

**Air Quality and
Greenhouse Gas Emissions
Technical Report**

1830 N Blue Heights Drive
Los Angeles, CA 90069

Prepared for:

City of Los Angeles
Department of City Planning

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PURPOSE

This Air Quality and Greenhouse Gas Technical Report was prepared to support the CEQA evaluation of a proposed residence. The Project Site is within the Hollywood Community Plan area and the Bel Air – Beverly Crest neighborhood of the City of Los Angeles. The Project involves the construction of a new 2-story, 8,976-square-foot single-family residence with attached 1,107-square-foot 4-car garage and 8,611 square feet of basement space.

This report describes the existing framework and methodology used to estimate emissions associated with the Project and includes the model data output sheets.

FRAMEWORK

Air Quality Pollutants

Title I of the federal Clean Air Act (CAA) identifies attainment, nonattainment, and unclassifiable areas with regard to the criteria pollutants, and sets deadlines for all areas to reach attainment for criteria pollutants. The USEPA has set National Ambient Air Quality Standards (NAAQS) and also designates air basins as achieving “attainment” or suffering from “nonattainment” of the standards.

The California Clean Air Act requires all areas of the state to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practicable date. The California Air Resources Board (CARB) sets the CAAQS for each of the criteria pollutants. In general, the CAAQS are more restrictive than the NAAQS.

California is divided into air districts which are the regional governing authorities with primary responsibility for controlling air pollution from stationary sources. Los Angeles is within the South Coast Air Quality Management District (SCAQMD). SCAQMD has established thresholds and methodology for evaluating the significance of emissions of criteria pollutants.

The criteria pollutants are described below.

Ozone

Ozone (O₃) is a gas formed when volatile organic compounds (VOCs) and oxides of nitrogen (NO_x), both byproducts of internal combustion engine exhaust and other sources, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months, when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.

Respirable Particulate Matter (PM10)

Respirable particulate matter (PM10) consists of extremely small, suspended particles or droplets 10 micrometers (μm) or smaller in diameter. Some sources of PM10, like pollen and windstorms, are naturally occurring. However, in populated areas, most PM10 is caused by road dust, diesel soot, combustion products, the abrasion of tires and brakes, and construction activities.

Fine Particulate Matter (PM2.5)

PM2.5 refers to fine particulate matter that is 2.5 μm or smaller in size. The sources of PM2.5 include fuel combustion from automobiles, power plants, wood burning, industrial processes, and diesel-powered vehicles such as buses and trucks. These fine particles are also formed in the atmosphere when gases such as SO₂, NO_x, and VOCs are transformed in the air by chemical reactions.

Carbon Monoxide (CO)

Carbon monoxide (CO) is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, and because motor vehicles operating at slow speeds are the primary source of CO in the basin, the highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

Nitrogen Dioxide (NO₂)

Nitrogen dioxide (NO₂) is a reddish-brown, highly reactive gas that is formed in the ambient air through the oxidation of nitric oxide (NO). NO₂ is also a byproduct of fuel combustion. The principle form of NO₂ produced by combustion is NO, but NO reacts quickly to form NO₂, creating the mixture of NO and NO₂ referred to as oxides of nitrogen (NO_x). NO₂ acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO_x is only potentially irritating. NO₂ absorbs blue light, the result of which is a brownish-red cast to the atmosphere and reduced visibility.

Sulfur Dioxide (SO₂)

Sulfur Dioxide (SO₂) is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of the burning of high-sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO₂ oxidizes in the atmosphere, it forms sulfates (SO₄).

Greenhouse Gases

Greenhouse gases (GHGs) are gases that trap heat in the atmosphere in a way that is analogous to how a greenhouse functions. Common GHGs include water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxides, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. Both natural processes and human activities emit GHGs. Emissions from human activities, such as electricity production and vehicle use, have elevated concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations. The presence of these GHGs in the atmosphere affects the earth's temperature by retaining heat.

In September 2006, Governor Schwarzenegger signed California's Global Warming Solutions Act of 2006 (AB32) that requires CARB to establish statewide GHG emissions cap for 2020 based on 1990 emissions. As such, evaluating GHG emissions has become part of the CEQA process. The SCAQMD has provided guidance to determining significance of GHG emissions.

EMISSIONS MODELING

Emissions of air pollutants and GHGs were estimated for construction and operation of the Project using the California Emission Estimator Model (CalEEMod). CalEEMod is a computer model developed by the California Air Pollution Control Officer's Association (CAPCOA) in collaboration with the California Air Districts and is the recommended methodology by SCAQMD. CalEEMod relies on project-specific information pertaining to geographic setting, utility service, construction scheduling, equipment inventory, and operational design features to generate estimates of air pollutants and GHG emissions. The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

The resulting calculations of maximum daily emissions are shown in the attached model output pages. Within the CalEEMod terminology, "Mitigated Construction" refers to compliance with SCAQMD rules. It is assumed that Project construction would abide by these rules.

For construction emissions, the highest value from mitigated onsite construction output tables for each phases of construction for each season (Winter, Summer) is used. For operational values, the highest values from each seasonal output are used. Predicted GHG emissions are derived from the Annual project output. The current accepted method for accounting for construction GHG emissions within the SCAQMD service area is to annualize these emissions over a project's operational lifetime, generally defined as 30 years for analysis purposes.

Blue Heights Residence - South Coast Air Basin, Annual

Blue Heights Residence
South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	1.00	Dwelling Unit	0.85	16,360.00	3

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2019
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Blue Heights Residence - South Coast Air Basin, Annual

Project Characteristics -

Land Use - Lot coverage = 14,316 sq. ft.

Lot area = 37,056 sq. ft.

Construction Phase - Export during grading would be limited to 12 truck trips per day with a capacity of 10 cubic yards per truck

Off-road Equipment - No cranes

Grading - 9,586 cy of soil exported offi-site

Trips and VMT - Grading will last approximately 80 days, with 12 truck trips per day with a capacity of 10 cy.

Export taken to Scholl Canyon Landfill, 40 miles roundtrip

Woodstoves - No woodstoves

Construction Off-road Equipment Mitigation - Per CARB Title 13 CCR Section 2520-2427, equipment required to be Tier 4 Final for new equipment. For conservative analysis, equipment set to Tier 2.

