.4900e-003		69.0116
Total	**0.0705**	**0.4760**	**0.8444**	**2.3600e-003**	**0.0956**	**7.3900e-003**	**0.1030**	**0.0258**	**6.7900e-003**	**0.0326**		**217.0289**	**217.0289**	**4.4900e-003**		**217.1231**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9832	0.0000	4.9832	2.5331	0.0000	2.5331			0.0000			0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808		1,439.1894	1,439.1894	0.4410		1,448.4496
Total	**1.8844**	**19.7889**	**13.1786**	**0.0141**	**4.9832**	**1.0661**	**6.0493**	**2.5331**	**0.9808**	**3.5139**		**1,439.1894**	**1,439.1894**	**0.4410**		**1,448.4496**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0207	0.2213	0.2199	7.5000e-004	1.7828	3.4500e-003	1.7863	0.1808	3.1800e-003	0.1840		74.0453	74.0453	5.0000e-004		74.0558
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0291	0.0335	0.4047	8.7000e-004	7.6920	4.8000e-004	7.6925	0.7779	4.4000e-004	0.7783		68.9383	68.9383	3.4900e-003		69.0116
Total	**0.0498**	**0.2547**	**0.6245**	**1.6200e-003**	**9.4749**	**3.9300e-003**	**9.4788**	**0.9587**	**3.6200e-003**	**0.9623**		**142.9836**	**142.9836**	**3.9900e-003**		**143.0674**

Mitigated Construction On-Site

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

Fugitive Dust					4.9832	0.0000	4.9832	2.5331	0.0000	2.5331			0.0000			0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808	0.0000	1,439.1894	1,439.1894	0.4410		1,448.4496
Total	**1.8844**	**19.7889**	**13.1786**	**0.0141**	**4.9832**	**1.0661**	**6.0493**	**2.5331**	**0.9808**	**3.5139**	**0.0000**	**1,439.1894**	**1,439.1894**	**0.4410**		**1,448.4496**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0207	0.2213	0.2199	7.5000e-004	0.0167	3.4500e-003	0.0201	4.5900e-003	3.1800e-003	7.7700e-003		74.0453	74.0453	5.0000e-004		74.0558
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0291	0.0335	0.4047	8.7000e-004	0.0623	4.8000e-004	0.0628	0.0166	4.4000e-004	0.0170		68.9383	68.9383	3.4900e-003		69.0116
Total	**0.0498**	**0.2547**	**0.6245**	**1.6200e-003**	**0.0790**	**3.9300e-003**	**0.0829**	**0.0212**	**3.6200e-003**	**0.0248**		**142.9836**	**142.9836**	**3.9900e-003**		**143.0674**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823		2,034.2860	2,034.2860	0.4268		2,043.2497
Total	**2.9546**	**19.1088**	**14.3110**	**0.0220**		**1.2257**	**1.2257**		**1.1823**	**1.1823**		**2,034.2860**	**2,034.2860**	**0.4268**		**2,043.2497**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.9000e-004	4.1600e-003	4.1300e-003	1.0000e-005	0.0377	6.0000e-005	0.0378	3.8200e-003	6.0000e-005	3.8800e-003		1.3905	1.3905	1.0000e-005		1.3907
Vendor	0.0226	0.1632	0.2405	4.8000e-004	1.3021	2.6600e-003	1.3047	0.1323	2.4500e-003	0.1348		47.3144	47.3144	3.6000e-004		47.3219
Worker	0.0182	0.0209	0.2529	5.4000e-004	4.8075	3.0000e-004	4.8078	0.4862	2.7000e-004	0.4865		43.0865	43.0865	2.1800e-003		43.1322
Total	**0.0412**	**0.1883**	**0.4976**	**1.0300e-003**	**6.1473**	**3.0200e-003**	**6.1504**	**0.6223**	**2.7800e-003**	**0.6251**		**91.7914**	**91.7914**	**2.5500e-003**		**91.8449**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823	0.0000	2,034.2860	2,034.2860	0.4268		2,043.2497
Total	**2.9546**	**19.1088**	**14.3110**	**0.0220**		**1.2257**	**1.2257**		**1.1823**	**1.1823**	**0.0000**	**2,034.2860**	**2,034.2860**	**0.4268**		**2,043.2497**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	3.9000e-004	4.1600e-003	4.1300e-003	1.0000e-005	3.4000e-004	6.0000e-005	4.1000e-004	9.0000e-005	6.0000e-005	1.5000e-004		1.3905	1.3905	1.0000e-005		1.3907
Vendor	0.0226	0.1632	0.2405	4.8000e-004	0.0128	2.6600e-003	0.0155	3.6800e-003	2.4500e-003	6.1300e-003		47.3144	47.3144	3.6000e-004		47.3219
Worker	0.0182	0.0209	0.2529	5.4000e-004	0.0389	3.0000e-004	0.0392	0.0104	2.7000e-004	0.0106		43.0865	43.0865	2.1800e-003		43.1322
Total	**0.0412**	**0.1883**	**0.4976**	**1.0300e-003**	**0.0521**	**3.0200e-003**	**0.0551**	**0.0141**	**2.7800e-003**	**0.0169**		**91.7914**	**91.7914**	**2.5500e-003**		**91.8449**

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5826	17.3173	13.8357	0.0220		1.0532	1.0532		1.0172	1.0172		2,021.4136	2,021.4136	0.4059		2,029.9373
Total	**2.5826**	**17.3173**	**13.8357**	**0.0220**		**1.0532**	**1.0532**		**1.0172**	**1.0172**		**2,021.4136**	**2,021.4136**	**0.4059**		**2,029.9373**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.6000e-004	3.7100e-003	3.8400e-003	1.0000e-005	0.2965	6.0000e-005	0.2966	0.0299	6.0000e-005	0.0300		1.3661	1.3661	1.0000e-005		1.3663
Vendor	0.0200	0.1467	0.2194	4.8000e-004	1.3021	2.4500e-003	1.3045	0.1323	2.2500e-003	0.1346		46.4846	46.4846	3.5000e-004		46.4919
Worker	0.0163	0.0190	0.2280	5.4000e-004	4.8075	2.9000e-004	4.8078	0.4862	2.7000e-004	0.4865		41.4706	41.4706	2.0200e-003		41.5130

Total	**0.0366**	**0.1694**	**0.4512**	**1.0300e-003**	**6.4061**	**2.8000e-003**	**6.4089**	**0.6484**	**2.5800e-003**	**0.6510**		**89.3213**	**89.3213**	**2.3800e-003**		**89.3712**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5826	17.3173	13.8357	0.0220		1.0532	1.0532		1.0172	1.0172	0.0000	2,021.4136	2,021.4136	0.4059		2,029.9373
Total	**2.5826**	**17.3173**	**13.8357**	**0.0220**		**1.0532**	**1.0532**		**1.0172**	**1.0172**	**0.0000**	**2,021.4136**	**2,021.4136**	**0.4059**		**2,029.9373**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.6000e-004	3.7100e-003	3.8400e-003	1.0000e-005	2.1500e-003	6.0000e-005	2.2100e-003	5.4000e-004	6.0000e-005	6.0000e-004		1.3661	1.3661	1.0000e-005		1.3663
Vendor	0.0200	0.1467	0.2194	4.8000e-004	0.0128	2.4500e-003	0.0152	3.6800e-003	2.2500e-003	5.9400e-003		46.4846	46.4846	3.5000e-004		46.4919
Worker	0.0163	0.0190	0.2280	5.4000e-004	0.0389	2.9000e-004	0.0392	0.0104	2.7000e-004	0.0106		41.4706	41.4706	2.0200e-003		41.5130
Total	**0.0366**	**0.1694**	**0.4512**	**1.0300e-003**	**0.0539**	**2.8000e-003**	**0.0567**	**0.0146**	**2.5800e-003**	**0.0172**		**89.3213**	**89.3213**	**2.3800e-003**		**89.3712**

3.5 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0052	10.3081	8.8698	0.0133		0.6027	0.6027		0.5553	0.5553		1,326.5758	1,326.5758	0.4051		1,335.0833
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0052**	**10.3081**	**8.8698**	**0.0133**		**0.6027**	**0.6027**		**0.5553**	**0.5553**		**1,326.5758**	**1,326.5758**	**0.4051**		**1,335.0833**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.6000e-003	0.0790	0.0818	3.0000e-004	0.7131	1.3500e-003	0.7145	0.0723	1.2400e-003	0.0736		29.0987	29.0987	2.0000e-004		29.1029
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0423	0.0493	0.5929	1.4100e-003	12.4996	7.6000e-004	12.5003	1.2641	7.0000e-004	1.2648		107.8235	107.8235	5.2500e-003		107.9338
Total	**0.0499**	**0.1283**	**0.6746**	**1.7100e-003**	**13.2127**	**2.1100e-003**	**13.2148**	**1.3364**	**1.9400e-003**	**1.3383**		**136.9222**	**136.9222**	**5.4500e-003**		**137.0367**

Mitigated Construction On-Site

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

Off-Road	1.0052	10.3081	8.8698	0.0133		0.6027	0.6027		0.5553	0.5553	0.0000	1,326.5758	1,326.5758	0.4051		1,335.0833
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0052**	**10.3081**	**8.8698**	**0.0133**		**0.6027**	**0.6027**		**0.5553**	**0.5553**	**0.0000**	**1,326.5758**	**1,326.5758**	**0.4051**		**1,335.0833**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.6000e-003	0.0790	0.0818	3.0000e-004	6.6700e-003	1.3500e-003	8.0200e-003	1.8400e-003	1.2400e-003	3.0800e-003		29.0987	29.0987	2.0000e-004		29.1029
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0423	0.0493	0.5929	1.4100e-003	0.1012	7.6000e-004	0.1020	0.0270	7.0000e-004	0.0277		107.8235	107.8235	5.2500e-003		107.9338
Total	**0.0499**	**0.1283**	**0.6746**	**1.7100e-003**	**0.1079**	**2.1100e-003**	**0.1100**	**0.0288**	**1.9400e-003**	**0.0307**		**136.9222**	**136.9222**	**5.4500e-003**		**137.0367**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	25.3085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**25.6071**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.6000e-003	0.0790	0.0818	3.0000e-004	0.7131	1.3500e-003	0.7145	0.0723	1.2400e-003	0.0736		29.0987	29.0987	2.0000e-004		29.1029
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.2600e-003	3.7900e-003	0.0456	1.1000e-004	0.9615	6.0000e-005	0.9616	0.0972	5.0000e-005	0.0973		8.2941	8.2941	4.0000e-004		8.3026
Total	**0.0109**	**0.0828**	**0.1274**	**4.1000e-004**	**1.6746**	**1.4100e-003**	**1.6760**	**0.1696**	**1.2900e-003**	**0.1709**		**37.3928**	**37.3928**	**6.0000e-004**		**37.4055**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	25.3085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**25.6071**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	7.6000e-003	0.0790	0.0818	3.0000e-004	6.6700e-003	1.3500e-003	8.0200e-003	1.8400e-003	1.2400e-003	3.0800e-003		29.0987	29.0987	2.0000e-004		29.1029
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.2600e-003	3.7900e-003	0.0456	1.1000e-004	7.7900e-003	6.0000e-005	7.8400e-003	2.0700e-003	5.0000e-005	2.1300e-003		8.2941	8.2941	4.0000e-004		8.3026
Total	**0.0109**	**0.0828**	**0.1274**	**4.1000e-004**	**0.0145**	**1.4100e-003**	**0.0159**	**3.9100e-003**	**1.2900e-003**	**5.2100e-003**		**37.3928**	**37.3928**	**6.0000e-004**		**37.4055**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8567	2.3587	9.4787	0.0187	65.3809	0.0333	65.4142	6.6893	0.0306	6.7199		1,611.9966	1,611.9966	0.0603		1,613.2633
Unmitigated	0.8567	2.3587	9.4787	0.0187	65.3809	0.0333	65.4142	6.6893	0.0306	6.7199		1,611.9966	1,611.9966	0.0603		1,613.2633

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	183.00	183.00	183.00	524,211	524,211
Total	183.00	183.00	183.00	524,211	524,211

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711	0.054898	0.001011	0.001367	0.008332	0.000508	0.002928

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108		170.5864	170.5864	3.2700e-003	3.1300e-003	171.6246
NaturalGas Unmitigated	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108		170.5864	170.5864	3.2700e-003	3.1300e-003	171.6246

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	1449.98	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108		170.5864	170.5864	3.2700e-003	3.1300e-003	171.6246

Total		**0.0156**	**0.1336**	**0.0569**	**8.5000e-004**		**0.0108**	**0.0108**		**0.0108**	**0.0108**		**170.5864**	**170.5864**	**3.2700e-003**	**3.1300e-003**	**171.6246**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	1.44998	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108		170.5864	170.5864	3.2700e-003	3.1300e-003	171.6246
Total		**0.0156**	**0.1336**	**0.0569**	**8.5000e-004**		**0.0108**	**0.0108**		**0.0108**	**0.0108**		**170.5864**	**170.5864**	**3.2700e-003**	**3.1300e-003**	**171.6246**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.8794	0.8597	45.3654	0.1691		8.6270	8.6270		8.6270	8.6270	1,247.4000	2.2283	1,249.6283	4.9039	0.0000	1,352.6111
Unmitigated	6.8794	0.8597	45.3654	0.1691		8.6270	8.6270		8.6270	8.6270	1,247.4000	2.2283	1,249.6283	4.9039	0.0000	1,352.6111

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	0.4328					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	6.3384	0.8451	44.1154	0.1690		8.6202	8.6202		8.6202	8.6202	1,247.4000	0.0000	1,247.4000	4.9017	0.0000	1,350.3359
Landscaping	0.0389	0.0146	1.2500	7.0000e-005		6.7900e-003	6.7900e-003		6.7900e-003	6.7900e-003		2.2283	2.2283	2.2400e-003		2.2753
Architectural Coating	0.0693					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**6.8794**	**0.8597**	**45.3654**	**0.1691**		**8.6270**	**8.6270**		**8.6270**	**8.6270**	**1,247.4000**	**2.2283**	**1,249.6283**	**4.9040**	**0.0000**	**1,352.6111**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	0.4328					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	6.3384	0.8451	44.1154	0.1690		8.6202	8.6202		8.6202	8.6202	1,247.4000	0.0000	1,247.4000	4.9017	0.0000	1,350.3359
Landscaping	0.0389	0.0146	1.2500	7.0000e-005		6.7900e-003	6.7900e-003		6.7900e-003	6.7900e-003		2.2283	2.2283	2.2400e-003		2.2753
Architectural Coating	0.0693					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**6.8794**	**0.8597**	**45.3654**	**0.1691**		**8.6270**	**8.6270**		**8.6270**	**8.6270**	**1,247.4000**	**2.2283**	**1,249.6283**	**4.9040**	**0.0000**	**1,352.6111**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

South Town Project

Yolo/Solano AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	1,270.00	Dwelling Unit	412.34	2,286,000.00	3632
Apartments Low Rise	252.00	Dwelling Unit	15.75	252,000.00	721
Condo/Townhouse	75.00	Dwelling Unit	4.69	75,000.00	215

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	550.00	5.00
tblProjectCharacteristics	OperationalYear	2014	2017

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	60.9436	0.8970	77.6284	0.0449		9.4221	9.4221		9.4220	9.4220	932.2614	161.0285	1,093.2899	1.4069	0.0587	1,141.0372
Energy	0.2641	2.2572	0.9605	0.0144		0.1825	0.1825		0.1825	0.1825	0.0000	5,591.2463	5,591.2463	0.1847	0.0758	5,618.6164
Mobile	11.4819	35.8659	135.9438	0.2487	926.6652	0.4725	927.1377	94.7405	0.4345	95.1750	0.0000	19,500.1744	19,500.1744	0.7755	0.0000	19,516.4608
Waste						0.0000	0.0000		0.0000	0.0000	318.0665	0.0000	318.0665	18.7972	0.0000	712.8076
Water						0.0000	0.0000		0.0000	0.0000	33.0106	230.5795	263.5901	3.4009	0.0822	360.4960
Total	**72.6897**	**39.0201**	**214.5327**	**0.3080**	**926.6652**	**10.0770**	**936.7423**	**94.7405**	**10.0390**	**104.7795**	**1,283.3385**	**25,483.0287**	**26,766.3673**	**24.5653**	**0.2167**	**27,349.4180**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	60.9436	0.8970	77.6284	0.0449		9.4221	9.4221		9.4220	9.4220	932.2614	161.0285	1,093.2899	1.4069	0.0587	1,141.0372
Energy	0.2641	2.2572	0.9605	0.0144		0.1825	0.1825		0.1825	0.1825	0.0000	5,591.2463	5,591.2463	0.1847	0.0758	5,618.6164
Mobile	11.2717	34.3633	131.8530	0.2367	880.3320	0.4501	880.7821	90.0035	0.4140	90.4175	0.0000	18,555.1700	18,555.1700	0.7407	0.0000	18,570.7246
Waste						0.0000	0.0000		0.0000	0.0000	318.0665	0.0000	318.0665	18.7972	0.0000	712.8076
Water						0.0000	0.0000		0.0000	0.0000	33.0106	230.5795	263.5901	3.4003	0.0821	360.4433
Total	**72.4795**	**37.5175**	**210.4419**	**0.2959**	**880.3320**	**10.0547**	**890.3867**	**90.0035**	**10.0184**	**100.0219**	**1,283.3385**	**24,538.0243**	**25,821.3628**	**24.5298**	**0.2166**	**26,403.6291**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.29**	**3.85**	**1.91**	**3.90**	**5.00**	**0.22**	**4.95**	**5.00**	**0.20**	**4.54**	**0.00**	**3.71**	**3.53**	**0.14**	**0.06**	**3.46**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Diversity

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	11.2717	34.3633	131.8530	0.2367	880.3320	0.4501	880.7821	90.0035	0.4140	90.4175	0.0000	18,555.1700	18,555.1700	0.7407	0.0000	18,570.7246
Unmitigated	11.4819	35.8659	135.9438	0.2487	926.6652	0.4725	927.1377	94.7405	0.4345	95.1750	0.0000	19,500.1744	19,500.1744	0.7755	0.0000	19,516.4608

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,660.68	1,804.32	1529.64	4,762,245	4,524,133
Condo/Townhouse	494.25	537.00	455.25	1,417,335	1,346,468
Single Family Housing	12,153.90	12,801.60	11137.90	34,664,648	32,931,416
Total	14,308.83	15,142.92	13,122.79	40,844,228	38,802,016

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3
Condo/Townhouse	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3
Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711	0.054898	0.001011	0.001367	0.008332	0.000508	0.002928

Ashton Place - Operational Only with Other 2 acre Parcel

Yolo/Solano AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	26.00	Dwelling Unit	3.76	46,800.00	74

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - site plan plus other 2-acre parcel

Construction Phase - based on applicant provided schedule

Off-road Equipment -

Off-road Equipment -

Trips and VMT - Assumed mobilization/demobilization of equipment required an average of 1 truck per 2 pieces of equipment

Grading - site acreage

Vehicle Trips - Based on Traffic Study

Road Dust -

Woodstoves - assumed EPA certified wood burning devices

Water And Wastewater - based on UWMP

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	8.44	3.76
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblVehicleTrips	ST_TR	10.08	12.20
tblVehicleTrips	SU_TR	8.77	12.20
tblVehicleTrips	WD_TR	9.57	12.20

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5937	9.3100e-003	0.7710	6.1000e-004		0.0848	0.0848		0.0848	0.0848	8.8067	0.3154	9.1220	0.0191	4.2000e-004	9.6543
Energy	4.9500e-003	0.0423	0.0180	2.7000e-004		3.4200e-003	3.4200e-003		3.4200e-003	3.4200e-003	0.0000	102.4512	102.4512	3.3600e-003	1.4000e-003	102.9551
Mobile	0.2554	0.7979	3.0243	5.5300e-003	20.6149	0.0105	20.6254	2.1076	9.6700e-003	2.1173	0.0000	433.8067	433.8067	0.0173	0.0000	434.1690
Waste						0.0000	0.0000		0.0000	0.0000	5.8583	0.0000	5.8583	0.3462	0.0000	13.1289
Water						0.0000	0.0000		0.0000	0.0000	0.5374	3.7540	4.2914	0.0554	1.3400e-003	5.8691
Total	**0.8541**	**0.8495**	**3.8132**	**6.4100e-003**	**20.6149**	**0.0987**	**20.7136**	**2.1076**	**0.0979**	**2.2055**	**15.2024**	**540.3273**	**555.5297**	**0.4413**	**3.1600e-003**	**565.7764**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5937	9.3100e-003	0.7710	6.1000e-004		0.0848	0.0848		0.0848	0.0848	8.8067	0.3154	9.1220	0.0191	4.2000e-004	9.6543

Energy	4.9500e-003	0.0423	0.0180	2.7000e-004		3.4200e-003	3.4200e-003		3.4200e-003	3.4200e-003	0.0000	102.4512	102.4512	3.3600e-003	1.4000e-003	102.9551
Mobile	0.2554	0.7979	3.0243	5.5300e-003	20.6149	0.0105	20.6254	2.1076	9.6700e-003	2.1173	0.0000	433.8067	433.8067	0.0173	0.0000	434.1690
Waste						0.0000	0.0000		0.0000	0.0000	5.8583	0.0000	5.8583	0.3462	0.0000	13.1289
Water						0.0000	0.0000		0.0000	0.0000	0.5374	3.7540	4.2914	0.0554	1.3400e-003	5.8682
Total	**0.8541**	**0.8495**	**3.8132**	**6.4100e-003**	**20.6149**	**0.0987**	**20.7136**	**2.1076**	**0.0979**	**2.2055**	**15.2024**	**540.3273**	**555.5297**	**0.4413**	**3.1600e-003**	**565.7755**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2554	0.7979	3.0243	5.5300e-003	20.6149	0.0105	20.6254	2.1076	9.6700e-003	2.1173	0.0000	433.8067	433.8067	0.0173	0.0000	434.1690
Unmitigated	0.2554	0.7979	3.0243	5.5300e-003	20.6149	0.0105	20.6254	2.1076	9.6700e-003	2.1173	0.0000	433.8067	433.8067	0.0173	0.0000	434.1690

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	317.20	317.20	317.20	908,633	908,633
Total	317.20	317.20	317.20	908,633	908,633

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711	0.054898	0.001011	0.001367	0.008332	0.000508	0.002928

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	53.4976	53.4976	2.4200e-003	5.0000e-004	53.7035
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	53.4976	53.4976	2.4200e-003	5.0000e-004	53.7035
NaturalGas Mitigated	4.9500e-003	0.0423	0.0180	2.7000e-004		3.4200e-003	3.4200e-003		3.4200e-003	3.4200e-003	0.0000	48.9537	48.9537	9.4000e-004	9.0000e-004	49.2516
NaturalGas Unmitigated	4.9500e-003	0.0423	0.0180	2.7000e-004		3.4200e-003	3.4200e-003		3.4200e-003	3.4200e-003	0.0000	48.9537	48.9537	9.4000e-004	9.0000e-004	49.2516

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	917357	4.9500e-003	0.0423	0.0180	2.7000e-004		3.4200e-003	3.4200e-003		3.4200e-003	3.4200e-003	0.0000	48.9537	48.9537	9.4000e-004	9.0000e-004	49.2516
Total		**4.9500e-003**	**0.0423**	**0.0180**	**2.7000e-004**		**3.4200e-003**	**3.4200e-003**		**3.4200e-003**	**3.4200e-003**	**0.0000**	**48.9537**	**48.9537**	**9.4000e-004**	**9.0000e-004**	**49.2516**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	917357	4.9500e-003	0.0423	0.0180	2.7000e-004		3.4200e-003	3.4200e-003		3.4200e-003	3.4200e-003	0.0000	48.9537	48.9537	9.4000e-004	9.0000e-004	49.2516
Total		**4.9500e-003**	**0.0423**	**0.0180**	**2.7000e-004**		**3.4200e-003**	**3.4200e-003**		**3.4200e-003**	**3.4200e-003**	**0.0000**	**48.9537**	**48.9537**	**9.4000e-004**	**9.0000e-004**	**49.2516**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	183896	53.4976	2.4200e-003	5.0000e-004	53.7035
Total		**53.4976**	**2.4200e-003**	**5.0000e-004**	**53.7035**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	183896	53.4976	2.4200e-003	5.0000e-004	53.7035
Total		**53.4976**	**2.4200e-003**	**5.0000e-004**	**53.7035**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5937	9.3100e-003	0.7710	6.1000e-004		0.0848	0.0848		0.0848	0.0848	8.8067	0.3154	9.1220	0.0191	4.2000e-004	9.6543
Unmitigated	0.5937	9.3100e-003	0.7710	6.1000e-004		0.0848	0.0848		0.0848	0.0848	8.8067	0.3154	9.1220	0.0191	4.2000e-004	9.6543

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0293					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1828					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.3756	7.0400e-003	0.5760	6.0000e-004		0.0837	0.0837		0.0837	0.0837	8.8067	0.0000	8.8067	0.0188	4.2000e-004	9.3323
Landscaping	6.0700e-003	2.2700e-003	0.1950	1.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003	0.0000	0.3154	0.3154	3.2000e-004	0.0000	0.3220
Total	**0.5937**	**9.3100e-003**	**0.7710**	**6.1000e-004**		**0.0848**	**0.0848**		**0.0848**	**0.0848**	**8.8067**	**0.3154**	**9.1220**	**0.0191**	**4.2000e-004**	**9.6543**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0293					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1828					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.3756	7.0400e-003	0.5760	6.0000e-004		0.0837	0.0837		0.0837	0.0837	8.8067	0.0000	8.8067	0.0188	4.2000e-004	9.3323
Landscaping	6.0700e-003	2.2700e-003	0.1950	1.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003	0.0000	0.3154	0.3154	3.2000e-004	0.0000	0.3220
Total	**0.5937**	**9.3100e-003**	**0.7710**	**6.1000e-004**		**0.0848**	**0.0848**		**0.0848**	**0.0848**	**8.8067**	**0.3154**	**9.1220**	**0.0191**	**4.2000e-004**	**9.6543**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.2914	0.0554	1.3400e-003	5.8682
Unmitigated	4.2914	0.0554	1.3400e-003	5.8691

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	1.694 / 1.06796	4.2914	0.0554	1.3400e-003	5.8691
Total		**4.2914**	**0.0554**	**1.3400e-003**	**5.8691**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	1.694 / 1.06796	4.2914	0.0554	1.3400e-003	5.8682

Total		**4.2914**	**0.0554**	**1.3400e-003**	**5.8682**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	5.8583	0.3462	0.0000	13.1289
Mitigated	5.8583	0.3462	0.0000	13.1289

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	28.86	5.8583	0.3462	0.0000	13.1289
Total		**5.8583**	**0.3462**	**0.0000**	**13.1289**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	28.86	5.8583	0.3462	0.0000	13.1289
Total		**5.8583**	**0.3462**	**0.0000**	**13.1289**

9.0 Operational Offroad

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

10.0 Vegetation

Ashton Place - Operational Only with Other 2 acre Parcel

Yolo/Solano AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	32.00	Dwelling Unit	3.76	57,600.00	92

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - site plan plus other 2-acre parcel

Construction Phase - based on applicant provided schedule

Off-road Equipment -

Off-road Equipment -

Trips and VMT - Assumed mobilization/demobilization of equipment required an average of 1 truck per 2 pieces of equipment

Grading - site acreage

Vehicle Trips - Based on Traffic Study

Road Dust -

Woodstoves - assumed EPA certified wood burning devices

Water And Wastewater - based on UWMP

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	10.39	3.76
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblVehicleTrips	ST_TR	10.08	12.20
tblVehicleTrips	SU_TR	8.77	12.20
tblVehicleTrips	WD_TR	9.57	12.20

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6373	9.8300e-003	0.8160	6.1000e-004		0.0850	0.0850		0.0850	0.0850	8.8067	0.3881	9.1948	0.0192	4.2000e-004	9.7286
Energy	6.0900e-003	0.0520	0.0221	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	126.0938	126.0938	4.1300e-003	1.7200e-003	126.7140
Mobile	0.3144	0.9820	3.7222	6.8100e-003	25.3722	0.0129	25.3851	2.5940	0.0119	2.6059	0.0000	533.9160	533.9160	0.0212	0.0000	534.3619
Waste						0.0000	0.0000		0.0000	0.0000	5.8583	0.0000	5.8583	0.3462	0.0000	13.1289
Water						0.0000	0.0000		0.0000	0.0000	0.5374	3.7540	4.2914	0.0554	1.3400e-003	5.8691
Total	**0.9578**	**1.0439**	**4.5603**	**7.7500e-003**	**25.3722**	**0.1022**	**25.4743**	**2.5940**	**0.1011**	**2.6951**	**15.2024**	**664.1519**	**679.3543**	**0.4461**	**3.4800e-003**	**689.8024**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6373	9.8300e-003	0.8160	6.1000e-004		0.0850	0.0850		0.0850	0.0850	8.8067	0.3881	9.1948	0.0192	4.2000e-004	9.7286

Energy	6.0900e-003	0.0520	0.0221	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	126.0938	126.0938	4.1300e-003	1.7200e-003	126.7140
Mobile	0.3144	0.9820	3.7222	6.8100e-003	25.3722	0.0129	25.3851	2.5940	0.0119	2.6059	0.0000	533.9160	533.9160	0.0212	0.0000	534.3619
Waste						0.0000	0.0000		0.0000	0.0000	5.8583	0.0000	5.8583	0.3462	0.0000	13.1289
Water						0.0000	0.0000		0.0000	0.0000	0.5374	3.7540	4.2914	0.0554	1.3400e-003	5.8682
Total	**0.9578**	**1.0439**	**4.5603**	**7.7500e-003**	**25.3722**	**0.1022**	**25.4743**	**2.5940**	**0.1011**	**2.6951**	**15.2024**	**664.1519**	**679.3543**	**0.4461**	**3.4800e-003**	**689.8016**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3144	0.9820	3.7222	6.8100e-003	25.3722	0.0129	25.3851	2.5940	0.0119	2.6059	0.0000	533.9160	533.9160	0.0212	0.0000	534.3619
Unmitigated	0.3144	0.9820	3.7222	6.8100e-003	25.3722	0.0129	25.3851	2.5940	0.0119	2.6059	0.0000	533.9160	533.9160	0.0212	0.0000	534.3619