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstructionPhase	NumDays	2.00	80.00
tblConstructionPhase	PhaseEndDate	7/31/2017	4/24/2018

Blue Heights Residence - South Coast Air Basin, Annual

tblConstructionPhase	PhaseEndDate	7/31/2017	4/10/2018
tblConstructionPhase	PhaseEndDate	7/31/2017	11/21/2017
tblConstructionPhase	PhaseEndDate	7/31/2017	4/17/2018
tblConstructionPhase	PhaseEndDate	7/31/2017	8/1/2017
tblConstructionPhase	PhaseStartDate	8/1/2017	4/18/2018
tblConstructionPhase	PhaseStartDate	8/1/2017	11/22/2017
tblConstructionPhase	PhaseStartDate	8/1/2017	8/2/2017
tblConstructionPhase	PhaseStartDate	8/1/2017	4/11/2018
tblGrading	AcresOfGrading	0.00	0.85
tblGrading	MaterialExported	0.00	9,586.00
tblLandUse	BuildingSpaceSquareFeet	1,800.00	16,360.00
tblLandUse	LandUseSquareFeet	1,800.00	16,360.00
tblLandUse	LotAcreage	0.32	0.85
tblProjectCharacteristics	OperationalYear	2018	2019
tblTripsAndVMT	HaulingTripLength	20.00	40.00
tblTripsAndVMT	HaulingTripNumber	1,198.00	960.00
tblWoodstoves	NumberCatalytic	0.05	0.00
tblWoodstoves	NumberNoncatalytic	0.05	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

Blue Heights Residence - South Coast Air Basin, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	8-1-2017	10-31-2017	0.6216	0.6216
2	11-1-2017	1-31-2018	0.4782	0.4782
3	2-1-2018	4-30-2018	0.3801	0.3801
		Highest	0.6216	0.6216

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	0.0675	3.3000e-004	0.0137	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0393	0.2210	0.2603	2.0000e-005	1.0000e-005	0.2629
Energy	1.8000e-004	1.5400e-003	6.6000e-004	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	6.5386	6.5386	1.5000e-004	6.0000e-005	6.5590
Mobile	5.5400e-003	0.0114	0.0623	1.4000e-004	0.0122	1.4000e-004	0.0123	3.2500e-003	1.3000e-004	3.3800e-003	0.0000	12.8430	12.8430	8.4000e-004	0.0000	12.8641
Waste						0.0000	0.0000		0.0000	0.0000	0.2497	0.0000	0.2497	0.0148	0.0000	0.6186
Water						0.0000	0.0000		0.0000	0.0000	0.0207	0.7267	0.7474	2.1400e-003	5.0000e-005	0.8169
Total	0.0732	0.0132	0.0766	1.6000e-004	0.0122	7.7000e-004	0.0129	3.2500e-003	7.6000e-004	4.0100e-003	0.3097	20.3293	20.6389	0.0179	1.2000e-004	21.1214

Blue Heights Residence - South Coast Air Basin, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0646	3.1000e-004	0.0104	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2330	0.2330	2.0000e-005	0.0000	0.2347
Energy	1.8000e-004	1.5400e-003	6.6000e-004	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	6.5386	6.5386	1.5000e-004	6.0000e-005	6.5590
Mobile	5.5400e-003	0.0114	0.0623	1.4000e-004	0.0122	1.4000e-004	0.0123	3.2500e-003	1.3000e-004	3.3800e-003	0.0000	12.8430	12.8430	8.4000e-004	0.0000	12.8641
Waste						0.0000	0.0000		0.0000	0.0000	0.0749	0.0000	0.0749	4.4300e-003	0.0000	0.1856
Water						0.0000	0.0000		0.0000	0.0000	0.0165	0.6167	0.6332	1.7100e-003	4.0000e-005	0.6889
Total	0.0703	0.0132	0.0734	1.5000e-004	0.0122	3.3000e-004	0.0125	3.2500e-003	3.2000e-004	3.5700e-003	0.0914	20.2313	20.3227	7.1500e-003	1.0000e-004	20.5322

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	3.99	0.15	4.20	6.25	0.00	57.14	3.40	0.00	57.89	10.97	70.47	0.48	1.53	60.08	16.67	2.79

3.0 Construction Detail

Construction Phase

Blue Heights Residence - South Coast Air Basin, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	4/18/2018	4/24/2018	5	5	
2	Building Construction	Building Construction	11/22/2017	4/10/2018	5	100	
3	Grading	Grading	8/2/2017	11/21/2017	5	80	
4	Paving	Paving	4/11/2018	4/17/2018	5	5	
5	Site Preparation	Site Preparation	8/1/2017	8/1/2017	5	1	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0.85

Acres of Paving: 0

Residential Indoor: 33,129; Residential Outdoor: 11,043; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Blue Heights Residence - South Coast Air Basin, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Building Construction	Cranes	1	4.00	231	0.29
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	960.00	14.70	6.90	40.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 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	0.0512					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5000e-004	5.0100e-003	4.6400e-003	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	0.6383	0.6383	6.0000e-005	0.0000	0.6398
Total	0.0519	5.0100e-003	4.6400e-003	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	0.6383	0.6383	6.0000e-005	0.0000	0.6398

Blue Heights Residence - South Coast Air Basin, Annual

3.2 Architectural Coating - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0512					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5000e-004	5.0100e-003	4.6400e-003	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	0.6383	0.6383	6.0000e-005	0.0000	0.6398
Total	0.0519	5.0100e-003	4.6400e-003	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	0.6383	0.6383	6.0000e-005	0.0000	0.6398

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3.2 Architectural Coating - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

3.3 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	0.0179	0.1786	0.1130	1.6000e-004		0.0120	0.0120		0.0111	0.0111	0.0000	14.8078	14.8078	4.5400e-003	0.0000	14.9213
Total	0.0179	0.1786	0.1130	1.6000e-004		0.0120	0.0120		0.0111	0.0111	0.0000	14.8078	14.8078	4.5400e-003	0.0000	14.9213

Blue Heights Residence - South Coast Air Basin, Annual

3.3 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0179	0.1786	0.1130	1.6000e-004		0.0120	0.0120		0.0111	0.0111	0.0000	14.8078	14.8078	4.5400e-003	0.0000	14.9212
Total	0.0179	0.1786	0.1130	1.6000e-004		0.0120	0.0120		0.0111	0.0111	0.0000	14.8078	14.8078	4.5400e-003	0.0000	14.9212

Blue Heights Residence - South Coast Air Basin, Annual

3.3 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

3.3 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	0.0391	0.3971	0.2790	4.1000e-004		0.0255	0.0255		0.0235	0.0235	0.0000	37.4442	37.4442	0.0117	0.0000	37.7356
Total	0.0391	0.3971	0.2790	4.1000e-004		0.0255	0.0255		0.0235	0.0235	0.0000	37.4442	37.4442	0.0117	0.0000	37.7356

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3.3 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0391	0.3971	0.2790	4.1000e-004		0.0255	0.0255		0.0235	0.0235	0.0000	37.4442	37.4442	0.0117	0.0000	37.7356
Total	0.0391	0.3971	0.2790	4.1000e-004		0.0255	0.0255		0.0235	0.0235	0.0000	37.4442	37.4442	0.0117	0.0000	37.7356

Blue Heights Residence - South Coast Air Basin, Annual

3.3 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0311	0.0000	0.0311	0.0167	0.0000	0.0167	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0484	0.4199	0.3167	4.8000e-004		0.0293	0.0293		0.0279	0.0279	0.0000	42.7940	42.7940	8.4100e-003	0.0000	43.0044
Total	0.0484	0.4199	0.3167	4.8000e-004	0.0311	0.0293	0.0604	0.0167	0.0279	0.0446	0.0000	42.7940	42.7940	8.4100e-003	0.0000	43.0044

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3.4 Grading - 2017

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	9.0100e-003	0.2882	0.0567	7.2000e-004	0.0165	1.7300e-003	0.0182	4.5300e-003	1.6500e-003	6.1800e-003	0.0000	70.5504	70.5504	4.6200e-003	0.0000	70.6659
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3900e-003	2.0000e-003	0.0213	5.0000e-005	4.3900e-003	4.0000e-005	4.4300e-003	1.1700e-003	3.0000e-005	1.2000e-003	0.0000	4.3354	4.3354	1.6000e-004	0.0000	4.3395
Total	0.0114	0.2902	0.0781	7.7000e-004	0.0209	1.7700e-003	0.0227	5.7000e-003	1.6800e-003	7.3800e-003	0.0000	74.8858	74.8858	4.7800e-003	0.0000	75.0054

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0121	0.0000	0.0121	6.5100e-003	0.0000	6.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0484	0.4199	0.3167	4.8000e-004		0.0293	0.0293		0.0279	0.0279	0.0000	42.7939	42.7939	8.4100e-003	0.0000	43.0043
Total	0.0484	0.4199	0.3167	4.8000e-004	0.0121	0.0293	0.0414	6.5100e-003	0.0279	0.0344	0.0000	42.7939	42.7939	8.4100e-003	0.0000	43.0043

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3.4 Grading - 2017

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	9.0100e-003	0.2882	0.0567	7.2000e-004	0.0165	1.7300e-003	0.0182	4.5300e-003	1.6500e-003	6.1800e-003	0.0000	70.5504	70.5504	4.6200e-003	0.0000	70.6659
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3900e-003	2.0000e-003	0.0213	5.0000e-005	4.3900e-003	4.0000e-005	4.4300e-003	1.1700e-003	3.0000e-005	1.2000e-003	0.0000	4.3354	4.3354	1.6000e-004	0.0000	4.3395
Total	0.0114	0.2902	0.0781	7.7000e-004	0.0209	1.7700e-003	0.0227	5.7000e-003	1.6800e-003	7.3800e-003	0.0000	74.8858	74.8858	4.7800e-003	0.0000	75.0054

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	2.3000e-003	0.0219	0.0181	3.0000e-005		1.2800e-003	1.2800e-003		1.1800e-003	1.1800e-003	0.0000	2.4270	2.4270	6.8000e-004	0.0000	2.4441
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.3000e-003	0.0219	0.0181	3.0000e-005		1.2800e-003	1.2800e-003		1.1800e-003	1.1800e-003	0.0000	2.4270	2.4270	6.8000e-004	0.0000	2.4441

Blue Heights Residence - South Coast Air Basin, Annual

3.5 Paving - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	2.0000e-004	2.1000e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4741	0.4741	2.0000e-005	0.0000	0.4745
Total	2.4000e-004	2.0000e-004	2.1000e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4741	0.4741	2.0000e-005	0.0000	0.4745

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	2.3000e-003	0.0219	0.0181	3.0000e-005		1.2800e-003	1.2800e-003		1.1800e-003	1.1800e-003	0.0000	2.4270	2.4270	6.8000e-004	0.0000	2.4441
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.3000e-003	0.0219	0.0181	3.0000e-005		1.2800e-003	1.2800e-003		1.1800e-003	1.1800e-003	0.0000	2.4270	2.4270	6.8000e-004	0.0000	2.4441

Blue Heights Residence - South Coast Air Basin, Annual

3.5 Paving - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	2.0000e-004	2.1000e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4741	0.4741	2.0000e-005	0.0000	0.4745
Total	2.4000e-004	2.0000e-004	2.1000e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4741	0.4741	2.0000e-005	0.0000	0.4745

3.6 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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3000e-004	5.2600e-003	2.1800e-003	0.0000		2.4000e-004	2.4000e-004		2.2000e-004	2.2000e-004	0.0000	0.4534	0.4534	1.4000e-004	0.0000	0.4569
Total	4.3000e-004	5.2600e-003	2.1800e-003	0.0000	2.7000e-004	2.4000e-004	5.1000e-004	3.0000e-005	2.2000e-004	2.5000e-004	0.0000	0.4534	0.4534	1.4000e-004	0.0000	0.4569

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3.6 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.3000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0271	0.0271	0.0000	0.0000	0.0271
Total	1.0000e-005	1.0000e-005	1.3000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0271	0.0271	0.0000	0.0000	0.0271

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3000e-004	5.2600e-003	2.1800e-003	0.0000		2.4000e-004	2.4000e-004		2.2000e-004	2.2000e-004	0.0000	0.4534	0.4534	1.4000e-004	0.0000	0.4569
Total	4.3000e-004	5.2600e-003	2.1800e-003	0.0000	1.0000e-004	2.4000e-004	3.4000e-004	1.0000e-005	2.2000e-004	2.3000e-004	0.0000	0.4534	0.4534	1.4000e-004	0.0000	0.4569

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3.6 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.3000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0271	0.0271	0.0000	0.0000	0.0271
Total	1.0000e-005	1.0000e-005	1.3000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0271	0.0271	0.0000	0.0000	0.0271

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Blue Heights Residence - South Coast Air Basin, Annual

	ROG	NOx	CO	SO2	Fugitive 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	5.5400e-003	0.0114	0.0623	1.4000e-004	0.0122	1.4000e-004	0.0123	3.2500e-003	1.3000e-004	3.3800e-003	0.0000	12.8430	12.8430	8.4000e-004	0.0000	12.8641
Unmitigated	5.5400e-003	0.0114	0.0623	1.4000e-004	0.0122	1.4000e-004	0.0123	3.2500e-003	1.3000e-004	3.3800e-003	0.0000	12.8430	12.8430	8.4000e-004	0.0000	12.8641

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	9.52	9.91	8.62	32,282	32,282
Total	9.52	9.91	8.62	32,282	32,282

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.555637	0.046489	0.189274	0.131530	0.019327	0.005527	0.013212	0.007588	0.001170	0.000625	0.024698	0.000655	0.004269

5.0 Energy Detail

Historical Energy Use: N

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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	4.7498	4.7498	1.1000e-004	2.0000e-005	4.7595
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.7498	4.7498	1.1000e-004	2.0000e-005	4.7595
NaturalGas Mitigated	1.8000e-004	1.5400e-003	6.6000e-004	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.7888	1.7888	3.0000e-005	3.0000e-005	1.7995
NaturalGas Unmitigated	1.8000e-004	1.5400e-003	6.6000e-004	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.7888	1.7888	3.0000e-005	3.0000e-005	1.7995

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	33521.2	1.8000e-004	1.5400e-003	6.6000e-004	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.7888	1.7888	3.0000e-005	3.0000e-005	1.7995
Total		1.8000e-004	1.5400e-003	6.6000e-004	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.7888	1.7888	3.0000e-005	3.0000e-005	1.7995

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5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas 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	33521.2	1.8000e-004	1.5400e-003	6.6000e-004	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.7888	1.7888	3.0000e-005	3.0000e-005	1.7995
Total		1.8000e-004	1.5400e-003	6.6000e-004	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.7888	1.7888	3.0000e-005	3.0000e-005	1.7995