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	390.40	390.40	390.40	1,118,317	1,118,317
Total	390.40	390.40	390.40	1,118,317	1,118,317

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711	0.054898	0.001011	0.001367	0.008332	0.000508	0.002928

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	65.8432	65.8432	2.9800e-003	6.2000e-004	66.0967
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	65.8432	65.8432	2.9800e-003	6.2000e-004	66.0967
NaturalGas Mitigated	6.0900e-003	0.0520	0.0221	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2507	60.2507	1.1500e-003	1.1000e-003	60.6173
NaturalGas Unmitigated	6.0900e-003	0.0520	0.0221	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2507	60.2507	1.1500e-003	1.1000e-003	60.6173

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	1.12905e+006	6.0900e-003	0.0520	0.0221	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2507	60.2507	1.1500e-003	1.1000e-003	60.6173

Total		**6.0900e-003**	**0.0520**	**0.0221**	**3.3000e-004**		**4.2100e-003**	**4.2100e-003**		**4.2100e-003**	**4.2100e-003**	**0.0000**	**60.2507**	**60.2507**	**1.1500e-003**	**1.1000e-003**	**60.6173**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	1.12905e+006	6.0900e-003	0.0520	0.0221	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2507	60.2507	1.1500e-003	1.1000e-003	60.6173
Total		**6.0900e-003**	**0.0520**	**0.0221**	**3.3000e-004**		**4.2100e-003**	**4.2100e-003**		**4.2100e-003**	**4.2100e-003**	**0.0000**	**60.2507**	**60.2507**	**1.1500e-003**	**1.1000e-003**	**60.6173**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	226334	65.8432	2.9800e-003	6.2000e-004	66.0967
Total		**65.8432**	**2.9800e-003**	**6.2000e-004**	**66.0967**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	226334	65.8432	2.9800e-003	6.2000e-004	66.0967
Total		**65.8432**	**2.9800e-003**	**6.2000e-004**	**66.0967**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6373	9.8300e-003	0.8160	6.1000e-004		0.0850	0.0850		0.0850	0.0850	8.8067	0.3881	9.1948	0.0192	4.2000e-004	9.7286
Unmitigated	0.6373	9.8300e-003	0.8160	6.1000e-004		0.0850	0.0850		0.0850	0.0850	8.8067	0.3881	9.1948	0.0192	4.2000e-004	9.7286

6.2 Area by SubCategory

Unmitigated

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

Architectural Coating	0.0293					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2250					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.3756	7.0400e-003	0.5760	6.0000e-004		0.0837	0.0837		0.0837	0.0837	8.8067	0.0000	8.8067	0.0188	4.2000e-004	9.3323
Landscaping	7.4700e-003	2.8000e-003	0.2400	1.0000e-005		1.3000e-003	1.3000e-003		1.3000e-003	1.3000e-003	0.0000	0.3881	0.3881	3.9000e-004	0.0000	0.3963
Total	**0.6373**	**9.8400e-003**	**0.8160**	**6.1000e-004**		**0.0850**	**0.0850**		**0.0850**	**0.0850**	**8.8067**	**0.3881**	**9.1948**	**0.0192**	**4.2000e-004**	**9.7286**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0293					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2250					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.3756	7.0400e-003	0.5760	6.0000e-004		0.0837	0.0837		0.0837	0.0837	8.8067	0.0000	8.8067	0.0188	4.2000e-004	9.3323
Landscaping	7.4700e-003	2.8000e-003	0.2400	1.0000e-005		1.3000e-003	1.3000e-003		1.3000e-003	1.3000e-003	0.0000	0.3881	0.3881	3.9000e-004	0.0000	0.3963
Total	**0.6373**	**9.8400e-003**	**0.8160**	**6.1000e-004**		**0.0850**	**0.0850**		**0.0850**	**0.0850**	**8.8067**	**0.3881**	**9.1948**	**0.0192**	**4.2000e-004**	**9.7286**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			

Mitigated	4.2914	0.0554	1.3400e-003	5.8682
Unmitigated	4.2914	0.0554	1.3400e-003	5.8691

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	1.694 / 1.06796	4.2914	0.0554	1.3400e-003	5.8691
Total		**4.2914**	**0.0554**	**1.3400e-003**	**5.8691**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	1.694 / 1.06796	4.2914	0.0554	1.3400e-003	5.8682
Total		**4.2914**	**0.0554**	**1.3400e-003**	**5.8682**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	5.8583	0.3462	0.0000	13.1289
Mitigated	5.8583	0.3462	0.0000	13.1289

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	28.86	5.8583	0.3462	0.0000	13.1289
Total		**5.8583**	**0.3462**	**0.0000**	**13.1289**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Single Family Housing	28.86	5.8583	0.3462	0.0000	13.1289
Total		**5.8583**	**0.3462**	**0.0000**	**13.1289**

9.0 Operational Offroad

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

10.0 Vegetation

Ashton Place - Operational Only with Other 2 acre Parcel

Yolo/Solano AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	32.00	Dwelling Unit	3.76	57,600.00	92

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - site plan plus other 2-acre parcel

Construction Phase - based on applicant provided schedule

Off-road Equipment -

Off-road Equipment -

Trips and VMT - Assumed mobilization/demobilization of equipment required an average of 1 truck per 2 pieces of equipment

Grading - site acreage

Vehicle Trips - Based on Traffic Study

Road Dust -

Woodstoves - assumed EPA certified wood burning devices

Water And Wastewater - based on UWMP

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	10.39	3.76
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblVehicleTrips	ST_TR	10.08	12.20
tblVehicleTrips	SU_TR	8.77	12.20
tblVehicleTrips	WD_TR	9.57	12.20

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.6365	0.2027	16.7156	0.0148		2.0563	2.0563		2.0563	2.0563	236.7731	4.7537	241.5268	0.5102	0.0114	255.7594
Energy	0.0334	0.2851	0.1213	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.9177	363.9177	6.9800e-003	6.6700e-003	366.1325
Mobile	1.8767	5.6601	23.7648	0.0369	139.4793	0.0714	139.5508	14.2704	0.0657	14.3361		3,183.5908	3,183.5908	0.1289		3,186.2971
Total	**12.5466**	**6.1479**	**40.6017**	**0.0535**	**139.4793**	**2.1507**	**141.6301**	**14.2704**	**2.1450**	**16.4154**	**236.7731**	**3,552.2622**	**3,789.0354**	**0.6460**	**0.0180**	**3,808.1889**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.6365	0.2027	16.7156	0.0148		2.0563	2.0563		2.0563	2.0563	236.7731	4.7537	241.5268	0.5102	0.0114	255.7594
Energy	0.0334	0.2851	0.1213	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.9177	363.9177	6.9800e-003	6.6700e-003	366.1325
Mobile	1.8767	5.6601	23.7648	0.0369	139.4793	0.0714	139.5508	14.2704	0.0657	14.3361		3,183.5908	3,183.5908	0.1289		3,186.2971
Total	**12.5466**	**6.1479**	**40.6017**	**0.0535**	**139.4793**	**2.1507**	**141.6301**	**14.2704**	**2.1450**	**16.4154**	**236.7731**	**3,552.2622**	**3,789.0354**	**0.6460**	**0.0180**	**3,808.1889**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8767	5.6601	23.7648	0.0369	139.4793	0.0714	139.5508	14.2704	0.0657	14.3361		3,183.5908	3,183.5908	0.1289		3,186.2971
Unmitigated	1.8767	5.6601	23.7648	0.0369	139.4793	0.0714	139.5508	14.2704	0.0657	14.3361		3,183.5908	3,183.5908	0.1289		3,186.2971

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	390.40	390.40	390.40	1,118,317	1,118,317
Total	390.40	390.40	390.40	1,118,317	1,118,317

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711	0.054898	0.001011	0.001367	0.008332	0.000508	0.002928

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0334	0.2851	0.1213	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.9177	363.9177	6.9800e-003	6.6700e-003	366.1325
NaturalGas Unmitigated	0.0334	0.2851	0.1213	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.9177	363.9177	6.9800e-003	6.6700e-003	366.1325

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	3093.3	0.0334	0.2851	0.1213	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.9177	363.9177	6.9800e-003	6.6700e-003	366.1325
Total		**0.0334**	**0.2851**	**0.1213**	**1.8200e-003**		**0.0231**	**0.0231**		**0.0231**	**0.0231**		**363.9177**	**363.9177**	**6.9800e-003**	**6.6700e-003**	**366.1325**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	3.0933	0.0334	0.2851	0.1213	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.9177	363.9177	6.9800e-003	6.6700e-003	366.1325
Total		**0.0334**	**0.2851**	**0.1213**	**1.8200e-003**		**0.0231**	**0.0231**		**0.0231**	**0.0231**		**363.9177**	**363.9177**	**6.9800e-003**	**6.6700e-003**	**366.1325**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.6365	0.2027	16.7156	0.0148		2.0563	2.0563		2.0563	2.0563	236.7731	4.7537	241.5268	0.5102	0.0114	255.7594
Unmitigated	10.6365	0.2027	16.7156	0.0148		2.0563	2.0563		2.0563	2.0563	236.7731	4.7537	241.5268	0.5102	0.0114	255.7594

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1605					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Consumer Products	1.2326					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	9.1604	0.1716	14.0489	0.0147		2.0418	2.0418		2.0418	2.0418	236.7731	0.0000	236.7731	0.5054	0.0114	250.9055
Landscaping	0.0830	0.0311	2.6666	1.4000e-004		0.0145	0.0145		0.0145	0.0145		4.7537	4.7537	4.7700e-003		4.8539
Total	**10.6365**	**0.2027**	**16.7155**	**0.0148**		**2.0563**	**2.0563**		**2.0563**	**2.0563**	**236.7731**	**4.7537**	**241.5268**	**0.5102**	**0.0114**	**255.7594**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1605					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2326					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	9.1604	0.1716	14.0489	0.0147		2.0418	2.0418		2.0418	2.0418	236.7731	0.0000	236.7731	0.5054	0.0114	250.9055
Landscaping	0.0830	0.0311	2.6666	1.4000e-004		0.0145	0.0145		0.0145	0.0145		4.7537	4.7537	4.7700e-003		4.8539
Total	**10.6365**	**0.2027**	**16.7155**	**0.0148**		**2.0563**	**2.0563**		**2.0563**	**2.0563**	**236.7731**	**4.7537**	**241.5268**	**0.5102**	**0.0114**	**255.7594**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Ashton Place - Operational Only with Other 2 acre Parcel - Paved Roads

Yolo/Solano AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	32.00	Dwelling Unit	3.76	57,600.00	92

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - site plan plus other 2-acre parcel

Construction Phase - based on applicant provided schedule

Off-road Equipment -

Off-road Equipment -

Trips and VMT - Assumed mobilization/demobilization of equipment required an average of 1 truck per 2 pieces of equipment

Grading - site acreage

Vehicle Trips - Based on Traffic Study

Road Dust - paved

Woodstoves - assumed EPA certified wood burning devices

Water And Wastewater - based on UWMP

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	10.39	3.76
tblProjectCharacteristics	OperationalYear	2014	2017
tblRoadDust	RoadPercentPave	94	100
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblVehicleTrips	ST_TR	10.08	12.20
tblVehicleTrips	SU_TR	8.77	12.20
tblVehicleTrips	WD_TR	9.57	12.20

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.6365	0.2027	16.7156	0.0148		2.0563	2.0563		2.0563	2.0563	236.7731	4.7537	241.5268	0.5102	0.0114	255.7594
Energy	0.0334	0.2851	0.1213	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.9177	363.9177	6.9800e-003	6.6700e-003	366.1325
Mobile	1.8767	5.6601	23.7648	0.0369	2.3848	0.0714	2.4562	0.6384	0.0657	0.7041		3,183.5908	3,183.5908	0.1289		3,186.2971
Total	**12.5466**	**6.1479**	**40.6017**	**0.0535**	**2.3848**	**2.1507**	**4.5355**	**0.6384**	**2.1450**	**2.7834**	**236.7731**	**3,552.2622**	**3,789.0354**	**0.6460**	**0.0180**	**3,808.1889**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.6365	0.2027	16.7156	0.0148		2.0563	2.0563		2.0563	2.0563	236.7731	4.7537	241.5268	0.5102	0.0114	255.7594
Energy	0.0334	0.2851	0.1213	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.9177	363.9177	6.9800e-003	6.6700e-003	366.1325
Mobile	1.8767	5.6601	23.7648	0.0369	2.3848	0.0714	2.4562	0.6384	0.0657	0.7041		3,183.5908	3,183.5908	0.1289		3,186.2971
Total	**12.5466**	**6.1479**	**40.6017**	**0.0535**	**2.3848**	**2.1507**	**4.5355**	**0.6384**	**2.1450**	**2.7834**	**236.7731**	**3,552.2622**	**3,789.0354**	**0.6460**	**0.0180**	**3,808.1889**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8767	5.6601	23.7648	0.0369	2.3848	0.0714	2.4562	0.6384	0.0657	0.7041		3,183.5908	3,183.5908	0.1289		3,186.2971
Unmitigated	1.8767	5.6601	23.7648	0.0369	2.3848	0.0714	2.4562	0.6384	0.0657	0.7041		3,183.5908	3,183.5908	0.1289		3,186.2971

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	390.40	390.40	390.40	1,118,317	1,118,317
Total	390.40	390.40	390.40	1,118,317	1,118,317

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711	0.054898	0.001011	0.001367	0.008332	0.000508	0.002928

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0334	0.2851	0.1213	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.9177	363.9177	6.9800e-003	6.6700e-003	366.1325
NaturalGas Unmitigated	0.0334	0.2851	0.1213	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.9177	363.9177	6.9800e-003	6.6700e-003	366.1325

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	3093.3	0.0334	0.2851	0.1213	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.9177	363.9177	6.9800e-003	6.6700e-003	366.1325
Total		**0.0334**	**0.2851**	**0.1213**	**1.8200e-003**		**0.0231**	**0.0231**		**0.0231**	**0.0231**		**363.9177**	**363.9177**	**6.9800e-003**	**6.6700e-003**	**366.1325**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	3.0933	0.0334	0.2851	0.1213	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.9177	363.9177	6.9800e-003	6.6700e-003	366.1325
Total		**0.0334**	**0.2851**	**0.1213**	**1.8200e-003**		**0.0231**	**0.0231**		**0.0231**	**0.0231**		**363.9177**	**363.9177**	**6.9800e-003**	**6.6700e-003**	**366.1325**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.6365	0.2027	16.7156	0.0148		2.0563	2.0563		2.0563	2.0563	236.7731	4.7537	241.5268	0.5102	0.0114	255.7594
Unmitigated	10.6365	0.2027	16.7156	0.0148		2.0563	2.0563		2.0563	2.0563	236.7731	4.7537	241.5268	0.5102	0.0114	255.7594