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	8528.1	4.7498	1.1000e-004	2.0000e-005	4.7595
Total		4.7498	1.1000e-004	2.0000e-005	4.7595

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5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	8528.1	4.7498	1.1000e-004	2.0000e-005	4.7595
Total		4.7498	1.1000e-004	2.0000e-005	4.7595

6.0 Area Detail**6.1 Mitigation Measures Area**

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use only Natural Gas Hearths
- Use Low VOC Cleaning Supplies

Blue Heights Residence - South Coast Air Basin, Annual

	ROG	NOx	CO	SO2	Fugitive 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	0.0646	3.1000e-004	0.0104	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2330	0.2330	2.0000e-005	0.0000	0.2347
Unmitigated	0.0675	3.3000e-004	0.0137	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0393	0.2210	0.2603	2.0000e-005	1.0000e-005	0.2629

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	5.1200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0591					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.9400e-003	2.1000e-004	3.2900e-003	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0393	0.2041	0.2434	0.0000	1.0000e-005	0.2457
Landscaping	3.2000e-004	1.2000e-004	0.0104	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0169	0.0169	2.0000e-005	0.0000	0.0173
Total	0.0675	3.3000e-004	0.0137	1.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0393	0.2210	0.2603	2.0000e-005	1.0000e-005	0.2629

Blue Heights Residence - South Coast Air Basin, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.1200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0591					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.0000e-005	1.9000e-004	8.0000e-005	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2161	0.2161	0.0000	0.0000	0.2174
Landscaping	3.2000e-004	1.2000e-004	0.0104	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0169	0.0169	2.0000e-005	0.0000	0.0173
Total	0.0646	3.1000e-004	0.0104	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.2330	0.2330	2.0000e-005	0.0000	0.2347

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

Blue Heights Residence - South Coast Air Basin, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.6332	1.7100e-003	4.0000e-005	0.6889
Unmitigated	0.7474	2.1400e-003	5.0000e-005	0.8169

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	0.065154 / 0.0410754	0.7474	2.1400e-003	5.0000e-005	0.8169
Total		0.7474	2.1400e-003	5.0000e-005	0.8169

Blue Heights Residence - South Coast Air Basin, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	0.0521232 / 0.0385698	0.6332	1.7100e-003	4.0000e-005	0.6889
Total		0.6332	1.7100e-003	4.0000e-005	0.6889

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Blue Heights Residence - South Coast Air Basin, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0749	4.4300e-003	0.0000	0.1856
Unmitigated	0.2497	0.0148	0.0000	0.6186

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	1.23	0.2497	0.0148	0.0000	0.6186
Total		0.2497	0.0148	0.0000	0.6186

Blue Heights Residence - South Coast Air Basin, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	0.369	0.0749	4.4300e-003	0.0000	0.1856
Total		0.0749	4.4300e-003	0.0000	0.1856

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Blue Heights Residence - South Coast Air Basin, Annual

Blue Heights Residence - South Coast Air Basin, Summer

Blue Heights Residence
South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	1.00	Dwelling Unit	0.85	16,360.00	3

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2019
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Blue Heights Residence - South Coast Air Basin, Summer

Project Characteristics -

Land Use - Lot coverage = 14,316 sq. ft.

Lot area = 37,056 sq. ft.

Construction Phase - Export during grading would be limited to 12 truck trips per day with a capacity of 10 cubic yards per truck

Off-road Equipment - No cranes

Grading - 9,586 cy of soil exported offi-site

Trips and VMT - Grading will last approximately 80 days, with 12 truck trips per day with a capacity of 10 cy.

Export taken to Scholl Canyon Landfill, 40 miles roundtrip

Woodstoves - No woodstoves

Construction Off-road Equipment Mitigation - Per CARB Title 13 CCR Section 2520-2427, equipment required to be Tier 4 Final for new equipment. For conservative analysis, equipment set to Tier 2.

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstructionPhase	NumDays	2.00	80.00
tblConstructionPhase	PhaseEndDate	7/31/2017	4/24/2018

Blue Heights Residence - South Coast Air Basin, Summer

tblConstructionPhase	PhaseEndDate	7/31/2017	4/10/2018
tblConstructionPhase	PhaseEndDate	7/31/2017	11/21/2017
tblConstructionPhase	PhaseEndDate	7/31/2017	4/17/2018
tblConstructionPhase	PhaseEndDate	7/31/2017	8/1/2017
tblConstructionPhase	PhaseStartDate	8/1/2017	4/18/2018
tblConstructionPhase	PhaseStartDate	8/1/2017	11/22/2017
tblConstructionPhase	PhaseStartDate	8/1/2017	8/2/2017
tblConstructionPhase	PhaseStartDate	8/1/2017	4/11/2018
tblGrading	AcresOfGrading	0.00	0.85
tblGrading	MaterialExported	0.00	9,586.00
tblLandUse	BuildingSpaceSquareFeet	1,800.00	16,360.00
tblLandUse	LandUseSquareFeet	1,800.00	16,360.00
tblLandUse	LotAcreage	0.32	0.85
tblProjectCharacteristics	OperationalYear	2018	2019
tblTripsAndVMT	HaulingTripLength	20.00	40.00
tblTripsAndVMT	HaulingTripNumber	1,198.00	960.00
tblWoodstoves	NumberCatalytic	0.05	0.00
tblWoodstoves	NumberNoncatalytic	0.05	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

Blue Heights Residence - South Coast Air Basin, Summer

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	0.5896	0.0177	0.3464	5.0000e-004		0.0369	0.0369		0.0369	0.0369	3.4653	18.1486	21.6138	4.9000e-004	6.4000e-004	21.8156
Energy	9.9000e-004	8.4600e-003	3.6000e-003	5.0000e-005		6.8000e-004	6.8000e-004		6.8000e-004	6.8000e-004		10.8046	10.8046	2.1000e-004	2.0000e-004	10.8688
Mobile	0.0335	0.0610	0.3697	8.5000e-004	0.0714	8.2000e-004	0.0722	0.0190	7.7000e-004	0.0198		85.1762	85.1762	5.3800e-003		85.3108
Total	0.6241	0.0872	0.7196	1.4000e-003	0.0714	0.0384	0.1097	0.0190	0.0383	0.0573	3.4653	114.1293	117.5946	6.0800e-003	8.4000e-004	117.9951

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	0.3563	0.0159	0.0893	1.0000e-004		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	19.2074	19.2074	5.1000e-004	3.5000e-004	19.3243
Energy	9.9000e-004	8.4600e-003	3.6000e-003	5.0000e-005		6.8000e-004	6.8000e-004		6.8000e-004	6.8000e-004		10.8046	10.8046	2.1000e-004	2.0000e-004	10.8688
Mobile	0.0335	0.0610	0.3697	8.5000e-004	0.0714	8.2000e-004	0.0722	0.0190	7.7000e-004	0.0198		85.1762	85.1762	5.3800e-003		85.3108
Total	0.3908	0.0853	0.4625	1.0000e-003	0.0714	3.1600e-003	0.0745	0.0190	3.1100e-003	0.0221	0.0000	115.1882	115.1882	6.1000e-003	5.5000e-004	115.5038