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1605					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2326					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Hearth	9.1604	0.1716	14.0489	0.0147		2.0418	2.0418		2.0418	2.0418	236.7731	0.0000	236.7731	0.5054	0.0114	250.9055
Landscaping	0.0830	0.0311	2.6666	1.4000e-004		0.0145	0.0145		0.0145	0.0145		4.7537	4.7537	4.7700e-003		4.8539
Total	**10.6365**	**0.2027**	**16.7155**	**0.0148**		**2.0563**	**2.0563**		**2.0563**	**2.0563**	**236.7731**	**4.7537**	**241.5268**	**0.5102**	**0.0114**	**255.7594**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1605					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2326					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	9.1604	0.1716	14.0489	0.0147		2.0418	2.0418		2.0418	2.0418	236.7731	0.0000	236.7731	0.5054	0.0114	250.9055
Landscaping	0.0830	0.0311	2.6666	1.4000e-004		0.0145	0.0145		0.0145	0.0145		4.7537	4.7537	4.7700e-003		4.8539
Total	**10.6365**	**0.2027**	**16.7155**	**0.0148**		**2.0563**	**2.0563**		**2.0563**	**2.0563**	**236.7731**	**4.7537**	**241.5268**	**0.5102**	**0.0114**	**255.7594**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Commercial Use for Ashton and Other Parcel

Yolo/Solano AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	43.52	1000sqft	3.76	43,516.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - site plan plus other parcel

Construction Phase - based on applicant provided schedule

Off-road Equipment -

Off-road Equipment -

Trips and VMT - Assumed mobilization/demobilization of equipment required an average of 1 truck per 2 pieces of equipment

Grading - site acreage

Vehicle Trips - Based on Traffic Study

Woodstoves - assumed EPA certified wood burning devices

Water And Wastewater - based on UWMP

Table Name	Column Name	Default Value	New Value

tblLandUse	LotAcreage	1.00	3.76
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	HaulingTripNumber	0.00	4.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1821	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.8000e-004	7.8000e-004	0.0000	0.0000	8.2000e-004
Energy	5.8000e-004	5.3100e-003	4.4600e-003	3.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	153.7695	153.7695	6.8000e-003	1.4900e-003	154.3744
Mobile	1.0839	2.5074	11.2850	0.0170	61.7021	0.0317	61.7337	6.3083	0.0292	6.3375	0.0000	1,296.9758	1,296.9758	0.0523	0.0000	1,298.0740
Waste						0.0000	0.0000		0.0000	0.0000	3.7046	0.0000	3.7046	0.2189	0.0000	8.3022
Water						0.0000	0.0000		0.0000	0.0000	0.4084	2.8299	3.2383	0.0421	1.0200e-003	4.4372
Total	**1.2666**	**2.5127**	**11.2899**	**0.0171**	**61.7021**	**0.0321**	**61.7341**	**6.3083**	**0.0296**	**6.3379**	**4.1130**	**1,453.5760**	**1,457.6890**	**0.3201**	**2.5100e-003**	**1,465.1887**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1821	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.8000e-004	7.8000e-004	0.0000	0.0000	8.2000e-004
Energy	5.8000e-004	5.3100e-003	4.4600e-003	3.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	153.7695	153.7695	6.8000e-003	1.4900e-003	154.3744
Mobile	1.0839	2.5074	11.2850	0.0170	61.7021	0.0317	61.7337	6.3083	0.0292	6.3375	0.0000	1,296.9758	1,296.9758	0.0523	0.0000	1,298.0740
Waste						0.0000	0.0000		0.0000	0.0000	3.7046	0.0000	3.7046	0.2189	0.0000	8.3022
Water						0.0000	0.0000		0.0000	0.0000	0.4084	2.8299	3.2383	0.0421	1.0200e-003	4.4366
Total	**1.2666**	**2.5127**	**11.2899**	**0.0171**	**61.7021**	**0.0321**	**61.7341**	**6.3083**	**0.0296**	**6.3379**	**4.1130**	**1,453.5760**	**1,457.6890**	**0.3201**	**2.5100e-003**	**1,465.1880**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.0839	2.5074	11.2850	0.0170	61.7021	0.0317	61.7337	6.3083	0.0292	6.3375	0.0000	1,296.9758	1,296.9758	0.0523	0.0000	1,298.0740
Unmitigated	1.0839	2.5074	11.2850	0.0170	61.7021	0.0317	61.7337	6.3083	0.0292	6.3375	0.0000	1,296.9758	1,296.9758	0.0523	0.0000	1,298.0740

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Strip Mall	1,928.63	1,829.41	889.03	2,719,608	2,719,608
Total	1,928.63	1,829.41	889.03	2,719,608	2,719,608

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471242	0.066902	0.153160	0.152374	0.056721	0.006800	0.022935	0.055707	0.001002	0.001366	0.008369	0.000503	0.002919

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	147.9873	147.9873	6.6900e-003	1.3800e-003	148.5570
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	147.9873	147.9873	6.6900e-003	1.3800e-003	148.5570
NaturalGas Mitigated	5.8000e-004	5.3100e-003	4.4600e-003	3.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	5.7822	5.7822	1.1000e-004	1.1000e-004	5.8174
NaturalGas Unmitigated	5.8000e-004	5.3100e-003	4.4600e-003	3.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	5.7822	5.7822	1.1000e-004	1.1000e-004	5.8174

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Strip Mall	108355	5.8000e-004	5.3100e-003	4.4600e-003	3.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	5.7822	5.7822	1.1000e-004	1.1000e-004	5.8174
Total		**5.8000e-004**	**5.3100e-003**	**4.4600e-003**	**3.0000e-005**		**4.0000e-004**	**4.0000e-004**		**4.0000e-004**	**4.0000e-004**	**0.0000**	**5.7822**	**5.7822**	**1.1000e-004**	**1.1000e-004**	**5.8174**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Strip Mall	108355	5.8000e-004	5.3100e-003	4.4600e-003	3.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	5.7822	5.7822	1.1000e-004	1.1000e-004	5.8174
Total		**5.8000e-004**	**5.3100e-003**	**4.4600e-003**	**3.0000e-005**		**4.0000e-004**	**4.0000e-004**		**4.0000e-004**	**4.0000e-004**	**0.0000**	**5.7822**	**5.7822**	**1.1000e-004**	**1.1000e-004**	**5.8174**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	508702	147.9873	6.6900e-003	1.3800e-003	148.5570
Total		**147.9873**	**6.6900e-003**	**1.3800e-003**	**148.5570**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
Strip Mall	508702	147.9873	6.6900e-003	1.3800e-003	148.5570
Total		**147.9873**	**6.6900e-003**	**1.3800e-003**	**148.5570**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1821	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.8000e-004	7.8000e-004	0.0000	0.0000	8.2000e-004
Unmitigated	0.1821	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.8000e-004	7.8000e-004	0.0000	0.0000	8.2000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0121					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1700					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Landscaping	4.0000e-005	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.8000e-004	7.8000e-004	0.0000	0.0000	8.2000e-004
Total	**0.1821**	**0.0000**	**4.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.8000e-004**	**7.8000e-004**	**0.0000**	**0.0000**	**8.2000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0121					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1700					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.8000e-004	7.8000e-004	0.0000	0.0000	8.2000e-004
Total	**0.1821**	**0.0000**	**4.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.8000e-004**	**7.8000e-004**	**0.0000**	**0.0000**	**8.2000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.2383	0.0421	1.0200e-003	4.4366
Unmitigated	3.2383	0.0421	1.0200e-003	4.4372

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	1.28738 / 0.78904	3.2383	0.0421	1.0200e-003	4.4372
Total		**3.2383**	**0.0421**	**1.0200e-003**	**4.4372**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	1.28738 / 0.78904	3.2383	0.0421	1.0200e-003	4.4366
Total		**3.2383**	**0.0421**	**1.0200e-003**	**4.4366**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.7046	0.2189	0.0000	8.3022
Unmitigated	3.7046	0.2189	0.0000	8.3022

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	18.25	3.7046	0.2189	0.0000	8.3022
Total		**3.7046**	**0.2189**	**0.0000**	**8.3022**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	18.25	3.7046	0.2189	0.0000	8.3022
Total		**3.7046**	**0.2189**	**0.0000**	**8.3022**

9.0 Operational Offroad

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

10.0 Vegetation

Commercial Use for Ashton and Other Parcel

Yolo/Solano AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	43.52	1000sqft	3.76	43,516.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - site plan plus other parcel

Construction Phase - based on applicant provided schedule

Off-road Equipment -

Off-road Equipment -

Trips and VMT - Assumed mobilization/demobilization of equipment required an average of 1 truck per 2 pieces of equipment

Grading - site acreage

Vehicle Trips - Based on Traffic Study

Woodstoves - assumed EPA certified wood burning devices

Water And Wastewater - based on UWMP

Table Name	Column Name	Default Value	New Value

tblLandUse	LotAcreage	1.00	3.76
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	HaulingTripNumber	0.00	4.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.9979	4.0000e-005	4.5000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.5200e-003	9.5200e-003	3.0000e-005		0.0101
Energy	3.2000e-003	0.0291	0.0245	1.7000e-004		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003		34.9250	34.9250	6.7000e-004	6.4000e-004	35.1376
Mobile	7.1212	15.7668	83.2768	0.1008	370.4458	0.1915	370.6372	37.9013	0.1762	38.0775		8,443.4721	8,443.4721	0.3469		8,450.7566
Total	**8.1222**	**15.7959**	**83.3057**	**0.1010**	**370.4458**	**0.1937**	**370.6395**	**37.9013**	**0.1784**	**38.0797**		**8,478.4067**	**8,478.4067**	**0.3476**	**6.4000e-004**	**8,485.9042**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.9979	4.0000e-005	4.5000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.5200e-003	9.5200e-003	3.0000e-005		0.0101
Energy	3.2000e-003	0.0291	0.0245	1.7000e-004		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003		34.9250	34.9250	6.7000e-004	6.4000e-004	35.1376
Mobile	7.1212	15.7668	83.2768	0.1008	370.4458	0.1915	370.6372	37.9013	0.1762	38.0775		8,443.4721	8,443.4721	0.3469		8,450.7566
Total	**8.1222**	**15.7959**	**83.3057**	**0.1010**	**370.4458**	**0.1937**	**370.6395**	**37.9013**	**0.1784**	**38.0797**		**8,478.4067**	**8,478.4067**	**0.3476**	**6.4000e-004**	**8,485.9042**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.1212	15.7668	83.2768	0.1008	370.4458	0.1915	370.6372	37.9013	0.1762	38.0775		8,443.4721	8,443.4721	0.3469		8,450.7566
Unmitigated	7.1212	15.7668	83.2768	0.1008	370.4458	0.1915	370.6372	37.9013	0.1762	38.0775		8,443.4721	8,443.4721	0.3469		8,450.7566

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Strip Mall	1,928.63	1,829.41	889.03	2,719,608	2,719,608
Total	1,928.63	1,829.41	889.03	2,719,608	2,719,608

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471242	0.066902	0.153160	0.152374	0.056721	0.006800	0.022935	0.055707	0.001002	0.001366	0.008369	0.000503	0.002919

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.2000e-003	0.0291	0.0245	1.7000e-004		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003		34.9250	34.9250	6.7000e-004	6.4000e-004	35.1376
NaturalGas Unmitigated	3.2000e-003	0.0291	0.0245	1.7000e-004		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003		34.9250	34.9250	6.7000e-004	6.4000e-004	35.1376

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Strip Mall	296.863	3.2000e-003	0.0291	0.0245	1.7000e-004		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003		34.9250	34.9250	6.7000e-004	6.4000e-004	35.1376
Total		**3.2000e-003**	**0.0291**	**0.0245**	**1.7000e-004**		**2.2100e-003**	**2.2100e-003**		**2.2100e-003**	**2.2100e-003**		**34.9250**	**34.9250**	**6.7000e-004**	**6.4000e-004**	**35.1376**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Strip Mall	0.296863	3.2000e-003	0.0291	0.0245	1.7000e-004		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003		34.9250	34.9250	6.7000e-004	6.4000e-004	35.1376
Total		**3.2000e-003**	**0.0291**	**0.0245**	**1.7000e-004**		**2.2100e-003**	**2.2100e-003**		**2.2100e-003**	**2.2100e-003**		**34.9250**	**34.9250**	**6.7000e-004**	**6.4000e-004**	**35.1376**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.9979	4.0000e-005	4.5000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.5200e-003	9.5200e-003	3.0000e-005		0.0101
Unmitigated	0.9979	4.0000e-005	4.5000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.5200e-003	9.5200e-003	3.0000e-005		0.0101

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Consumer Products	0.9312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.3000e-004	4.0000e-005	4.5000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.5200e-003	9.5200e-003	3.0000e-005		0.0101
Total	**0.9979**	**4.0000e-005**	**4.5000e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**9.5200e-003**	**9.5200e-003**	**3.0000e-005**		**0.0101**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.3000e-004	4.0000e-005	4.5000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.5200e-003	9.5200e-003	3.0000e-005		0.0101
Total	**0.9979**	**4.0000e-005**	**4.5000e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**9.5200e-003**	**9.5200e-003**	**3.0000e-005**		**0.0101**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Commercial Use for Ashton and Other Parcel Paved

Yolo/Solano AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	43.52	1000sqft	3.76	43,516.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - site plan plus other parcel

Construction Phase - based on applicant provided schedule

Off-road Equipment -

Off-road Equipment -

Trips and VMT - Assumed mobilization/demobilization of equipment required an average of 1 truck per 2 pieces of equipment

Grading - site acreage

Vehicle Trips - Based on Traffic Study

Woodstoves - assumed EPA certified wood burning devices

Water And Wastewater - based on UWMP

Road Dust - paved

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	1.00	3.76
tblProjectCharacteristics	OperationalYear	2014	2018
tblRoadDust	RoadPercentPave	94	100
tblTripsAndVMT	HaulingTripNumber	0.00	4.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.9979	4.0000e-005	4.5000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.5200e-003	9.5200e-003	3.0000e-005		0.0101
Energy	3.2000e-003	0.0291	0.0245	1.7000e-004		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003		34.9250	34.9250	6.7000e-004	6.4000e-004	35.1376
Mobile	7.1212	15.7668	83.2768	0.1008	6.3347	0.1915	6.5261	1.6959	0.1762	1.8721		8,443.4721	8,443.4721	0.3469		8,450.7566
Total	**8.1222**	**15.7959**	**83.3057**	**0.1010**	**6.3347**	**0.1937**	**6.5284**	**1.6959**	**0.1784**	**1.8743**		**8,478.4067**	**8,478.4067**	**0.3476**	**6.4000e-004**	**8,485.9042**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.9979	4.0000e-005	4.5000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.5200e-003	9.5200e-003	3.0000e-005		0.0101
Energy	3.2000e-003	0.0291	0.0245	1.7000e-004		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003		34.9250	34.9250	6.7000e-004	6.4000e-004	35.1376
Mobile	7.1212	15.7668	83.2768	0.1008	6.3347	0.1915	6.5261	1.6959	0.1762	1.8721		8,443.4721	8,443.4721	0.3469		8,450.7566
Total	**8.1222**	**15.7959**	**83.3057**	**0.1010**	**6.3347**	**0.1937**	**6.5284**	**1.6959**	**0.1784**	**1.8743**		**8,478.4067**	**8,478.4067**	**0.3476**	**6.4000e-004**	**8,485.9042**