Blue Heights Residence - South Coast Air Basin, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	37.38	2.09	35.73	28.57	0.00	91.76	32.08	0.00	91.88	61.39	100.00	-0.93	2.05	-0.33	34.52	2.11

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	4/18/2018	4/24/2018	5	5	
2	Building Construction	Building Construction	11/22/2017	4/10/2018	5	100	
3	Grading	Grading	8/2/2017	11/21/2017	5	80	
4	Paving	Paving	4/11/2018	4/17/2018	5	5	
5	Site Preparation	Site Preparation	8/1/2017	8/1/2017	5	1	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0.85

Acres of Paving: 0

Residential Indoor: 33,129; Residential Outdoor: 11,043; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Blue Heights Residence - South Coast Air Basin, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Building Construction	Cranes	1	4.00	231	0.29
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	960.00	14.70	6.90	40.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Blue Heights Residence - South Coast Air Basin, Summer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 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	20.4737					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	20.7724	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171

Blue Heights Residence - South Coast Air Basin, Summer

3.2 Architectural Coating - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

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	20.4737					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	20.7724	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171

Blue Heights Residence - South Coast Air Basin, Summer

3.2 Architectural Coating - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000

3.3 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	1.2812	12.7589	8.0700	0.0114		0.8591	0.8591		0.7904	0.7904		1,165.9164	1,165.9164	0.3572			1,174.8473
Total	1.2812	12.7589	8.0700	0.0114		0.8591	0.8591		0.7904	0.7904		1,165.9164	1,165.9164	0.3572			1,174.8473

Blue Heights Residence - South Coast Air Basin, Summer

3.3 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

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	1.2812	12.7589	8.0700	0.0114		0.8591	0.8591		0.7904	0.7904	0.0000	1,165.9164	1,165.9164	0.3572		1,174.8473
Total	1.2812	12.7589	8.0700	0.0114		0.8591	0.8591		0.7904	0.7904	0.0000	1,165.9164	1,165.9164	0.3572		1,174.8473

Blue Heights Residence - South Coast Air Basin, Summer

3.3 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.3 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	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520		1,146.5323	1,146.5323	0.3569		1,155.4555
Total	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520		1,146.5323	1,146.5323	0.3569		1,155.4555

Blue Heights Residence - South Coast Air Basin, Summer

3.3 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000

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	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520	0.0000	1,146.5323	1,146.5323	0.3569			1,155.4555
Total	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520	0.0000	1,146.5323	1,146.5323	0.3569			1,155.4555

Blue Heights Residence - South Coast Air Basin, Summer

3.3 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.4 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					0.7776	0.0000	0.7776	0.4171	0.0000	0.4171			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978		1,179.3075	1,179.3075	0.2319		1,185.1047
Total	1.2100	10.4978	7.9182	0.0120	0.7776	0.7318	1.5094	0.4171	0.6978	1.1148		1,179.3075	1,179.3075	0.2319		1,185.1047

Blue Heights Residence - South Coast Air Basin, Summer

3.4 Grading - 2017

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	0.2239	6.9014	1.3951	0.0181	0.4190	0.0431	0.4621	0.1148	0.0412	0.1560		1,951.2439	1,951.2439	0.1260		1,954.3927
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	0.0601	0.0442	0.5682	1.2600e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		125.3679	125.3679	4.7300e-003		125.4862
Total	0.2839	6.9456	1.9634	0.0193	0.5307	0.0440	0.5748	0.1444	0.0421	0.1865		2,076.6118	2,076.6118	0.1307		2,079.8789

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3033	0.0000	0.3033	0.1627	0.0000	0.1627			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978	0.0000	1,179.3075	1,179.3075	0.2319		1,185.1047
Total	1.2100	10.4978	7.9182	0.0120	0.3033	0.7318	1.0350	0.1627	0.6978	0.8604	0.0000	1,179.3075	1,179.3075	0.2319		1,185.1047

Blue Heights Residence - South Coast Air Basin, Summer

3.4 Grading - 2017

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	0.2239	6.9014	1.3951	0.0181	0.4190	0.0431	0.4621	0.1148	0.0412	0.1560		1,951.2439	1,951.2439	0.1260		1,954.3927
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	0.0601	0.0442	0.5682	1.2600e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		125.3679	125.3679	4.7300e-003		125.4862
Total	0.2839	6.9456	1.9634	0.0193	0.5307	0.0440	0.5748	0.1444	0.0421	0.1865		2,076.6118	2,076.6118	0.1307		2,079.8789

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	0.9202	8.7447	7.2240	0.0113		0.5109	0.5109		0.4735	0.4735		1,070.1372	1,070.1372	0.3017		1,077.6798
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9202	8.7447	7.2240	0.0113		0.5109	0.5109		0.4735	0.4735		1,070.1372	1,070.1372	0.3017		1,077.6798

Blue Heights Residence - South Coast Air Basin, Summer

3.5 Paving - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0962	0.0693	0.9006	2.2000e-003	0.2012	1.6100e-003	0.2028	0.0534	1.4900e-003	0.0549		219.3696	219.3696	7.5000e-003		219.5571
Total	0.0962	0.0693	0.9006	2.2000e-003	0.2012	1.6100e-003	0.2028	0.0534	1.4900e-003	0.0549		219.3696	219.3696	7.5000e-003		219.5571

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9202	8.7447	7.2240	0.0113		0.5109	0.5109		0.4735	0.4735	0.0000	1,070.1372	1,070.1372	0.3017		1,077.6798
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9202	8.7447	7.2240	0.0113		0.5109	0.5109		0.4735	0.4735	0.0000	1,070.1372	1,070.1372	0.3017		1,077.6798

Blue Heights Residence - South Coast Air Basin, Summer

3.5 Paving - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0962	0.0693	0.9006	2.2000e-003	0.2012	1.6100e-003	0.2028	0.0534	1.4900e-003	0.0549		219.3696	219.3696	7.5000e-003		219.5571
Total	0.0962	0.0693	0.9006	2.2000e-003	0.2012	1.6100e-003	0.2028	0.0534	1.4900e-003	0.0549		219.3696	219.3696	7.5000e-003		219.5571

3.6 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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.8524	10.5148	4.3533	9.7700e-003		0.4726	0.4726		0.4347	0.4347		999.5201	999.5201	0.3063		1,007.1764
Total	0.8524	10.5148	4.3533	9.7700e-003	0.5303	0.4726	1.0028	0.0573	0.4347	0.4920		999.5201	999.5201	0.3063		1,007.1764

Blue Heights Residence - South Coast Air Basin, Summer

3.6 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0300	0.0221	0.2841	6.3000e-004	0.0559	4.6000e-004	0.0564	0.0148	4.3000e-004	0.0153		62.6840	62.6840	2.3700e-003		62.7431
Total	0.0300	0.0221	0.2841	6.3000e-004	0.0559	4.6000e-004	0.0564	0.0148	4.3000e-004	0.0153		62.6840	62.6840	2.3700e-003		62.7431

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.8524	10.5148	4.3533	9.7700e-003		0.4726	0.4726		0.4347	0.4347	0.0000	999.5201	999.5201	0.3063		1,007.1764
Total	0.8524	10.5148	4.3533	9.7700e-003	0.2068	0.4726	0.6794	0.0223	0.4347	0.4571	0.0000	999.5201	999.5201	0.3063		1,007.1764

Blue Heights Residence - South Coast Air Basin, Summer

3.6 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0300	0.0221	0.2841	6.3000e-004	0.0559	4.6000e-004	0.0564	0.0148	4.3000e-004	0.0153		62.6840	62.6840	2.3700e-003		62.7431
Total	0.0300	0.0221	0.2841	6.3000e-004	0.0559	4.6000e-004	0.0564	0.0148	4.3000e-004	0.0153		62.6840	62.6840	2.3700e-003		62.7431

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Blue Heights Residence - South Coast Air Basin, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0335	0.0610	0.3697	8.5000e-004	0.0714	8.2000e-004	0.0722	0.0190	7.7000e-004	0.0198		85.1762	85.1762	5.3800e-003		85.3108
Unmitigated	0.0335	0.0610	0.3697	8.5000e-004	0.0714	8.2000e-004	0.0722	0.0190	7.7000e-004	0.0198		85.1762	85.1762	5.3800e-003		85.3108

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	9.52	9.91	8.62	32,282	32,282
Total	9.52	9.91	8.62	32,282	32,282

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.555637	0.046489	0.189274	0.131530	0.019327	0.005527	0.013212	0.007588	0.001170	0.000625	0.024698	0.000655	0.004269

5.0 Energy Detail

Historical Energy Use: N

Blue Heights Residence - South Coast Air Basin, Summer

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	9.9000e-004	8.4600e-003	3.6000e-003	5.0000e-005		6.8000e-004	6.8000e-004		6.8000e-004	6.8000e-004		10.8046	10.8046	2.1000e-004	2.0000e-004	10.8688
NaturalGas Unmitigated	9.9000e-004	8.4600e-003	3.6000e-003	5.0000e-005		6.8000e-004	6.8000e-004		6.8000e-004	6.8000e-004		10.8046	10.8046	2.1000e-004	2.0000e-004	10.8688

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	91.8389	9.9000e-004	8.4600e-003	3.6000e-003	5.0000e-005		6.8000e-004	6.8000e-004		6.8000e-004	6.8000e-004		10.8046	10.8046	2.1000e-004	2.0000e-004	10.8688
Total		9.9000e-004	8.4600e-003	3.6000e-003	5.0000e-005		6.8000e-004	6.8000e-004		6.8000e-004	6.8000e-004		10.8046	10.8046	2.1000e-004	2.0000e-004	10.8688

Blue Heights Residence - South Coast Air Basin, Summer

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas 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	0.0918389	9.9000e-004	8.4600e-003	3.6000e-003	5.0000e-005		6.8000e-004	6.8000e-004		6.8000e-004	6.8000e-004		10.8046	10.8046	2.1000e-004	2.0000e-004	10.8688
Total		9.9000e-004	8.4600e-003	3.6000e-003	5.0000e-005		6.8000e-004	6.8000e-004		6.8000e-004	6.8000e-004		10.8046	10.8046	2.1000e-004	2.0000e-004	10.8688

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use only Natural Gas Hearths
- Use Low VOC Cleaning Supplies

Blue Heights Residence - South Coast Air Basin, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.3563	0.0159	0.0893	1.0000e-004		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	19.2074	19.2074	5.1000e-004	3.5000e-004	19.3243
Unmitigated	0.5896	0.0177	0.3464	5.0000e-004		0.0369	0.0369		0.0369	0.0369	3.4653	18.1486	21.6138	4.9000e-004	6.4000e-004	21.8156

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	0.0281					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3239					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2351	0.0168	0.2635	5.0000e-004		0.0364	0.0364		0.0364	0.0364	3.4653	18.0000	21.4653	3.4000e-004	6.4000e-004	21.6634
Landscaping	2.5400e-003	9.6000e-004	0.0829	0.0000		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004		0.1486	0.1486	1.5000e-004		0.1522
Total	0.5896	0.0177	0.3464	5.0000e-004		0.0369	0.0369		0.0369	0.0369	3.4653	18.1486	21.6138	4.9000e-004	6.4000e-004	21.8156

Blue Heights Residence - South Coast Air Basin, Summer

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0281					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3239					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.7500e-003	0.0149	6.3500e-003	1.0000e-004		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	19.0588	19.0588	3.7000e-004	3.5000e-004	19.1721
Landscaping	2.5400e-003	9.6000e-004	0.0829	0.0000		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004		0.1486	0.1486	1.5000e-004		0.1522
Total	0.3563	0.0159	0.0893	1.0000e-004		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	19.2074	19.2074	5.2000e-004	3.5000e-004	19.3243

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

Blue Heights Residence - South Coast Air Basin, Summer

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Blue Heights Residence - South Coast Air Basin, Winter

Blue Heights Residence
South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	1.00	Dwelling Unit	0.85	16,360.00	3

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2019
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Blue Heights Residence - South Coast Air Basin, Winter

Project Characteristics -

Land Use - Lot coverage = 14,316 sq. ft.

Lot area = 37,056 sq. ft.

Construction Phase - Export during grading would be limited to 12 truck trips per day with a capacity of 10 cubic yards per truck

Off-road Equipment - No cranes

Grading - 9,586 cy of soil exported offi-site

Trips and VMT - Grading will last approximately 80 days, with 12 truck trips per day with a capacity of 10 cy.

Export taken to Scholl Canyon Landfill, 40 miles roundtrip

Woodstoves - No woodstoves

Construction Off-road Equipment Mitigation - Per CARB Title 13 CCR Section 2520-2427, equipment required to be Tier 4 Final for new equipment. For conservative analysis, equipment set to Tier 2.

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstructionPhase	NumDays	2.00	80.00
tblConstructionPhase	PhaseEndDate	7/31/2017	4/24/2018

Blue Heights Residence - South Coast Air Basin, Winter

tblConstructionPhase	PhaseEndDate	7/31/2017	4/10/2018
tblConstructionPhase	PhaseEndDate	7/31/2017	11/21/2017
tblConstructionPhase	PhaseEndDate	7/31/2017	4/17/2018
tblConstructionPhase	PhaseEndDate	7/31/2017	8/1/2017
tblConstructionPhase	PhaseStartDate	8/1/2017	4/18/2018
tblConstructionPhase	PhaseStartDate	8/1/2017	11/22/2017
tblConstructionPhase	PhaseStartDate	8/1/2017	8/2/2017
tblConstructionPhase	PhaseStartDate	8/1/2017	4/11/2018
tblGrading	AcresOfGrading	0.00	0.85
tblGrading	MaterialExported	0.00	9,586.00
tblLandUse	BuildingSpaceSquareFeet	1,800.00	16,360.00
tblLandUse	LandUseSquareFeet	1,800.00	16,360.00
tblLandUse	LotAcreage	0.32	0.85
tblProjectCharacteristics	OperationalYear	2018	2019
tblTripsAndVMT	HaulingTripLength	20.00	40.00
tblTripsAndVMT	HaulingTripNumber	1,198.00	960.00
tblWoodstoves	NumberCatalytic	0.05	0.00
tblWoodstoves	NumberNoncatalytic	0.05	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