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

Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.1212	15.7668	83.2768	0.1008	6.3347	0.1915	6.5261	1.6959	0.1762	1.8721		8,443.4721	8,443.4721	0.3469		8,450.7566
Unmitigated	7.1212	15.7668	83.2768	0.1008	6.3347	0.1915	6.5261	1.6959	0.1762	1.8721		8,443.4721	8,443.4721	0.3469		8,450.7566

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Strip Mall	1,928.63	1,829.41	889.03	2,719,608	2,719,608
Total	1,928.63	1,829.41	889.03	2,719,608	2,719,608

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471242	0.066902	0.153160	0.152374	0.056721	0.006800	0.022935	0.055707	0.001002	0.001366	0.008369	0.000503	0.002919

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.2000e-003	0.0291	0.0245	1.7000e-004		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003		34.9250	34.9250	6.7000e-004	6.4000e-004	35.1376
NaturalGas Unmitigated	3.2000e-003	0.0291	0.0245	1.7000e-004		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003		34.9250	34.9250	6.7000e-004	6.4000e-004	35.1376

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Strip Mall	296.863	3.2000e-003	0.0291	0.0245	1.7000e-004		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003		34.9250	34.9250	6.7000e-004	6.4000e-004	35.1376
Total		**3.2000e-003**	**0.0291**	**0.0245**	**1.7000e-004**		**2.2100e-003**	**2.2100e-003**		**2.2100e-003**	**2.2100e-003**		**34.9250**	**34.9250**	**6.7000e-004**	**6.4000e-004**	**35.1376**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Strip Mall	0.296863	3.2000e-003	0.0291	0.0245	1.7000e-004		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003		34.9250	34.9250	6.7000e-004	6.4000e-004	35.1376
Total		**3.2000e-003**	**0.0291**	**0.0245**	**1.7000e-004**		**2.2100e-003**	**2.2100e-003**		**2.2100e-003**	**2.2100e-003**		**34.9250**	**34.9250**	**6.7000e-004**	**6.4000e-004**	**35.1376**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.9979	4.0000e-005	4.5000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.5200e-003	9.5200e-003	3.0000e-005		0.0101
Unmitigated	0.9979	4.0000e-005	4.5000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.5200e-003	9.5200e-003	3.0000e-005		0.0101

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					

Architectural Coating	0.0662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.3000e-004	4.0000e-005	4.5000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.5200e-003	9.5200e-003	3.0000e-005		0.0101
Total	**0.9979**	**4.0000e-005**	**4.5000e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**9.5200e-003**	**9.5200e-003**	**3.0000e-005**		**0.0101**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.3000e-004	4.0000e-005	4.5000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.5200e-003	9.5200e-003	3.0000e-005		0.0101
Total	**0.9979**	**4.0000e-005**	**4.5000e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**9.5200e-003**	**9.5200e-003**	**3.0000e-005**		**0.0101**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

APPENDIX B

Project Name: Ashton Place IS-MND		
Work Site Coordinates: 38°19'38 N/ 121°56'88 W	**Date/Time:** Friday, September 2, 2016	**Weather conditions:** Sunny, ~80°
Surveyor/Company: Sara Reece/Stantec		

Land Cover Information

Land Cover or Habitat	**Observed in Work Area (Y/N)**	**Observed in broader Work Assessment Area (Y/N)**	**Photos**
Ruderal annual grassland	Y	Y	Refer to photographs attached to this memo
Developed	N	Y	

Observations/verification of resources within assessment area

Senior Biologist Sara Reece conducted a reconnaissance survey of the approximately 1-acre site located off Vanden Road and Cogburn Circle in Vacaville, Solano County, California (Figure 1).

The site is located in a residential area and is bordered by residences to the north and west; a park and fire station to the south; and agricultural fields to the east. The site itself is highly disturbed and appears to have been used as a staging area in the recent past (a modular office, Port-a-Potty, and storage containers were still on site). Vegetation within the site is limited to annual grasses (the site had recently been mowed and overlain with straw, so grasses were not identifiable) and invasive and weedy species including yellow starthistle (*Centaurea solstitialis*), purple starthistle (*Centaurea calcitrapa*), prickly lettuce (*Lactuca serriola*), and bindweed (*Convulvulus arvensis*). Stunted saplings which appeared to be *Populus* were also scattered throughout the site. The south border of the site feaures a sidewalk and has been landscaped with crepe myrtle, day lilies, and other ornamental plants.

In terms of wildlife, a number of killdeer (*Charadrius vociferus*) calls were heard, but no individuals were seen within the boundaries of the site. A number of rodent burrows had been dug into soils mounded along the masonry walls surrounding the west, north, and east borders of the site. No other wildlife were seen or heard at the site.

Photo 1. View of site looking south to fire station along Congdon Circle. Stunted *Populus* saplings are visible.

Photo 2. View of site looking west toward residences.

Photo 3. View of site looking southeast.

Photo 4. Example of rodent burrows found throughout soils mounded on borders of the site.

Fig 1. Ashton Place IS-MND
Legend
Survey Area
Vega Way
Wimbledon Dr
202 Cogburn Cir
Vanden Rd
N
200 ft
Google earth
© 2016 Google

APPENDIX C

Stantec

Memo

To:	Christina Corsello	From:	Ashley Hallock, Senior Archaeologist
	City of Vacaville Community Development Department Planning Division 650 Merchant Street Vacaville, CA 95688		Stantec 1201 J Street, Studio100 Sacramento, CA 95814
File:	Cultural Survey Technical Memorandum for Ashton Place Unit 3, Vacaville, Solano County, California	Date:	September 16, 2016

Reference: Cultural Survey Technical Memorandum for Ashton Place Unit 3, Vacaville, Solano County, California

D. R. Horton Northern California Division proposes to develop a 1.76-acre parcel (Assessor's Parcel Number 0136-874-010) and construct 15 two-story detached homes for the project. Additionally, D.R. Horton proposes to request to change the General Plan Designation of the property from Neighborhood Commercial (NC) to Residential Medium Density (RMD) and also to rezone the property to RMD, a request for exception to General Plan Policy 2.3-1 13 whereby new lots in Southtown are to meet or exceed the standards for adjacent homes.

The project is located within the city of Vacaville, Solano County, California and its legal location is Township 6 North, Range 1 West, Section 35 of the Elmira, California United States Geological Survey (USGS) topographic map. The project area consists of an approximately 1.76 acre vacant lot across the street (Cogburn Circle) from the Vacaville Fire Department 75, and is surrounded on the north, east, and western sides by suburban housing.

Stantec, Inc. (Stantec) prepared an Initial Study/Mitigated Negative Declaration (ISMND) for the project. As part of that effort, a Stantec archaeologist conducted pedestrian survey of the 1.76-acre project area. This technical memorandum contains a summary of the pedestrian survey. For a complete account of the cultural resources investigations for this project, please consult the ISMND prepared for Ashton Place Unit 3, Vacaville, California (Stantec 2016). Stantec Senior Archaeologist, Ashley Hallock, MA, RPA, arrived onsite to conduct a field inspection and pedestrian survey of the project area at 8:00 AM on September 2nd, 2016. The entire 1.76-acre parcel (project area) was surveyed walking no greater than 5-meter transects.

The surface ground cover consisted of what looked to be the remnants of construction staging, perhaps for the nearby new Fire Department. Piles of bark dust and dirt were observed throughout the eastern portion of the project area. Additionally, much of the area had been trampled and a small trailer, such as those found at construction sites, was situated on the south-western corner of the project area. It was not in use. Vegetation consisted of dried grass, invasive weeds, and the possible remnants of Cottonwood trees, Yellow Star Thistle, Lactuca, and morning-glory. Several horizontal piles of soil had been dumped in the eastern portion of the project area.

Reference: Cultural Survey Technical Memorandum for Ashton Place Unit 3, Vacaville, Solano County, California

The ground surface visibility in general was poor (less than 90%). Observed soils within the soil dump piles was a thick, dried, clay loam w/ some visible iron oxide. The soil appears to have been dumped from elsewhere and was observed placed on the ground surface. Exposed soils, observed in several patches of visible soil and in rodent disturbance areas, was a dry, coarse, silt loam w/ subangular gravels. No cultural resources were identified as a result of this survey.

Stantec, Inc.

Senior Archaeologist, Project Manager
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Email: Ashley.hallock@stantec.com

Figure 1. Western side of the Project area. View is toward the west. IMG_0158. 9/2/2016. A. Hallock.

Reference: Cultural Survey Technical Memorandum for Ashton Place Unit 3, Vacaville, Solano County, California

Figure 2. Northeast quarter of the project area, dirt piles in background. IMG_0159. 9/2/2016. A. Hallock.

Figure 3. View of southeast project area, view is from the north wall. IMG_0160. 9/2/2016. A. Hallock.

Reference: Cultural Survey Technical Memorandum for Ashton Place Unit 3, Vacaville, Solano County, California

Figure 4. View of southern project area, looking towards the new fire station. IMG_0161. 9/2/2016. A. Hallock.

Figure 5. View of dirt pile. Detailed view. IMG_0162. 9/2/2016. A. Hallock.

Reference: Cultural Survey Technical Memorandum for Ashton Place Unit 3, Vacaville, Solano County, California

Figure 6. Western portion of the project area. IMG_0163. 9/2/2016. A. Hallock.

Figure 2. View of exposed soils. IMG_0164. 9/2/2016. A. Hallock.

APPENDIX D

PHILLIPPI ENGINEERING, INC.
CIVIL ENGINEERING - LAND SURVEYING

SEWER CALCULATIONS MEMO
ASHTON PLACE UNITS 1-3, POTTERS PLACE, AND PARK PARISH
OCTOBER 21, 2016

The purpose of this memo is to compare the projected sewer flows from the Ashton Place Units 1-3, Potters Place and Park Parish properties as originally intended (Neighborhood Commercial and Residential Medium) versus the proposed sewer flows which would result from the conversion to Single Family Residential (RMD).

The projected commercial flows are identified in the *Southtown Area Sewer Plan Evaluation and CSP-S Trunk Sewer Service Area Master Plan (Master Plan).* The proposed revisions include converting the two Neighborhood Commercial sites to Residential Medium Density (32 RMD single family lots) and modifying the originally envisioned 30 Townhouses (RMD) to 32 Single family housing units (also RMD).

To adequately analyze the changes in the projected sewer flows it is important to compare the original Master Plan Projections with the Proposed Revisions which include the Approved and Existing uses.

Sewershed ST1848 includes the area known as Ashton Place Unit 3. This area, previously designated as neighborhood commercial is being converted to 15 RMD housing units. For this shed area, the original Master Plan envisioned 114 residential units (DUs), 1.4 acres commercial and 7.0 acres of park. The proposed revisions along with the approved and existing uses would yield the following uses: 108 DUs, 5.9 acres of park and 1 acre of Public Use (Fire Station).

In summary, the Master Plan envisioned the following flow from Sewershed ST1848:

- 114 DUs at 240 gpd/unit or 27,360 gpd
- 1.4 ac commercial at 1900 gpd/ac or 2,660 gpd
- 7.0 acres of Park for no flow
- Total projected sewer flow, per the Master Plan from ST 1848 was 30,020 gpd

With Approved and existing projects and the proposed Ashton Unit 3 revision, the flow from Sewershed ST1848 is as follows:

- 108 DU at 240 gpd/unit or 25,920 gpd
- 5.9 acres of park for no flow
- 1 ac of Public Use (Fire Station) at 1500 gpd/ac or 1,500 gpd
- Total projected flow from ST 1848 with revisions is 27,420 gpd

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There is a reduction of 2,600 gpd (30,020 gpd minus 27,420 gpd) in Sewershed ST1848, therefore there is No Impact to this Sewershed.

The Master Plan for Sewershed ST09, the area that includes Ashton Place Unit 1 and 2 and Potters Place, envisioned 138 residential units in the original Master Plan. With existing projects, approved projects and the proposed revision, the total number of residential units is reduced to 134. The sewer flow in Sewershed ST09 is reduced by 4 DUs times 240 gpd/DU or 960 gpd, therefore there is No Impact to this Sewershed.

Sewershed ST04 is the area that includes Park Parish. The original Master Plan, for this area, envisioned 136 DUs, 2.9 acres of commercial and 7 acres of park. With the existing and approved projects and the proposed revision, the following uses will comprise Sewershed ST04: 156 DUs and 7 acres of park.

In summary, the Master Plan envisioned the following flow from Sewershed ST04:

- 136 DUs at 240 gpd/unit or 32,640 gpd
- 2.9 ac commercial at 1900 gpd/ac or 5,510 gpd
- 7.0 acres of Park for no flow
- Total projected sewer flow, per the Master Plan from ST04 was 38,150 gpd

With approved and existing projects and the proposed Park Parish revision, the flow from Sewershed ST04 is as follows:

- 156 DU at 240 gpd/unit or 37,440 gpd
- 7.0 acres of park for no flow
- Total projected flow from ST04 with revisions is 37,440 gpd

There is a reduction of 710 gpd in Sewershed ST04, therefore there is No Impact to this Sewershed.

In summary:

- Sewer flow in Sewershed ST1848 has been reduced by 2,600 gpd from the original Master Plan,
- Sewer flow in Sewershed ST09 has been reduced by 960 gpd from the original Master Plan, and,
- Sewer flow in Sewershed ST04 has been reduced by 710 gpd from the original Master Plan.

Therefore, there is No Sewer Impact.

APPENDIX E

PHILLIPPI ENGINEERING, INC.
CIVIL ENGINEERING - LAND SURVEYING

STORM DRAIN RUNOFF COMPARISON
COMMERCIAL VS. RESIDENTIAL
ASHTON PLACE UNITS 1-3, POTTERS PLACE AND PARK PARISH
TWO SITE AREAS
ASHTON PLACE UNIT 3 – 1.33 AC
PARK PARISH -2.00 AC
October 20, 2016

Calculations based on the City of Vacaville Storm Drain Design Standards
And the Solano County Water Agency Hydrology Manual

QUANTITY OF RUNOFF EQUALS COEFFICIENT OF RUNOFF TIMES THE INTENSITY OF THE STORM TIMES THE AREA.

$$Q = C * I * A$$

Area (A_1) Ashton Place Unit 3 Project site is 1.33 Acres
Area (A_2) Park Parish Project site is 2.00 Acres

The Coefficient of Runoff for Commercial Property per Table DS 4-1 C_C= 0.9

The Coefficient of Runoff for Single Family Medium Density Residential Property per Table DS 4-1 C_R= 0.5

The Time of Concentration is the minimum required 10 minutes because both sites area are so small.

Per Figure 2-2 from the SCWA Hydrology Manual the Ashton Place Unit 3 area is located near the Mean Annual Precipitation isohyetal line 24.

Per Table 3-4B of the SCWA Manual the rainfall intensity for a 10-year storm event (10-minute time of concentration(t)) for isohyetal line 24 = 0.48 in.

The intensity (i) = 0.48 in. / (10 (min) /60 (min/hr)) = 2.88 in./hr.