Blue Heights Residence - South Coast Air Basin, Winter

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	0.5896	0.0177	0.3464	5.0000e-004		0.0369	0.0369		0.0369	0.0369	3.4653	18.1486	21.6138	4.9000e-004	6.4000e-004	21.8156
Energy	9.9000e-004	8.4600e-003	3.6000e-003	5.0000e-005		6.8000e-004	6.8000e-004		6.8000e-004	6.8000e-004		10.8046	10.8046	2.1000e-004	2.0000e-004	10.8688
Mobile	0.0327	0.0642	0.3545	8.0000e-004	0.0714	8.2000e-004	0.0722	0.0190	7.7000e-004	0.0198		80.5574	80.5574	5.3600e-003		80.6913
Total	0.6232	0.0904	0.7045	1.3500e-003	0.0714	0.0384	0.1098	0.0190	0.0383	0.0573	3.4653	109.5105	112.9758	6.0600e-003	8.4000e-004	113.3757

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	0.3563	0.0159	0.0893	1.0000e-004		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	19.2074	19.2074	5.1000e-004	3.5000e-004	19.3243
Energy	9.9000e-004	8.4600e-003	3.6000e-003	5.0000e-005		6.8000e-004	6.8000e-004		6.8000e-004	6.8000e-004		10.8046	10.8046	2.1000e-004	2.0000e-004	10.8688
Mobile	0.0327	0.0642	0.3545	8.0000e-004	0.0714	8.2000e-004	0.0722	0.0190	7.7000e-004	0.0198		80.5574	80.5574	5.3600e-003		80.6913
Total	0.3899	0.0886	0.4474	9.5000e-004	0.0714	3.1600e-003	0.0746	0.0190	3.1100e-003	0.0221	0.0000	110.5694	110.5694	6.0800e-003	5.5000e-004	110.8844

Blue Heights Residence - South Coast Air Basin, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	37.43	2.01	36.49	29.63	0.00	91.76	32.07	0.00	91.88	61.39	100.00	-0.97	2.13	-0.33	34.52	2.20

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	4/18/2018	4/24/2018	5	5	
2	Building Construction	Building Construction	11/22/2017	4/10/2018	5	100	
3	Grading	Grading	8/2/2017	11/21/2017	5	80	
4	Paving	Paving	4/11/2018	4/17/2018	5	5	
5	Site Preparation	Site Preparation	8/1/2017	8/1/2017	5	1	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0.85

Acres of Paving: 0

Residential Indoor: 33,129; Residential Outdoor: 11,043; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Blue Heights Residence - South Coast Air Basin, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Building Construction	Cranes	1	4.00	231	0.29
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	960.00	14.70	6.90	40.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Blue Heights Residence - South Coast Air Basin, Winter

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 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	20.4737					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	20.7724	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171

Blue Heights Residence - South Coast Air Basin, Winter

3.2 Architectural Coating - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

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	20.4737					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	20.7724	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171

Blue Heights Residence - South Coast Air Basin, Winter

3.2 Architectural Coating - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000

3.3 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	1.2812	12.7589	8.0700	0.0114		0.8591	0.8591		0.7904	0.7904		1,165.9164	1,165.9164	0.3572			1,174.8473
Total	1.2812	12.7589	8.0700	0.0114		0.8591	0.8591		0.7904	0.7904		1,165.9164	1,165.9164	0.3572			1,174.8473

Blue Heights Residence - South Coast Air Basin, Winter

3.3 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000

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	1.2812	12.7589	8.0700	0.0114		0.8591	0.8591		0.7904	0.7904	0.0000	1,165.9164	1,165.9164	0.3572			1,174.8473
Total	1.2812	12.7589	8.0700	0.0114		0.8591	0.8591		0.7904	0.7904	0.0000	1,165.9164	1,165.9164	0.3572			1,174.8473

Blue Heights Residence - South Coast Air Basin, Winter

3.3 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000

3.3 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	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520		1,146.5323	1,146.5323	0.3569			1,155.4555
Total	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520		1,146.5323	1,146.5323	0.3569			1,155.4555

Blue Heights Residence - South Coast Air Basin, Winter

3.3 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000

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	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520	0.0000	1,146.5323	1,146.5323	0.3569			1,155.4555
Total	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520	0.0000	1,146.5323	1,146.5323	0.3569			1,155.4555

Blue Heights Residence - South Coast Air Basin, Winter

3.3 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000

3.4 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					0.7776	0.0000	0.7776	0.4171	0.0000	0.4171			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978		1,179.3075	1,179.3075	0.2319		1,185.1047
Total	1.2100	10.4978	7.9182	0.0120	0.7776	0.7318	1.5094	0.4171	0.6978	1.1148		1,179.3075	1,179.3075	0.2319		1,185.1047

Blue Heights Residence - South Coast Air Basin, Winter

3.4 Grading - 2017

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	0.2271	7.0762	1.4509	0.0179	0.4190	0.0434	0.4624	0.1148	0.0416	0.1563		1,934.5006	1,934.5006	0.1291		1,937.7281
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	0.0658	0.0486	0.5203	1.1800e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		117.6240	117.6240	4.4600e-003		117.7355
Total	0.2928	7.1248	1.9712	0.0191	0.5307	0.0444	0.5751	0.1444	0.0424	0.1868		2,052.1246	2,052.1246	0.1336		2,055.4636

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3033	0.0000	0.3033	0.1627	0.0000	0.1627			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978	0.0000	1,179.3075	1,179.3075	0.2319		1,185.1047
Total	1.2100	10.4978	7.9182	0.0120	0.3033	0.7318	1.0350	0.1627	0.6978	0.8604	0.0000	1,179.3075	1,179.3075	0.2319		1,185.1047

Blue Heights Residence - South Coast Air Basin, Winter

3.4 Grading - 2017

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	0.2271	7.0762	1.4509	0.0179	0.4190	0.0434	0.4624	0.1148	0.0416	0.1563		1,934.5006	1,934.5006	0.1291		1,937.7281
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	0.0658	0.0486	0.5203	1.1800e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		117.6240	117.6240	4.4600e-003		117.7355
Total	0.2928	7.1248	1.9712	0.0191	0.5307	0.0444	0.5751	0.1444	0.0424	0.1868		2,052.1246	2,052.1246	0.1336		2,055.4636

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	0.9202	8.7447	7.2240	0.0113		0.5109	0.5109		0.4735	0.4735		1,070.1372	1,070.1372	0.3017		1,077.6798
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9202	8.7447	7.2240	0.0113		0.5109	0.5109		0.4735	0.4735		1,070.1372	1,070.1372	0.3017		1,077.6798