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The following calculations compute the quantity of storm water runoff for the property at 1.33 acres in size, developed both commercially and residentially:

Q (1.33 ac. Commercial) = C_C * I * A = 0.9 * 2.88 * 1.33 = 3.45 cfs

Q (1.33 ac. Residential) = C_R * I * A = 0.5 * 2.88 * 1.33 = 1.92 cfs

The following calculations compute the quantity of storm water runoff for the property at 2.00 acres in size, developed both commercially and residentially:

Q (2.00 ac. Commercial) = C_C * I * A = 0.9 * 2.88 * 2.00 = 5.18 cfs

Q (2.00 ac. Residential) = C_R * I * A = 0.5 * 2.88 * 2.00 = 2.88 cfs

There is a storm water runoff reduction of 44% by converting the properties from a commercial use to a residential use.

Conclusion: Conversion of the Ashton Place Unit 3 and Park Parish properties from a commercial development to a residential development will result in a 44% reduction in storm water runoff in a 10-year storm event. Simply put, this reduction is directly related to the coefficient of runoff, which is 44% higher for commercial developments over residential developments. There is NO IMPACT.

APPENDIX F

PHILLIPPI ENGINEERING, INC.

CIVIL ENGINEERING - LAND SURVEYING

WATER SUPPLY CALCULATIONS MEMO
ASHTON PLACE UNITS 1-3, POTTERS PLACE AND PARK PARISH
October 21, 2016

The purpose of this memo is to compare the projected potable water requirements for the Ashton Place Units 1-3, Potters Place and Park Parish properties as originally intended (Neighborhood Commercial and Townhouses) versus the proposed potable water requirement which would result from the conversion to Single Family Residential (Residential Medium Density). To accurately reflect the comparison of water demand as originally envisioned in the EIR one must also account for all the proposed changes to the Southtown area. The following chart summarizes the changes in the number of residential lots in the Southtown and Southtown Commons areas that have occurred over time:

SOUTHTOWN AND SOUTHTOWN COMMONS (VANDEN RANCH) LOT COUNTS

	ORIGINAL TENTATIVE MAPS	WITH ANY REVISED TENTATIVE MAPS	CURRENT APPROVED TENTATIVE MAPS AND FINAL MAPS	PROPOSED ASHTON PLACE PARK PARISH REVISIONS
Southtown Phase 1	323	323	323	323
Southtown Phase 2	201	201	195	195
Southtown Phase 3	242	242	242	242
Southtown Phase 1A	117	141	141	141
Southtown Commons (AKA Vanden Ranch)	241	216	216	216
Vanden II	37	37	37	37
Ashton Place, Potters Place and Park Parish (RMD Single Family Detached)	0	0	0	64
TOTAL SINGLE FAMILY	**1161**	**1160**	**1154**	**1218**
Apartments	223	223	223	223
SUBTOTAL WITH APARTMENTS	**1384**	**1383**	**1377**	**1441**
Townhouses	60	60	60	0
TOTAL RESIDENTIAL UNITS	**1444**	**1443**	**1437**	**1441**
Neighborhood Commercial (Ashton Place Unit 3)	1.33 Ac	1.33 Ac.	N/A	0
Neighborhood Commercial (Park Parish))	2.00 Ac	2.00 Ac.	N/A	0
Other Commercial	N/C	N/C	N/C	N/C

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In summary, from the Tentative Map through all revisions, there is a net reduction of 3 residential units (60 less townhouses, 64 additional RMD single family and 7 less single family) for the Southtown and Southtown Commons areas when comparing against the original Tentative Map Approvals. In addition, there is a net reduction of 3.33 Acres of Neighborhood Commercial land.

With the above reductions, there is a total overall reduction of water demand as follows:

- 3 less Residential units at 350 gpd per unit or 1,050 gpd
- 3.33 acres less commercial development at 1,600 gpd or 5,328 gpd
- Total water demand in the Southtown and Southtown Commons area equals 6,378 gpd

Therefore, there is No Impact.

APPENDIX G

Existing Traffic Noise Levels

RESULTS: SOUND LEVELS <Project Name?>

<Organization?>
<Analysis By?>

16 September 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 20 deg C, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated Avg: 61.1	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver6	6	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
Receiver7	7	1	0.0	61.3	66	61.3	10	----	61.3	0.0	8	-8.0
Receiver8	8	1	0.0	60.2	66	60.2	10	----	60.2	0.0	8	-8.0
Receiver9	9	1	0.0	57.8	66	57.8	10	----	57.8	0.0	8	-8.0
Receiver10	10	1	0.0	63.8	66	63.8	10	----	63.8	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Construction Traffic Noise Levels

RESULTS: SOUND LEVELS <Project Name?>

<Organization?>
<Analysis By?>

16 September 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS

ATMOSPHERICS: 20 deg C, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			Avg: 62.3									
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver6	6	1	0.0	65.6	66	65.6	10	----	65.6	0.0	8	-8.0
Receiver7	7	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0
Receiver8	8	1	0.0	60.9	66	60.9	10	----	60.9	0.0	8	-8.0
Receiver9	9	1	0.0	58.6	66	58.6	10	----	58.6	0.0	8	-8.0
Receiver10	10	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Operational Noise Levels

RESULTS: SOUND LEVELS <Project Name?>

<Organization?>
<Analysis By?>

16 September 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 20 deg C, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated Avg: 61.7	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver6	6	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0
Receiver7	7	1	0.0	61.4	66	61.4	10	----	61.4	0.0	8	-8.0
Receiver8	8	1	0.0	60.3	66	60.3	10	----	60.3	0.0	8	-8.0
Receiver9	9	1	0.0	57.9	66	57.9	10	----	57.9	0.0	8	-8.0
Receiver10	10	1	0.0	63.9	66	63.9	10	----	63.9	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

APPENDIX H

Stantec

Memo

To:	Christina Corsello	From:	Joy Bhattacharya and Maria Tribelhorn
	City of Vacaville Planning Department		Stantec Consulting Services Inc.
File:	Ashton Place Unit 3 Project	Date:	October 7, 2016

Reference: Ashton Place Unit 3 Project – Traffic Assumptions Memorandum

Stantec prepared this memo to provide some background information regarding the technical approach and assumptions for the Ashton Place Unit 3 Project, specifically with respect to the Vehicle Miles Traveled (VMT) analysis. To evaluate the potential impact of modifying the land use to include residential rather than commercial space, Stantec calculated the potential impact over a weekday week period. The metric used is VMT, in this case the average week day week vehicle miles traveled for a household.

The average weekday trip length for a single family home is 7.48 miles (Metropolitan Transportation Commission, 2008). This value represents the average length of all home-based trips taken during a day for a household, including commute, recreational, errand and any other type of trip. This value is a one-way trip, which would represent either an inbound or an outbound trip end. The weekday daily trip generation for the development of 15 homes was estimated to be 183 trips (which would include both inbound trips and outbound trips). Divided by the 15 homes, the trip generation per household is about 12 trips on a weekday, which would represent similar homes in the area. Since the average trip length is 7.48 miles, the average household would have a daily VMT of 90 miles (7.48*12). This translates to an average weekday week VMT of 450 miles (90*5) for a household in the Southtown area.

Over the course of a week, it was assumed that residents would have made three trips a week to the proposed commercial use at the study parcel, which would be on average a 0.48 mile trip for Southtown residents. With the change in planned land use, residents will not be able to make a short trip to a nearby location for commercial services. Instead, in the future they will need to go elsewhere for the same needs, which will increase VMT slightly over the course of the week. On average, a Southtown resident in the future will need to travel 2.22 miles for commercial services rather than 0.48 miles, which would be a reduction of 1.74 miles. At three trips a week, this would translate to 5.2 miles a week per household, which is about 1.2 percent of the current estimate VMT.

It is important to note that the VMT reduction would only apply to the future scenario in which commercial space were built rather than residential space. Residents do not currently experience trip length reduction as the commercial space has not been built and residents will not experience a change from current trip length in the future as a result of this land use change. The land use change simply limits the ability of the City to reduce future trip length for Southtown residents.

Reference: Ashton Place Unit 3 Project – Traffic Assumptions Memorandum

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To:	Christina Corsello City of Vacaville Community Development Department Planning Division 650 Merchant Street Vacaville, CA 95688	From:	Joy Bhattacharya and Maria Tribelhorn 1340 Treat Boulevard Suite 300 Walnut Creek, CA 94597
File:	Ashton Place Unit 3 Project ISMND	Date:	October 10, 2016
Subject	Traffic Study		

The City of Vacaville (City) is subject to the California Environmental Quality Act (CEQA) which requires all discretionary decisions made by the City Council and City Planning Commission be reviewed for environmental impacts in accordance to CEQA. Approval of the proposed Ashton Place Unit 3 Project (Project) is considered a discretionary action of the City requiring an appropriate CEQA Document. The proposed residential development will consist of 15 two-story detached homes located on a 1.76 acre parcel identified as Assessor's Parcel Number 0136-874-010 bordered by existing residential to the north and west, Magnolia Park to the south beyond Cogburn Circle, and undeveloped/agricultural land to the east beyond Vanden Road. The Project consists of the 15 detached homes, private yard areas, and provides four (4) parking stalls per dwelling unit. All units would have rear entry and the units adjacent to Vanden Road and Vega Way would face the public street. The constructed project would be managed by one Homeowners Association (HOA).

In addition to the Project, the application and CEQA document would also evaluate the requested zoning of the site. The project site is currently zoned Neighborhood Commercial (CN). As part of the Village at Southtown application submitted to the City, the Project requests to change the General Plan Designation of the property to Residential Medium Density (RM) and also rezone the property to RM. In addition to the General Plan mapping change, the Village at Southtown application is requesting an exception to General Plan Policy 2.3-I 13 whereby new lots in the Southtown area are to meet or exceed the standards for the adjacent neighboring homes. The intent of the policy is to ensure that existing residences are not adversely affected by changes to the development plans on adjacent parcels. This policy would apply to the northern boundary of the subject parcel as the proposed lot sized for the parcels that abut the northern property line are between 1,752 square feet (sf) and 2,058 sf while the existing lots to the north are a minimum of 3,600+/- sf. There are four lots proposed which would about five existing houses to the north. The minimum setback from proposed homes to the property line is 12 feet (ft) which is in excess of the typical side yard setback of 10 ft required in Residential Low Density Zoning Districts.

EXISTING ROADWAY SYSTEM

The City contains a hierarchy of roadways that serve different functions, ranging from the highway system to arterial, collector, and local streets. A subset of these roads are designated as regionally significant routes and are subject to regional policy considerations, as described in the sections

below that summarize the Solano County Comprehensive Transportation Plan and Congestion Management Program (Solano CMP).

Highways

Vacaville is served by two freeways, Interstate 80 and Interstate 505, which are part of the interstate highway network. Interstate 80 primarily has four travel lanes in each direction in the Vacaville area. It extends southwest through Fairfield and Vallejo, crosses the Carquinez and Oakland Bay Bridges, terminating at Highway 101 in San Francisco. It also extends northeast through Dixon and Davis, over the Sacramento River to Sacramento and beyond. Interstate 505 links Interstate 80 with Interstate 5, a major north-south freeway serving the west coast of the United States. Interstate 505 has two travel lanes in each direction.

These freeways and their associated interchanges define the regional context, which affects the local access and circulation within Vacaville.

Local Street and Roadway System

The local street and roadway system is composed of a hierarchy of streets with varying functions. The classifications within this hierarchy are explained in detail in the Roadway Classifications and Standards section below. Arterial roads range from six-lane arterials, such as portions of Elmira Road, to four lane arterials, such as Peabody Road and Nut Tree Road. Two-lane roads can also be designated as arterial roads. Collectors, which have two travel lanes, include Orchard Avenue, Marshall Road, and Vanden Road. Local streets are primarily found in residential neighborhoods, carry little through traffic, and generally have the lowest traffic volumes. Collector routes funnel traffic from local roadways to the arterial roadway network.

TRIP GENERATION

As this Project proposes a change to the previously approved zoning from the Southtown Project EIR, Stantec compared the trip generation of the proposed land use to the approved trip generation of the Southtown Project EIR for the parcels affected by the proposed project. Trip generation for the proposed project was calculated based on the proposed number of detached housing units. The approved project trip generation was calculated based on commercial use.

The City of Vacaville has their own model for trip generation. The Vacaville Citywide MINUTP Model results (obtained from the Southtown Project EIR) were used to estimate the approved land use trip generation. Under the approved land use, three acres were allocated to commercial use, and 1.33 of those acres are part of the proposed project. The approved land use resulted in an estimated 44 p.m. peak hour person-trips as shown in Table 1.

The Institute of Transportation Engineer's (ITE) Trip Generation Manual results for the proposed land use were also compared against the MINUTP Model results. The ITE weekday daily, a.m. peak, and p.m. peak hour trip generation rates used for the proposed project are shown in Table 1 as well as the p.m. peak hour trip generation rates for the approved project. As shown, the proposed project

land use is expected to generate 183 daily person-trips, 20 a.m. peak hour person-trips and 19 p.m. peak hour person-trips during the weekday, including 12 inbound trips and 7 outbound trips. The MINUTP model generated five p.m. peak hour trips. Because the ITE trip rates were more conservative, the ITE trip rates were used for the analysis for the proposed land use.

The proposed change in land use is expected to generate 25 fewer trips than the approved land use during the p.m. peak hour. It would generate slightly more a.m. peak hour trips but over the course of the day it would generate substantially fewer trips.

Table 1: Trip Generation

Land Use (ITE Code)	Size		Daily		a.m. Peak Hour				p.m. Peak Hour			
			Rate/ Equ	Total	Rate/ Equ	In	Out	Total	Rate/ Equ	In	Out	Total
Proposed Project: Single-Family Detached Housing (210)	15	units	Equ A	183	Equ B	5	15	20	Equ C	12	7	19
Proposed Project: Approved Neighborhood Commercial*	1.33	acres	400	532	3% of Daily	10	6	16	32.9*	14	30	44
DIFFERENCE			**-**	**349**	**-**	**-5**	**+9**	**+4**	**-**	**-2**	**-23**	**-25**
Anticipated Conversion from Policy Change: Residential Conversion of Additional 2.0 acre parcel	17	units	Equ A	206	Equ B	6	16	22	Equ C	18	8	21
Anticipated Conversion from Policy Change: Total Approved Neighborhood Commercial	3	acres	400	1200	3% of Daily	22	14	36	32.9*	31	67	98

Notes:
Equ A: Ln (T) = 0.92 Ln (X) + 2.72
Equ B: T = 0.70 (X) + 9.74
Equ C: Ln (T) = 0.90 Ln (X) + 0.51
Source: For Single Family Detached Housing: ITE Trip Generation, 9th Edition; Stantec August 2015

Source for approved neighborhood commercial: SANDAG Traffic Generation Rates (specialty retail, strip

commercial), April 2002 *Trip generation rate from the 2003 Southtown Project EIR Source: Stantec 2016

Shown in Table I is the trip generation for the Southtown Project, when the proposed commercial would get converted to residential use. The approved commercial usage trip generation numbers for the full Southtown development is taken from the Southtown EIR. The Southtown development had planned for 3 acres of commercial use, which would result in t 1,200 daily trips, 36 a.m. peak hour trips, and 98 p.m. peak hour trips. As a worst case scenario, we have assumed the conversion of the 3 acres would result in building the proposed project's 15 residential homes plus an additional 17 residential units (additional 2.0 acre parcel). The trip generation of the additional 17 residential units would result in 206 daily trips, including 22 trips during the a.m. peak and 21 trips during the p.m. peak hour. Therefore, the conversion of this commercial use to residential use is estimated to reduce the number of trips generated in the Southtown Project Area.

TRIP DISTRIBUTION

To evaluate the impact of the project, three study intersections were selected for analysis:

1. Alamo Drive and Nut Tree Road
2. Alamo Drive and Vanden Road
3. Alamo Drive and Leisure Town Road

The trips estimated in the previous section were distributed to the transportation network for the Existing Plus Project scenario. All of the trips were routed northbound on Vanden Road for both the a.m. and p.m. peak period. Trips were distributed based on the current traffic patterns.

LEVEL OF SERVICE ANALYSIS METHODOLOGY

Potential project improvements at the study intersections were quantified through the determination of level of service (LOS), a qualitative measure describing operational conditions within a traffic stream. LOS has letter designations ranging from A to F, with LOS A representing free flow traffic with little or no delay and LOS F representing jammed conditions with excessive delay and long back-ups. Procedures for analyzing each type of facility are based on the Highway Capacity Manual 2000 (HCM 2000).

Data was collected in spring of 2016 for the Roberts Ranch Specific Plan EIR for the City of Vacaville. This data was input into Synchro to analyze the existing and existing plus project LOS.

INTERSECTION LEVEL OF SERVICE ANALYSIS – EXISTING CONDITIONS

Table 2 below summarizes peak hour level of service at the study intersection under Existing Conditions. LOS worksheets are provided in **Attachment 1**. Under the existing a.m. and p.m. peak, the study intersections operate at an acceptable level of service (LOS) C.

Table 2 - Peak Hour Intersection LOS - Existing Conditions

Scenario	Intersection	Intersection Control	A.M. Peak Hour		P.M. Peak Hour	
			Avg. Delay (sec/veh)	LOS	Avg. Delay (sec/veh)	LOS
Existing	Nut Tree Road/Alamo Drive	Signalized	28.5	C	32.4	C
Existing	Vanden Road/Alamo Drive	Signalized	21.2	C	28.4	C
Existing	Leisure Town Road/Alamo Drive	Signalized	26.9	C	29.2	C

Notes: LOS = Level of Service

INTERSECTION LEVEL OF SERVICE ANALYSIS – EXISTING PLUS PROJECT CONDITIONS

Table 3, on the following page, summarizes peak hour level of service at the study intersections under the Plus Project condition, accounting for the trips generated by the proposed project land use. LOS worksheets are provided in **Attachment 1.**

Under the Existing Plus Project a.m. and p.m. peak, the study intersections continue to operate at an acceptable (LOS). The trips generated by the site do not have a significant impact on the study intersections.

Table 3 - Peak Hour Intersection LOS - Existing Plus Improved Conditions

Scenario	Intersection	Intersection Control	A.M. Peak Hour		P.M. Peak Hour	
			Avg. Delay (sec/veh)	LOS	Avg. Delay (sec/veh)	LOS
Existing Plus Project	Nut Tree Road/Alamo Drive	Signalized	28.6	C	32.4	C
Existing Plus Project	Vanden Road/Alamo Drive	Signalized	21.5	C	28.6	C
Existing Plus Project	Leisure Town Road/Alamo Drive	Signalized	27.2	C	29.3	C

Notes: Delay = Average control delay in seconds per vehicle, LOS = Level of Service.

VEHICLE MILES TRAVELED

The current Solano CMP states a goal of reducing Vehicle Miles Traveled (VMT) by 10%. The previously approved commercial land use would have provided service facilities such as a grocery

store or convenience store, allowing for short (potentially non-automobile) trips. Calculation of Vehicle Miles Traveled (VMT) is based on the number of vehicle-trips made and the length of those trips. In the Southtown area, the weekday daily trip generation rate for a single household is estimated to be about 12 person-trips (derived from 183 person-trips/15 households in Trip Generation section). Divided by the 15 homes, the trip generation per household is about 12 trips on a weekday, which would represent similar homes in the area. Since the average trip length is 7.48 miles, the average household would have a daily VMT of 90 miles (7.48*12). This translates to an average weekday week VMT of 450 miles (90*5) for a household in the Southtown area.

The previously approved commercial land use had potential to reduce the VMT of the Southtown area by providing the residences with close-by services. Over the course of a week, it was assumed that residents would have made three trips a week to the proposed commercial use at the study parcel, which would be on average a 0.48 mile trip for Southtown residents. With the change in planned land use, residents will not be able to make a short trip to a nearby location for commercial services. Instead, in the future they will need to go elsewhere for the same needs, which will increase VMT slightly over the course of the week. On average, a Southtown resident in the future will need to travel 2.22 miles for commercial services rather than 0.48 miles, which would be a reduction of 1.74 miles. At three trips a week, this would translate to 5.2 miles a week per household, which is about 1.2 percent of the current estimate VMT.

Although there are fewer trips generated for the proposed land use than the approved land use, there would be no reduction in VMT as would have been possible with the commercial land use. However, a reduction of 1.2% is not a significant amount. Also, as was previously noted, with the proposed residential use, Southtown residents would be subject to an average 2.22 mile trip to the nearest commercial service rather than a shorter trip to the project site. However, as 2.22 miles is less than the average trip length of 7.48 miles, this distance is presumed to be insignificant.

PARKING

Parking conditions were also evaluated for the proposed land use. The Project would need to incorporate a minimum of 32 parking spaces to meet the anticipated demand. However, as discussed in Section 2.0, Project Description, the proposed project accounts for 60 parking spots: 24 parking stalls, 30 garage spaces (each of the 15homes includes a double car garage), and six driveway spaces (as shown in **Table 4**). At an 85th percentile parking demand rate of 2.14 vehicles per dwelling unit, a demand of 32 vehicles during the peak weekday period was calculated. This demand should be accommodated by the on-site provided parking, and should not have a significant impact on the neighborhood on-street parking.

Table 4: Parking Generation

Land Use (ITE Code)	Size		Peak Demand		Peak Supply
			Rate/Equ	Total	Total
Proposed: Single-Family Detached Housing (210)	15	units	2.14[1]	32	32
Notes: *ITE 85th Percentile parking demand rate for peak time (ITE Parking Generation)					

CONCLUSION

The Project is expected to generate 20 person trips during the a.m. peak hour and 19 person trips during the p.m. peak hour. Under the Existing Conditions and the Existing Plus Project Conditions all three study intersections operate at an acceptable LOS. The change in land use results in fewer estimated trips, but would not allow for the reduction of VMT that may have been accomplished under commercial use. Additionally, the site is not expected to have a significant impact on the surrounding on-street parking. In general, the relatively low amount of traffic generated by the site is not expected to have a significant impact on the transportation network.

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Attachment: Attachment 1 – LOS Reports

References:

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Solano Transportation Authority. "Solano County Congestion Management Program." December 2015. Solano Transportation Authority. 12 September 2016.

Institute of Transportation Engineers. Parking Generation. 4th ed. Washington, DC: Institute of Transportation Engineers, 2010. Print.

Municipal Transportation Commission. Travel Forecasts for the San Francisco Bay Area 2006 – 2035. Metropolitan Transportation Commission. 2008.

Attachment 1– LOS Reports

HCM Signalized Intersection Capacity Analysis
1: Nut Tree Rd & Alamo Dr

9/13/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	351	79	62	474	104	175	221	80	105	129	164
Future Volume (vph)	170	351	79	62	474	104	175	221	80	105	129	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.6		5.0	5.6		5.0	5.6		5.0	5.6	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.96		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1703	3366		1570	3428		1770	3359		1719	3157	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1703	3366		1570	3428		1770	3359		1719	3157	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	382	86	67	515	113	190	240	87	114	140	178
RTOR Reduction (vph)	0	14	0	0	15	0	0	34	0	0	155	0
Lane Group Flow (vph)	185	454	0	67	613	0	190	293	0	114	163	0
Confl. Peds. (#/hr)			3			4			3			8
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	6%	4%	4%	15%	2%	3%	2%	2%	5%	5%	2%	5%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	13.2	28.0		6.6	21.4		13.1	15.2		8.2	10.3	
Effective Green, g (s)	13.2	28.0		6.6	21.4		13.1	15.2		8.2	10.3	
Actuated g/C Ratio	0.17	0.35		0.08	0.27		0.17	0.19		0.10	0.13	
Clearance Time (s)	5.0	5.6		5.0	5.6		5.0	5.6		5.0	5.6	
Vehicle Extension (s)	1.6	2.2		1.6	2.1		1.6	1.6		1.6	2.1	
Lane Grp Cap (vph)	283	1190		130	926		292	644		177	410	
v/s Ratio Prot	c0.11	0.13		0.04	c0.18		c0.11	c0.09		0.07	0.05	
v/s Ratio Perm												
v/c Ratio	0.65	0.38		0.52	0.66		0.65	0.46		0.64	0.40	
Uniform Delay, d1	30.9	19.1		34.8	25.7		30.9	28.3		34.1	31.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.1	0.1		1.4	1.4		3.9	0.2		5.9	0.3	
Delay (s)	35.0	19.2		36.2	27.1		34.8	28.5		40.0	31.9	
Level of Service	C	B		D	C		C	C		D	C	
Approach Delay (s)		23.7			28.0			30.8			34.0	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	79.2	Sum of lost time (s)	21.2
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	117	287	131	29	288	11	83	30	85	20	40	213
Future Volume (vph)	117	287	131	29	288	11	83	30	85	20	40	213
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.6		5.0	5.6		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	0.89		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3440		1805	3587		1805	1690		1805	1642	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1805	3440		1805	3587		1805	1690		1805	1642	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	139	342	156	35	343	13	99	36	101	24	48	254
RTOR Reduction (vph)	0	35	0	0	2	0	0	75	0	0	154	0
Lane Group Flow (vph)	139	463	0	35	354	0	99	62	0	24	148	0
Confl. Peds. (#/hr)						3						1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	9.8	22.5		3.1	15.8		6.5	16.8		2.0	12.3	
Effective Green, g (s)	9.8	22.5		3.1	15.8		6.5	16.8		2.0	12.3	
Actuated g/C Ratio	0.15	0.35		0.05	0.24		0.10	0.26		0.03	0.19	
Clearance Time (s)	5.0	5.6		5.0	5.6		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.6	2.1		1.6	2.1		1.6	1.6		1.6	1.6	
Lane Grp Cap (vph)	272	1190		86	871		180	436		55	310	
v/s Ratio Prot	c0.08	c0.13		0.02	0.10		c0.05	c0.04		0.01	c0.09	
v/s Ratio Perm												
v/c Ratio	0.51	0.39		0.41	0.41		0.55	0.14		0.44	0.48	
Uniform Delay, d1	25.4	16.1		30.1	20.7		27.9	18.6		30.9	23.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.1		1.1	0.1		2.1	0.1		2.0	0.4	
Delay (s)	26.1	16.2		31.2	20.8		29.9	18.6		33.0	23.9	
Level of Service	C	B		C	C		C	B		C	C	
Approach Delay (s)		18.3			21.7			23.4			24.6	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	20.6
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	264	71	12	20	65	39	6	220	11	50	317	123
Future Volume (vph)	264	71	12	20	65	39	6	220	11	50	317	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7		4.1	5.7		4.1	5.3	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1900	1615	1805	1793		1805	1887		1805	1820	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1805	1900	1615	1805	1793		1805	1887		1805	1820	
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	318	86	14	24	78	47	7	265	13	60	382	148
RTOR Reduction (vph)	0	0	9	0	23	0	0	2	0	0	16	0
Lane Group Flow (vph)	318	86	5	24	102	0	7	276	0	60	514	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4									
Actuated Green, G (s)	15.5	22.1	22.1	2.0	8.6		0.7	19.1		4.0	22.8	
Effective Green, g (s)	15.5	22.1	22.1	2.0	8.6		0.7	19.1		4.0	22.8	
Actuated g/C Ratio	0.23	0.33	0.33	0.03	0.13		0.01	0.29		0.06	0.34	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7		4.1	5.7		4.1	5.3	
Vehicle Extension (s)	1.5	2.3	2.3	1.5	2.4		1.5	2.3		1.5	2.3	
Lane Grp Cap (vph)	419	629	535	54	231		18	540		108	622	
v/s Ratio Prot	c0.18	0.05		0.01	c0.06		0.00	0.15		c0.03	c0.28	
v/s Ratio Perm			0.00									
v/c Ratio	0.76	0.14	0.01	0.44	0.44		0.39	0.51		0.56	0.83	
Uniform Delay, d1	23.9	15.6	15.0	31.8	26.8		32.8	19.9		30.5	20.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.9	0.1	0.0	2.1	0.9		5.0	0.5		3.5	8.6	
Delay (s)	30.7	15.7	15.0	33.9	27.7		37.8	20.4		34.0	28.7	
Level of Service	C	B	B	C	C		D	C		C	C	
Approach Delay (s)		27.1			28.7			20.8			29.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	66.7	Sum of lost time (s)	19.5
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1: Nut Tree Rd & Alamo Dr

9/13/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	234	371	137	99	485	162	141	203	54	155	348	208
Future Volume (vph)	234	371	137	99	485	162	141	203	54	155	348	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.6		5.0	5.6		5.0	5.6		5.0	5.6	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.96		1.00	0.97		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3414		1719	3427		1805	3430		1787	3356	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3414		1719	3427		1805	3430		1787	3356	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	241	382	141	102	500	167	145	209	56	160	359	214
RTOR Reduction (vph)	0	42	0	0	37	0	0	27	0	0	99	0
Lane Group Flow (vph)	241	481	0	102	630	0	145	238	0	160	474	0
Confl. Peds. (#/hr)			6			4			2			1
Confl. Bikes (#/hr)			1									1
Heavy Vehicles (%)	2%	1%	1%	5%	1%	1%	0%	1%	4%	1%	1%	1%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	14.0	27.5		6.4	19.9		9.9	14.2		10.2	14.5	
Effective Green, g (s)	14.0	27.5		6.4	19.9		9.9	14.2		10.2	14.5	
Actuated g/C Ratio	0.18	0.35		0.08	0.25		0.12	0.18		0.13	0.18	
Clearance Time (s)	5.0	5.6		5.0	5.6		5.0	5.6		5.0	5.6	
Vehicle Extension (s)	1.6	2.2		1.6	2.1		1.6	1.6		1.6	2.1	
Lane Grp Cap (vph)	311	1180		138	857		224	612		229	612	
v/s Ratio Prot	c0.14	0.14		0.06	c0.18		0.08	0.07		c0.09	c0.14	
v/s Ratio Perm												
v/c Ratio	0.77	0.41		0.74	0.74		0.65	0.39		0.70	0.77	
Uniform Delay, d1	31.2	19.8		35.7	27.4		33.1	28.8		33.2	30.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.5	0.1		16.2	2.9		4.8	0.1		7.3	5.6	
Delay (s)	41.7	19.9		52.0	30.3		37.9	29.0		40.5	36.6	
Level of Service	D	B		D	C		D	C		D	D	
Approach Delay (s)		26.8			33.2			32.1			37.4	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	32.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	79.5	Sum of lost time (s)	21.2
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	310	98	64	408	14	246	69	39	9	26	77
Future Volume (vph)	90	310	98	64	408	14	246	69	39	9	26	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.6		5.0	5.6		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	1.00		1.00	0.95		1.00	0.89	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3480		1805	3589		1805	1797		1805	1670	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1805	3480		1805	3589		1805	1797		1805	1670	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	103	356	113	74	469	16	283	79	45	10	30	89
RTOR Reduction (vph)	0	23	0	0	2	0	0	12	0	0	72	0
Lane Group Flow (vph)	103	446	0	74	483	0	283	112	0	10	47	0
Confl. Peds. (#/hr)						3						1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	7.4	17.8		7.8	18.2		16.5	30.5		0.9	14.9	
Effective Green, g (s)	7.4	17.8		7.8	18.2		16.5	30.5		0.9	14.9	
Actuated g/C Ratio	0.10	0.23		0.10	0.23		0.21	0.39		0.01	0.19	
Clearance Time (s)	5.0	5.6		5.0	5.6		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.6	2.1		1.6	2.1		1.6	1.6		1.6	1.6	
Lane Grp Cap (vph)	172	798		181	841		383	706		20	320	
v/s Ratio Prot	c0.06	0.13		0.04	c0.13		c0.16	c0.06		0.01	0.03	
v/s Ratio Perm												
v/c Ratio	0.60	0.56		0.41	0.57		0.74	0.16		0.50	0.15	
Uniform Delay, d1	33.7	26.4		32.7	26.3		28.5	15.2		38.1	26.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.7	0.5		0.5	0.6		6.3	0.0		7.0	0.1	
Delay (s)	37.4	27.0		33.3	26.9		34.8	15.3		45.1	26.1	
Level of Service	D	C		C	C		C	B		D	C	
Approach Delay (s)		28.8			27.8			28.9			27.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	77.6	Sum of lost time (s)	20.6
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	173	83	14	10	110	62	15	399	39	62	215	272
Future Volume (vph)	173	83	14	10	110	62	15	399	39	62	215	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7		4.1	5.7		4.1	5.3	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.99		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1900	1615	1805	1797		1805	1875		1805	1741	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1805	1900	1615	1805	1797		1805	1875		1805	1741	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	206	99	17	12	131	74	18	475	46	74	256	324
RTOR Reduction (vph)	0	0	12	0	22	0	0	4	0	0	55	0
Lane Group Flow (vph)	206	99	5	12	183	0	18	517	0	74	525	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4									
Actuated Green, G (s)	12.0	23.5	23.5	0.9	12.4		1.6	24.8		5.6	29.2	
Effective Green, g (s)	12.0	23.5	23.5	0.9	12.4		1.6	24.8		5.6	29.2	
Actuated g/C Ratio	0.16	0.32	0.32	0.01	0.17		0.02	0.33		0.08	0.39	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7		4.1	5.7		4.1	5.3	
Vehicle Extension (s)	1.5	2.3	2.3	1.5	2.4		1.5	2.3		1.5	2.3	
Lane Grp Cap (vph)	291	600	510	21	299		38	625		136	684	
v/s Ratio Prot	c0.11	0.05		0.01	c0.10		0.01	0.28		c0.04	c0.30	
v/s Ratio Perm			0.00									
v/c Ratio	0.71	0.17	0.01	0.57	0.61		0.47	0.83		0.54	0.77	
Uniform Delay, d1	29.5	18.3	17.4	36.5	28.7		35.9	22.8		33.1	19.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.3	0.1	0.0	21.2	3.1		3.4	8.5		2.4	4.8	
Delay (s)	35.8	18.4	17.4	57.7	31.8		39.3	31.3		35.5	24.4	
Level of Service	D	B	B	E	C		D	C		D	C	
Approach Delay (s)		29.5			33.2			31.6			25.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	74.3	Sum of lost time (s)	19.5
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	353	79	62	480	105	175	221	80	106	129	164
Future Volume (vph)	170	353	79	62	480	105	175	221	80	106	129	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.6		5.0	5.6		5.0	5.6		5.0	5.6	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.96		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1703	3366		1570	3429		1770	3359		1719	3157	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1703	3366		1570	3429		1770	3359		1719	3157	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	384	86	67	522	114	190	240	87	115	140	178
RTOR Reduction (vph)	0	14	0	0	15	0	0	34	0	0	155	0
Lane Group Flow (vph)	185	456	0	67	621	0	190	293	0	115	163	0
Confl. Peds. (#/hr)			3			4			3			8
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	6%	4%	4%	15%	2%	3%	2%	2%	5%	5%	2%	5%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	13.3	28.3		6.6	21.6		13.2	15.2		8.2	10.2	
Effective Green, g (s)	13.3	28.3		6.6	21.6		13.2	15.2		8.2	10.2	
Actuated g/C Ratio	0.17	0.36		0.08	0.27		0.17	0.19		0.10	0.13	
Clearance Time (s)	5.0	5.6		5.0	5.6		5.0	5.6		5.0	5.6	
Vehicle Extension (s)	1.6	2.2		1.6	2.1		1.6	1.6		1.6	2.1	
Lane Grp Cap (vph)	284	1198		130	931		293	642		177	405	
v/s Ratio Prot	c0.11	0.14		0.04	c0.18		c0.11	c0.09		0.07	0.05	
v/s Ratio Perm												
v/c Ratio	0.65	0.38		0.52	0.67		0.65	0.46		0.65	0.40	
Uniform Delay, d1	30.9	19.1		34.9	25.8		31.0	28.5		34.3	31.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.0	0.1		1.4	1.5		3.7	0.2		6.0	0.3	
Delay (s)	35.0	19.2		36.4	27.2		34.7	28.7		40.3	32.1	
Level of Service	C	B		D	C		C	C		D	C	
Approach Delay (s)		23.6			28.1			30.9			34.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	79.5	Sum of lost time (s)	21.2
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	117	287	134	30	288	11	90	32	91	20	41	213
Future Volume (vph)	117	287	134	30	288	11	90	32	91	20	41	213
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.6		5.0	5.6		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	0.89		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3437		1805	3587		1805	1689		1805	1643	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1805	3437		1805	3587		1805	1689		1805	1643	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	139	342	160	36	343	13	107	38	108	24	49	254
RTOR Reduction (vph)	0	36	0	0	2	0	0	75	0	0	151	0
Lane Group Flow (vph)	139	466	0	36	354	0	107	71	0	24	152	0
Confl. Peds. (#/hr)						3						1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	9.8	22.7		3.1	16.0		6.8	17.3		2.0	12.5	
Effective Green, g (s)	9.8	22.7		3.1	16.0		6.8	17.3		2.0	12.5	
Actuated g/C Ratio	0.15	0.35		0.05	0.24		0.10	0.26		0.03	0.19	
Clearance Time (s)	5.0	5.6		5.0	5.6		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.6	2.1		1.6	2.1		1.6	1.6		1.6	1.6	
Lane Grp Cap (vph)	269	1187		85	873		186	444		54	312	
v/s Ratio Prot	c0.08	c0.14		0.02	0.10		c0.06	c0.04		0.01	c0.09	
v/s Ratio Perm												
v/c Ratio	0.52	0.39		0.42	0.41		0.58	0.16		0.44	0.49	
Uniform Delay, d1	25.8	16.3		30.4	20.9		28.1	18.6		31.3	23.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.1		1.2	0.1		2.7	0.1		2.1	0.4	
Delay (s)	26.5	16.4		31.7	21.0		30.7	18.7		33.4	24.2	
Level of Service	C	B		C	C		C	B		C	C	
Approach Delay (s)		18.6			22.0			23.8			24.8	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.7	Sum of lost time (s)	20.6
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	269	72	12	20	65	39	6	220	11	50	317	124
Future Volume (vph)	269	72	12	20	65	39	6	220	11	50	317	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7		4.1	5.7		4.1	5.3	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1900	1615	1805	1793		1805	1887		1805	1820	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1805	1900	1615	1805	1793		1805	1887		1805	1820	
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	324	87	14	24	78	47	7	265	13	60	382	149
RTOR Reduction (vph)	0	0	9	0	23	0	0	2	0	0	16	0
Lane Group Flow (vph)	324	87	5	24	102	0	7	276	0	60	515	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4									
Actuated Green, G (s)	15.7	22.3	22.3	2.0	8.6		0.7	19.2		4.0	22.9	
Effective Green, g (s)	15.7	22.3	22.3	2.0	8.6		0.7	19.2		4.0	22.9	
Actuated g/C Ratio	0.23	0.33	0.33	0.03	0.13		0.01	0.29		0.06	0.34	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7		4.1	5.7		4.1	5.3	
Vehicle Extension (s)	1.5	2.3	2.3	1.5	2.4		1.5	2.3		1.5	2.3	
Lane Grp Cap (vph)	422	632	537	53	230		18	540		107	622	
v/s Ratio Prot	c0.18	0.05		0.01	c0.06		0.00	0.15		c0.03	c0.28	
v/s Ratio Perm			0.00									
v/c Ratio	0.77	0.14	0.01	0.45	0.44		0.39	0.51		0.56	0.83	
Uniform Delay, d1	23.9	15.6	15.0	32.0	27.0		32.9	20.0		30.6	20.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.4	0.1	0.0	2.2	0.9		5.0	0.5		4.0	8.6	
Delay (s)	31.3	15.7	15.0	34.2	27.9		37.9	20.5		34.6	28.9	
Level of Service	C	B	B	C	C		D	C		C	C	
Approach Delay (s)		27.6			28.9			20.9			29.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	67.0	Sum of lost time (s)	19.5
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	234	375	137	100	488	163	141	203	54	157	348	208
Future Volume (vph)	234	375	137	100	488	163	141	203	54	157	348	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.6		5.0	5.6		5.0	5.6		5.0	5.6	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.96		1.00	0.97		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3415		1719	3427		1805	3430		1787	3356	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3415		1719	3427		1805	3430		1787	3356	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	241	387	141	103	503	168	145	209	56	162	359	214
RTOR Reduction (vph)	0	41	0	0	37	0	0	27	0	0	99	0
Lane Group Flow (vph)	241	487	0	103	634	0	145	238	0	162	474	0
Confl. Peds. (#/hr)			6			4			2			1
Confl. Bikes (#/hr)			1									1
Heavy Vehicles (%)	2%	1%	1%	5%	1%	1%	0%	1%	4%	1%	1%	1%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	14.0	27.5		6.5	20.0		9.9	14.2		10.3	14.6	
Effective Green, g (s)	14.0	27.5		6.5	20.0		9.9	14.2		10.3	14.6	
Actuated g/C Ratio	0.18	0.35		0.08	0.25		0.12	0.18		0.13	0.18	
Clearance Time (s)	5.0	5.6		5.0	5.6		5.0	5.6		5.0	5.6	
Vehicle Extension (s)	1.6	2.2		1.6	2.1		1.6	1.6		1.6	2.1	
Lane Grp Cap (vph)	310	1178		140	859		224	611		230	614	
v/s Ratio Prot	c0.14	0.14		0.06	c0.19		0.08	0.07		c0.09	c0.14	
v/s Ratio Perm												
v/c Ratio	0.78	0.41		0.74	0.74		0.65	0.39		0.70	0.77	
Uniform Delay, d1	31.4	19.9		35.8	27.4		33.2	28.9		33.2	31.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.6	0.1		15.8	2.9		4.8	0.2		7.8	5.5	
Delay (s)	42.0	20.1		51.6	30.4		38.0	29.1		41.0	36.5	
Level of Service	D	C		D	C		D	C		D	D	
Approach Delay (s)		26.9			33.2			32.2			37.5	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	32.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	79.7	Sum of lost time (s)	21.2
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	310	104	68	408	14	251	70	40	9	28	77
Future Volume (vph)	90	310	104	68	408	14	251	70	40	9	28	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.6		5.0	5.6		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	1.00		1.00	0.95		1.00	0.89	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3473		1805	3589		1805	1796		1805	1674	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1805	3473		1805	3589		1805	1796		1805	1674	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	103	356	120	78	469	16	289	80	46	10	32	89
RTOR Reduction (vph)	0	25	0	0	2	0	0	12	0	0	70	0
Lane Group Flow (vph)	103	451	0	78	483	0	289	114	0	10	51	0
Confl. Peds. (#/hr)						3						1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	7.5	17.9		7.8	18.2		17.0	31.0		0.9	14.9	
Effective Green, g (s)	7.5	17.9		7.8	18.2		17.0	31.0		0.9	14.9	
Actuated g/C Ratio	0.10	0.23		0.10	0.23		0.22	0.40		0.01	0.19	
Clearance Time (s)	5.0	5.6		5.0	5.6		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.6	2.1		1.6	2.1		1.6	1.6		1.6	1.6	
Lane Grp Cap (vph)	173	794		180	835		392	711		20	318	
v/s Ratio Prot	c0.06	0.13		0.04	c0.13		c0.16	c0.06		0.01	0.03	
v/s Ratio Perm												
v/c Ratio	0.60	0.57		0.43	0.58		0.74	0.16		0.50	0.16	
Uniform Delay, d1	33.9	26.7		33.1	26.6		28.5	15.2		38.4	26.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.6	0.6		0.6	0.6		6.1	0.0		7.0	0.1	
Delay (s)	37.5	27.3		33.7	27.3		34.6	15.2		45.4	26.5	
Level of Service	D	C		C	C		C	B		D	C	
Approach Delay (s)		29.1			28.1			28.8			28.0	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	78.2	Sum of lost time (s)	20.6
Intersection Capacity Utilization	54.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	83	14	10	111	62	15	399	39	62	215	275
Future Volume (vph)	174	83	14	10	111	62	15	399	39	62	215	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7		4.1	5.7		4.1	5.3	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.99		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1900	1615	1805	1798		1805	1875		1805	1740	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1805	1900	1615	1805	1798		1805	1875		1805	1740	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	207	99	17	12	132	74	18	475	46	74	256	327
RTOR Reduction (vph)	0	0	12	0	22	0	0	4	0	0	55	0
Lane Group Flow (vph)	207	99	5	12	184	0	18	517	0	74	528	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4									
Actuated Green, G (s)	12.0	23.5	23.5	0.9	12.4		1.6	24.9		5.6	29.3	
Effective Green, g (s)	12.0	23.5	23.5	0.9	12.4		1.6	24.9		5.6	29.3	
Actuated g/C Ratio	0.16	0.32	0.32	0.01	0.17		0.02	0.33		0.08	0.39	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7		4.1	5.7		4.1	5.3	
Vehicle Extension (s)	1.5	2.3	2.3	1.5	2.4		1.5	2.3		1.5	2.3	
Lane Grp Cap (vph)	291	600	510	21	299		38	627		135	685	
v/s Ratio Prot	c0.11	0.05		0.01	c0.10		0.01	0.28		c0.04	c0.30	
v/s Ratio Perm			0.00									
v/c Ratio	0.71	0.17	0.01	0.57	0.62		0.47	0.82		0.55	0.77	
Uniform Delay, d1	29.6	18.4	17.5	36.6	28.8		36.0	22.7		33.2	19.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.7	0.1	0.0	21.2	3.1		3.4	8.4		2.4	5.0	
Delay (s)	36.2	18.4	17.5	57.8	31.9		39.3	31.1		35.6	24.7	
Level of Service	D	B	B	E	C		D	C		D	C	
Approach Delay (s)		29.8			33.3			31.4			25.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	74.4	Sum of lost time (s)	19.5
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			