Blue Heights Residence - South Coast Air Basin, Winter

3.5 Paving - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1055	0.0762	0.8206	2.0700e-003	0.2012	1.6100e-003	0.2028	0.0534	1.4900e-003	0.0549		205.7855	205.7855	7.0500e-003		205.9616
Total	0.1055	0.0762	0.8206	2.0700e-003	0.2012	1.6100e-003	0.2028	0.0534	1.4900e-003	0.0549		205.7855	205.7855	7.0500e-003		205.9616

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9202	8.7447	7.2240	0.0113		0.5109	0.5109		0.4735	0.4735	0.0000	1,070.1372	1,070.1372	0.3017		1,077.6798
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9202	8.7447	7.2240	0.0113		0.5109	0.5109		0.4735	0.4735	0.0000	1,070.1372	1,070.1372	0.3017		1,077.6798

Blue Heights Residence - South Coast Air Basin, Winter

3.5 Paving - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1055	0.0762	0.8206	2.0700e-003	0.2012	1.6100e-003	0.2028	0.0534	1.4900e-003	0.0549		205.7855	205.7855	7.0500e-003		205.9616
Total	0.1055	0.0762	0.8206	2.0700e-003	0.2012	1.6100e-003	0.2028	0.0534	1.4900e-003	0.0549		205.7855	205.7855	7.0500e-003		205.9616

3.6 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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.8524	10.5148	4.3533	9.7700e-003		0.4726	0.4726		0.4347	0.4347		999.5201	999.5201	0.3063		1,007.1764
Total	0.8524	10.5148	4.3533	9.7700e-003	0.5303	0.4726	1.0028	0.0573	0.4347	0.4920		999.5201	999.5201	0.3063		1,007.1764

Blue Heights Residence - South Coast Air Basin, Winter

3.6 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0329	0.0243	0.2602	5.9000e-004	0.0559	4.6000e-004	0.0564	0.0148	4.3000e-004	0.0153		58.8120	58.8120	2.2300e-003		58.8678
Total	0.0329	0.0243	0.2602	5.9000e-004	0.0559	4.6000e-004	0.0564	0.0148	4.3000e-004	0.0153		58.8120	58.8120	2.2300e-003		58.8678

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.8524	10.5148	4.3533	9.7700e-003		0.4726	0.4726		0.4347	0.4347	0.0000	999.5201	999.5201	0.3063		1,007.1764
Total	0.8524	10.5148	4.3533	9.7700e-003	0.2068	0.4726	0.6794	0.0223	0.4347	0.4571	0.0000	999.5201	999.5201	0.3063		1,007.1764

Blue Heights Residence - South Coast Air Basin, Winter

3.6 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0329	0.0243	0.2602	5.9000e-004	0.0559	4.6000e-004	0.0564	0.0148	4.3000e-004	0.0153		58.8120	58.8120	2.2300e-003		58.8678
Total	0.0329	0.0243	0.2602	5.9000e-004	0.0559	4.6000e-004	0.0564	0.0148	4.3000e-004	0.0153		58.8120	58.8120	2.2300e-003		58.8678

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Blue Heights Residence - South Coast Air Basin, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0327	0.0642	0.3545	8.0000e-004	0.0714	8.2000e-004	0.0722	0.0190	7.7000e-004	0.0198		80.5574	80.5574	5.3600e-003		80.6913
Unmitigated	0.0327	0.0642	0.3545	8.0000e-004	0.0714	8.2000e-004	0.0722	0.0190	7.7000e-004	0.0198		80.5574	80.5574	5.3600e-003		80.6913

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	9.52	9.91	8.62	32,282	32,282
Total	9.52	9.91	8.62	32,282	32,282

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.555637	0.046489	0.189274	0.131530	0.019327	0.005527	0.013212	0.007588	0.001170	0.000625	0.024698	0.000655	0.004269

5.0 Energy Detail

Historical Energy Use: N

Blue Heights Residence - South Coast Air Basin, Winter

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	9.9000e-004	8.4600e-003	3.6000e-003	5.0000e-005		6.8000e-004	6.8000e-004		6.8000e-004	6.8000e-004		10.8046	10.8046	2.1000e-004	2.0000e-004	10.8688
NaturalGas Unmitigated	9.9000e-004	8.4600e-003	3.6000e-003	5.0000e-005		6.8000e-004	6.8000e-004		6.8000e-004	6.8000e-004		10.8046	10.8046	2.1000e-004	2.0000e-004	10.8688

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	91.8389	9.9000e-004	8.4600e-003	3.6000e-003	5.0000e-005		6.8000e-004	6.8000e-004		6.8000e-004	6.8000e-004		10.8046	10.8046	2.1000e-004	2.0000e-004	10.8688
Total		9.9000e-004	8.4600e-003	3.6000e-003	5.0000e-005		6.8000e-004	6.8000e-004		6.8000e-004	6.8000e-004		10.8046	10.8046	2.1000e-004	2.0000e-004	10.8688

Blue Heights Residence - South Coast Air Basin, Winter

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas 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	0.0918389	9.9000e-004	8.4600e-003	3.6000e-003	5.0000e-005		6.8000e-004	6.8000e-004		6.8000e-004	6.8000e-004		10.8046	10.8046	2.1000e-004	2.0000e-004	10.8688
Total		9.9000e-004	8.4600e-003	3.6000e-003	5.0000e-005		6.8000e-004	6.8000e-004		6.8000e-004	6.8000e-004		10.8046	10.8046	2.1000e-004	2.0000e-004	10.8688

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use only Natural Gas Hearths
- Use Low VOC Cleaning Supplies

Blue Heights Residence - South Coast Air Basin, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.3563	0.0159	0.0893	1.0000e-004		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	19.2074	19.2074	5.1000e-004	3.5000e-004	19.3243
Unmitigated	0.5896	0.0177	0.3464	5.0000e-004		0.0369	0.0369		0.0369	0.0369	3.4653	18.1486	21.6138	4.9000e-004	6.4000e-004	21.8156

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	0.0281					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3239					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2351	0.0168	0.2635	5.0000e-004		0.0364	0.0364		0.0364	0.0364	3.4653	18.0000	21.4653	3.4000e-004	6.4000e-004	21.6634
Landscaping	2.5400e-003	9.6000e-004	0.0829	0.0000		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004		0.1486	0.1486	1.5000e-004		0.1522
Total	0.5896	0.0177	0.3464	5.0000e-004		0.0369	0.0369		0.0369	0.0369	3.4653	18.1486	21.6138	4.9000e-004	6.4000e-004	21.8156

Blue Heights Residence - South Coast Air Basin, Winter

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0281					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3239					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.7500e-003	0.0149	6.3500e-003	1.0000e-004		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	19.0588	19.0588	3.7000e-004	3.5000e-004	19.1721
Landscaping	2.5400e-003	9.6000e-004	0.0829	0.0000		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004		0.1486	0.1486	1.5000e-004		0.1522
Total	0.3563	0.0159	0.0893	1.0000e-004		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	19.2074	19.2074	5.2000e-004	3.5000e-004	19.3243

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

Blue Heights Residence - South Coast Air Basin, Winter

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation
