

Appendix 10

Alternative 3 Supplemental Analysis



Alternative 3 Supplemental Analysis

9908 South Santa Monica Boulevard Condominium Project EIR

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July 2018

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Attachments

Attachment A	CalEEMod Data Sheets
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ALTERNATIVE 3 SUPPLEMENTAL ANALYSIS

This document is the Alternative 3 Supplemental Analysis for the 9908 South Santa Monica Boulevard Condominium Project, proposed in the City of Beverly Hills. The purpose of this document is to evaluate Alternative 3, or the Mixed Use Office and Commercial Alternative, to the Proposed Project and compare its impacts to those of the original Proposed Project analyzed in the Final Environmental Impact Report (FEIR).

Final EIR Section 6, *Alternatives*, currently examines four alternatives (including Alternative 3) to the Proposed Project that would still attain some basic Project objectives, but would generate impacts that are less than, similar to, or greater than those of the Proposed Project. During the environmental review process for the Proposed Project, a request was made by the applicant for a more comprehensive supplemental analysis of Alternative 3. Therefore, the following analysis considers potential impacts associated with Alternative 3 related to aesthetics, air quality, greenhouse gas emissions, hazards and hazardous materials, land use and planning, noise and vibration, and transportation and traffic in more detail than in Section 6 of the FEIR. Table 1 provides a summary comparison of the development characteristics of the originally Proposed Project, July 2018 Revised Project (see Appendix 9), and Alternative 3.

As discussed in Section 2, *Project Description*, the objectives for the Proposed Project are as follows:

- *Redevelop a currently vacant urban in-fill site into a luxury residential project that is compatible with adjoining residential development and adjoining luxury hotel, office and service businesses.*
- *Enhance and activate a currently vacant site in an underutilized area of the city with limited parking, limited circulation, and adjacent sensitive residential uses by bringing high end 24-hour residential use to the site.*
- *Support infill development in an existing urban area in a manner which minimizes traffic impacts.*
- *Enhance housing opportunities in the city, bring new residents to the area, and provide an opportunity for downsizing Beverly Hills residents to remain in the city.*
- *Create luxury medium density urban housing with ample landscaped setbacks, spacious living areas, high ceilings, private outdoor open space and luxury roof top amenities*
- *Improve the aesthetic quality of the site by creating a first class architectural building to replace vacant land.*
- *Create construction jobs and increase housing opportunities in the city.*
- *Improve public safety by bringing 24-hour residents and residential activity to an underutilized area of the City.*
- *Increase activity and customer base for surrounding commercial businesses by bringing residents to the area.*



**Table 1
 Comparison of the Proposed Project, July 2018 Revised Project, and
 Alternative 3's Buildout Characteristics**

Characteristic	Proposed Project	July 2018 Revised Project	Alternative 3
On-Site Uses			
Residential Units	27	27	-
Total Bedroom Count	57	73	-
Residential SF	89,988	86,182	-
Commercial SF	-	13,036	5,000
Office SF	-	-	67,004
Floor Area Ratio (FAR)	2.50	2.76	2.00
Parking Spaces	74 spaces	176 spaces	205 spaces
Building Levels and Height			
Parking Levels	1	3	4
Parking Level SF	36,002	95,834	131,712
Building Levels	5	5	3
Building Height	66 ¹ feet	58 ² feet	45 ³ feet
Floor Area by Level⁴			
Parking Level 4 SF	-	-	0
Parking Level 3 SF	-	0	0
Parking Level 2 SF	-	0	0
Parking Level 1 SF	3,237	0	0
Level 1 SF	18,974	22,342	21,945
Level 2 SF	18,531	22,253	25,686
Level 3 SF	19,352	21,763	24,373
Level 4 SF	19,352	21,034	-
Level 5 SF	10,135	10,332	-
Roof SF	407	1,494	-
Overall SF	89,988	99,218	72,004
Construction			
Grading/ Soil Export CY	20,500	45,000	60,000



SF = square feet, CY = cubic yards

¹ *Based on the text of the overlay zone for the originally proposed project, the height of the building was measured to the pool deck surface.*

² *Based on the text of the overlay zone for the July 2018 Revised Project, height is proposed to be measured to building roof surface, not pool deck surface.*

³ *Height based on Alternative 3 description.*

⁴ *Based on the BHMC Floor Area definition, below grade parking areas are not considered when determining a building's total floor area. The below grade areas that are included in floor area calculations are identified as floor area in this table.*

Alternative 3 Description

Alternative 3 would involve a mixed-use building that includes both commercial and office land uses on a 36,002 square-foot Project site located at 9908 South Santa Monica Boulevard in the City of Beverly Hills. The building would be three stories tall with a total height of 45 feet. Alternative 3 would replace the residential component of the Proposed Project with 67,004 square feet of office space. In addition, Alternative 3 would include 5,000 square feet of commercial space on the ground floor for a total of 72,004 square feet of floor area.

Alternative 3 would include four levels of subterranean parking and would provide 205 parking spaces for employees and visitors, including eight ADA spaces. The addition of a second, third, and fourth level of parking would eliminate the use of mechanical lifts that are included as part of the Proposed Project. The construction of four subterranean parking levels would extend the construction period by approximately five months in comparison to the Proposed Project (development of the originally Proposed Project was expected to occur over approximately 21 months). Access to the Project site would be provided by one driveway, with one inbound and outbound direction of travel, located at the northeastern boundary of the Project site along Charleville Boulevard. In addition, Alternative 3 would include a loading dock area for commercial vans and deliveries along the southeastern boundary of the Project site via a one-way eastbound City alley with access from South Moreno Drive.

The Project entitlement for Alternative 3 would consist of a Development Plan Review. Alternative 3 would not require an amendment to the General Plan and Zoning Code to create an Overlay Zone for the Project site, a Tentative Tract Map for condominium purposes when compared to the Proposed Project. Further, it would be up to the developer to decide whether to request a development agreement or not.

Impact Analysis

a. Aesthetics. Alternative 3 would be constructed on the same 36,002 square-foot vacant Project site as the Proposed Project and July 2018 Revised Project. The Project site is located in an urban built environment and surrounded by one- to four-story buildings. There are no City landmarks, hillside vistas or notable urban views from public spaces through the Project site. Therefore, similar to the Proposed Project, construction of Alternative 3 would not conflict with General Plan Policy OS 6.1, Protection of Scenic Views, which calls for protection of "scenic views and vistas from public places including City landmarks, hillside vistas, and urban views of the City."

Under Alternative 3, the residential component of the originally Proposed Project and July 2018 Revised Project would be replaced by office and commercial development, which would



represent a different visual character than the Proposed Project and July 2018 Revised Project. All retail space and some office space would be located at the ground floor of the mixed-use building proposed under Alternative 3 and would be visible at the building's frontage along the South Santa Monica Boulevard commercial corridor. Development of the ground floor under Alternative 3 would reduce the building's setback along the South Santa Monica Boulevard frontage, eliminate the setback along the Charleville Boulevard, and remove landscaping, amenity gardens, and private gardens that would be included under the Proposed Project. In addition, Alternative 3 would shift the building's vehicular access point from South Santa Monica Boulevard to Charleville Boulevard. Therefore, while Alternative 3 could result in no need for tree removal or tree relocation on South Santa Monica Boulevard, this alternative could result in more alteration to street trees on Charleville Boulevard to accommodate the vehicular access point to the building's underground parking levels. Nonetheless, ornamental street trees adjacent to the project site are not protected by Article 29 of the BHMC as native trees, heritage trees, or part of an urban grove because the trees are not located on private property. Therefore, similar to the Proposed Project and July 2018 Revised Project, Alternative 3 would not cause a significant impact should development of the vehicle access point require the alteration of adjacent street trees along Santa Monica Boulevard or Charleville Boulevard. In addition, Alternative 3 would also comply with General Plan Policy OS 6.4, which requires that new development minimize the removal of mature trees and natural visual resources on the site. Alternative 3 would replace the entirely residential Proposed Project and the mixed commercial and residential July 2018 Revised Project with commercial and office uses, which would be consistent with the Commercial Low Density land use under the General Plan, as well as the permitted land uses in the BHMC for the C-3A (Commercial) Zone. Therefore, the three-story building under Alternative 3 would be generally more compatible with the visual character of surrounding one-to-four story land uses along the established South Santa Monica Boulevard commercial corridor, including the Beverly Hills Community Sports Center to the west; commercial retail, offices, and the Peninsula Hotel across Charleville Boulevard to the east; and multi-family residential and parking garages to the south.

Alternative 3 would create new sources of light and glare that would be more intense than existing conditions since the site is vacant. Of the surrounding land uses, the multi-family residences south of the Project site would be most affected by potential light and glare. However, Beverly Hills Municipal Code (BHMC) Section 5-6-1101 prohibits any lighting which creates an intensity of light on residential property, which is greater than one foot-candle (defined as the illuminance on a one-square foot surface from a uniform source of light) above the ambient light level (Beverly Hills 2015). In addition, Alternative 3 would comply with City's General Plan Open Space Element Policies 6.6, Lighting, and 6.7, Glare, (Beverly Hills 2010):

- **OS 6.6 Lighting.** *Minimize obtrusive light by limiting outdoor lighting that is misdirected, excessive, or unnecessary.*
- **OS 6.7 Glare.** *Require that new development avoid the creation of incompatible glare through use of appropriate materials and design features.*

Alternative 3 would include 5,000 square feet of ground floor commercial space, which would potentially generate more light due to signage and window displays; however, the proposed commercial space would be oriented toward South Santa Monica Boulevard and Charleville Boulevard. Therefore, the lighting associated with the commercial uses would not spill over onto the adjacent residential neighborhood south of the Project site. In addition, required



compliance with the BHMC and Beverly Hills General Plan would result in less than significant impacts associated with new sources of light and glare.

While the originally Proposed Project and July 2018 Revised Project would involve construction of a five-story building on the Project site, development of Alternative 3 would involve construction of a three-story building. The height of the mixed-use building under Alternative 3 would be 45 feet, which is 21 feet less than the height of the 66-foot¹ tall building under the Proposed Project and 13 feet less than the height of the 58-foot² tall building under the July 2018 Revised Project. Therefore, Alternative 3 would generate less shadow effect on surrounding light-sensitive uses when compared to the five-story Proposed Project and five-story July 2018 Revised Project. The only shadow-sensitive use in the project vicinity is the rooftop open space area (including the pool) of the Peninsula Hotel located 50 feet east of the Project site. As discussed in Section 4.1, *Aesthetics*, the original Proposed Project's shadows would not be cast onto the Peninsula Hotel rooftop for a period greater than four hours between 9:00 AM and 5:00 PM during the summer months, or for a period greater than three hours between 9:00 AM and 3:00 PM during the winter months. As discussed in Appendix 9, similar to the Proposed Project, shadows from the July 2018 Revised Project would not be cast onto the Peninsula Hotel rooftop in exceedance of the same shadow impact thresholds. Therefore, shadow impacts from the Proposed Project and July 2018 Revised Project would be less than significant. Alternative 3 would generate reduced shadows on nearby uses, including the Peninsula Hotel rooftop, due to a decrease of 21 feet and 13 feet in height when compared to the Proposed Project and July 2018 Revised Project, respectively. Shadows from Alternative 3 would also not be cast onto the Peninsula Hotel rooftop for a period greater than four hours between 9:00 AM and 5:00 PM during the summer months, or for a period greater than three hours between 9:00 AM and 3:00 PM during the winter months.

Overall, development of Alternative 3 would generally improve the visual quality of the currently vacant site by providing new office and commercial use, which would be more aesthetically compatible with the character of the South Santa Monica Boulevard commercial corridor when compared to the residential components of the Proposed Project and July 2018 Revised Project. In addition, Alternative 3 would generate similar impacts to light and glare as the Proposed Project and July 2018 Revised Project; however, shadow impacts would be incrementally less due to the decrease in height, and would be less than significant.

b. Air Quality. Alternative 3 would eliminate all residential use on the Project site. Therefore, as a mixed-use office and commercial development, Alternative 3 would not generate a direct increase to the City's existing population. However, Alternative 3 would include 5,000 square feet of retail space and 67,004 square feet of office space that would provide new job opportunities in the City. The number of employees generated by Alternative 3 is estimated based on employment density numbers from SCAG's 2012 Employment Density Study Summary Report, which estimates one employee per 730 square feet of retail space and one employee per 440 square feet of office space (SCAG 2012). Based on this factor, the 5,000 square feet of commercial space would generate approximately seven employees and the 67,004 square feet of office space would generate approximately 152 employees for a combined total

¹ Based on the text of the overlay zone for the originally Proposed Project, the height of the building was measured to the pool deck surface.

² Based on the text of the overlay zone for the July 2018 Revised Project, height is proposed to be measured to building roof surface, not pool deck surface.



159 employees. According to SCAG, the estimated employment forecast for the City is 63,100 in 2020, which is an increase in 2,953 employees from the 60,147 employees in 2015 (SCAG 2017). Employees would largely originate from the existing employment pool already living in the Los Angeles region. In addition, 159 new employees would not exceed the SCAG’s employment forecast for the City. Therefore, Alternative 3 would not conflict with the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP).

Overall temporary construction associated with Alternative 3 would include an additional five months of construction activity required for the increased depth of the subterranean parking structure to accommodate four levels (a total of approximately 26 months from late 2018 to late 2020). Although the overall duration of construction would incrementally increase when compared to the Proposed Project, maximum daily construction emissions would not exceed the SCAQMD regional thresholds or Localized Significance Thresholds (LSTs) for all pollutants, as shown in Table 2. Therefore, similar to the Proposed Project and July 2018 Revised Project, construction of Alternative 3 would have a less than significant impact on regional and local air quality.

Table 2
Estimated Construction Maximum Daily Air Pollutant Emissions of Alternative 3

Year	Emissions (lbs/day)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
2018	1.8	31.2	12.7	0.1	3.0	1.4
2019	1.6	29.2	12.5	0.1	3.6	1.5
2020	4.2	13.6	12.7	<0.1	1.6	0.9
Maximum lbs/day	4.2	31.2	12.7	0.1	3.6	1.5
<i>SCAQMD Thresholds</i>	75	100	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No
Maximum Daily On-site Construction Emissions	2.9	9.8	7.8	<0.1	1.0	0.8
<i>Local Significant Threshold (on-site only)</i>	N/A	103	562	N/A	4	3
Threshold Exceeded?	No	No	No	No	No	No

*Source: All calculations were made using CalEEMod winter calculations for mitigated construction, which takes into account compliance with SCAQMD Rules 403, 1113, and 445. See Attachment A for calculations. Grading, Building Construction and Architectural Coating totals include worker trips, construction vehicle emissions, and fugitive dust.
 Note: Emission totals shown may not add up as a result of rounding.*

Similar to the Proposed Project and July 2018 Revised Project, Alternative 3 would result in an increase in both stationary and mobile source emissions. Stationary source emissions would come from additional natural gas consumption and electrical demand by on-site buildings. Mobile source emissions would come from Project-related vehicle trips. As shown in Table 3, operational emissions associated with Alternative 3 would not exceed SCAQMD’s operational thresholds. Therefore, similar to the Proposed Project and July 2018 Revised Project, impacts related to operational emissions would be less than significant under Alternative 3.



**Table 3
 Estimated Operational Emissions of Alternative 3**

Source	Maximum Emissions (lbs/day)				
	ROG	NO _x	CO	PM ₁₀	PM _{2.5}
Area Emissions	1.6	<0.1	<0.1	<0.1	<0.1
Energy Emissions	<0.1	0.2	0.2	<0.1	<0.1
Mobile Emissions	1.8	8.8	20.8	6.0	1.6
Total Emissions	3.4	9.0	21.0	6.0	1.7
<i>SCAQMD Thresholds</i>	<i>55</i>	<i>55</i>	<i>550</i>	<i>150</i>	<i>55</i>
Threshold Exceeded?	No	No	No	No	No

Source: All calculations were made using CalEEMod winter calculations for mitigated operational emissions, which takes into account compliance with SCAQMD's Architectural Coating Rule 1113 and project design features. See Attachment A for calculations.

Note: Emission totals shown may not add up as a result of rounding.

A CO hotspot could potentially occur near intersections where the Level of Service (LOS) changes to E or F, or where the volume to capacity ratio (V/C) increases by two percent or more as a result of the Alternative 3 for intersections rated D or worse (SCAQMD 2003). However, as discussed in subsection g., *Transportation and Traffic*, neither of the studied signalized intersections currently operate at LOS E or F during one or more peak hours. Further, implementation of Alternative 3 would not cause a change to LOS E or F at study intersections during one or more peak hours per the City's significance thresholds. In addition, as shown in Table 3, operational CO emissions would be well below SCAQMD regional thresholds. Therefore, similar to the Proposed Project, Alternative 3 would not result in a CO hotspot and impacts would be less than significant.

c. Greenhouse Gas Emissions. Temporary construction-related greenhouse gas (GHG) emissions associated with Alternative 3 would be slightly greater than those of the Proposed Project due to the increased duration of excavation for the four levels of subterranean parking. Operational emissions would also be incrementally higher. As shown in Table 4, construction of Alternative 3 would generate an estimated 878.6 MT of CO₂e. Amortized over a 30-year period (the assumed life of the project), construction of Alternative 3 would generate approximately 29.3 MT of CO₂e per year.



Table 4
Estimated Construction Emissions of Greenhouse Gases

Construction Year	CO₂e (MT)
2018	213.6
2019	392.4
2020	272.6
Total	878.6
<i>Amortized over 30 years</i>	<i>29.3 MT per year</i>

See Attachment A for calculations and for GHG emission factor assumptions. Modeling assumed compliance with SCAQMD Architectural Coating Rule 1113, Rule Healthy Hearth Rule 445, and SCAQMD Fugitive Dust Rule 403. Note: Total may not add up due to rounding.

Table 5 summarizes Alternative 3’s GHG emissions associated with area sources, energy use, solid waste generation, water use, and transportation. As shown in Table 5, Alternative 3’s combined construction, operational, and mobile GHG emissions would total approximately 1,646 MT CO₂e annually. By comparison, the Proposed Project would generate 312 MT CO₂e³ annually, and the July 2018 Revised Project would generate 1,116 MT CO₂e annually. Although emissions associated with Alternative 3 would be higher than those of the Proposed Project and July 2018 Revised Project, they would not exceed the 3,000 MT tons per year significance threshold and impacts would be less than significant.

Table 5
Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions (MT CO₂e)
Construction	29.3
Operational	
Area	<0.1
Energy	509.1
Solid Waste	34.0
Water	94.6
Mobile	
CH ₄ and CO ₂	933.9
N ₂ O	45.0
Total Emissions	1,645.9

Sources: See Attachment A for CalEEMod annual results, for GHG emission factor assumptions, calculation sheets for N₂O mobile emissions are also included in Attachment A. Note: Total may not add up due to rounding.

³ The Proposed Project was analyzed in the FEIR using CalEEMod Version 2013.2; however, for Appendix 9 the Proposed Project was remodeled for the air quality and greenhouse gas emissions analysis using CalEEMod Version 2016.3.2 to update the construction schedule and provide a direct comparison to the November 2017 Proposal and July 2018 Revised Project.



Overall GHG emissions would be greater than those of the Proposed Project and July 2018 Revised Project. However, similar to the originally Proposed and July 2018 Revised Projects, Alternative 3 would not conflict with applicable plans or policies related to GHG emissions since both entail infill development that would comply with applicable energy conservation requirements, implement proposed sustainability features, and generally be consistent with regional efforts to reduce regional vehicle miles traveled by providing employment and local-serving commercial amenities in an already urbanized area.

d. Hazards and Hazardous Materials. The Project site is not located in the vicinity of an airport or private airstrip. However, as discussed in Section 4.4, *Hazards and Hazardous Waste*, the Project site is located within a quarter mile of Beverly Hills High School (approximately 750 feet south of the site) and Good Shepherd Catholic School (approximately 1,100 feet east of the site), and approximately a quarter mile southeast of El Rodeo School. Regardless, the mixed-use building under Alternative 3 would be required to comply with all applicable codes and regulations pertaining to emergency response and fire protection. In addition, based on the type of commercial uses that are permitted in the C-3 zone (refer to Table 4.5-1 in Section 4.5, *Land Use and Planning*), commercial uses on the Project site would not involve the routine transport, use, storage, or disposal of hazardous materials. As discussed in Section 4.4, *Hazards and Hazardous Waste*, the Phase I ESA conducted by California Environmental in June 2014 revealed no observable evidence of above ground storage tanks (ASTs); underground storage tanks (USTs); odors; pools of liquid; stains or corrosion; or other potential forms of soil contamination or hazardous substances in connection with the Project site. However, the Phase I ESA determined that USTs could be discovered during excavation for the subterranean parking levels. As part of the fault trenching investigation conducted by ECI (see Attachment A of Appendix 9) ECI completed a physical investigation to verify if any faults were located on the project site. A trench was excavated diagonally (northeast trending) across the site to intercept any faults that may cross the property. However, the trenching activity did not result in the finding of USTs. As with the Proposed Project and July 2018 Revised Project, if USTs were uncovered during grading, removal under permits issued by Los Angeles County Department of Public Works and Beverly Hills Fire Department would be required to continue development of Alternative 3. There would be no impact from observable soil contamination or hazardous substances on-site and compliance with applicable regulations would reduce potential impacts related to previously undiscovered USTs to a less than significant level.

As discussed in Section 4.4, *Hazards and Hazardous Waste*, the nearest listed contaminated site is the Beverly Hilton, located approximately 200 feet north of the Project site. A release of fuel was reported in November 1998 at this off-site property. The Regional Water Quality Board (RWQCB) issued a No Further Action letter for the Beverly Hilton in March 2007. According to the 2014 Phase I ESA, it is unlikely that the groundwater beneath the site is impacted at concentrations that would lead to an on-site vapor intrusion condition (future structure) from the identified off-site facilities. Therefore, similar to the Proposed Project and July 2018 Revised Project, impacts related to the presence of hazardous materials in the soil or groundwater beneath the Project site would be less than significant under Alternative 3.

e. Land Use and Planning. Alternative 3 would not require an amendment to the General Plan and Zoning Code to create an Overlay Zone for the Project site when compared to the Proposed and July 2018 Revised Projects, or a Tentative Tract Map for condominium purpose when compared to the Proposed Project. The Project entitlement for Alternative 3 would consist of a Development Plan Review, including implementation of Mitigation Measure



LU-1 and LU-2 (as detailed below) to minimize potential impacts to surrounding land uses. In addition, the applicant could propose a development agreement..

LU-1 Operational Measures Program. Prior to issuance of a grading or building permit, whichever comes first, the applicant-submitted program of implementation and operational measures shall be reviewed and approved by the appropriate City Departments/Divisions (e.g. Building & Safety, Planning, Transportation, etc.).

LU-2 Construction Management Program. Prior to the issuance of a grading or building permit, whichever comes first, the applicant shall submit a construction management program that addresses the listed issues below. The program shall be reviewed and approved by the appropriate City Departments/Divisions (e.g. Building & Safety, Planning, Transportation, etc.).

- Fugitive Dust
- Noise attenuation
- Air quality
- Hours of operation
- Public notifications
- Holiday season considerations
- Coordination with other construction activities in the vicinity of the project
- Implementation of a Construction Traffic Management Plan
- Implementation of a Construction Workers Parking Plan

Overall, the mixed-use commercial and office building associated with Alternative 3 would comply with the intended Commercial Low Density land use under the General Plan, as well as the permitted land uses in the BHMC for the C-3A (Commercial) Zone.

The City's General Plan Land Use Element also contains the following goals and policies associated with commercial and offices uses and corridor development abutting residential neighborhoods within the City:

- **LU 2.1 City Places: Neighborhoods, Districts, and Corridors.** *Maintain and enhance the character, distribution, built form, scale, and aesthetic qualities of the City's distinctive residential neighborhoods, business districts, corridors, and open spaces.*
- **LU 2.4 Architectural and Site Design.** *Require that new construction and renovation of existing buildings and properties exhibit a high level of excellence in site planning, architectural design, building materials, use of sustainable design and construction practices, landscaping, and amenities that contribute to the City's distinctive image and complement existing development.*
- **LU 2.8 Pedestrian-Active Streets.** *Require that buildings in business districts be oriented to, and actively engage the street through design features such as build-to lines, articulated and modulated facades, ground floor transparency such as large windows, and the limitation of parking entries directly on the street. Parking ingress and egress should be accessed from alleys where feasible.*
- **LU 2.10 Development Transitions and Compatibility.** *Require that sites and buildings be planned, located, and designed to assure functional and visual transitions between areas of*



differing uses and densities by addressing property and height setbacks, window and entry placement, lighting, landscape buffers, and service access.

- **LU 3.1 Conservation.** *Conserve existing residential neighborhood, and non-residential areas where new development builds on and enhances the viability of existing business sectors that are the City's strengths, promotes transit accessibility, is phased to coincide with infrastructure funding and construction, and designed to assure transitions and compatibility with adjoining residential neighborhoods.*
- **LU 9.1 Uses for Diverse Customers.** *Accommodate retail, office, entertainment, dining, hotel, and visitor-serving uses that support the needs of local residents, attract customers from the region, and provide a quality experience for national and international tourists.*
- **LU 10.1 Local-Serving Business.** *Promote appropriate development of businesses that serve, are located in proximity to, and are accessible to adjoining residential neighborhoods, such as grocery stores, dry cleaners, and personal care businesses.*
- **LU 11.1 Preservation of Pedestrian-Oriented Retail Shopping Areas.** *Preserve, protect and enhance the character of the pedestrian-oriented retail shopping area, which are typified by a variety of retail shops with displays to attract and hold the interest of pedestrian shoppers, to ensure the continuity of the pedestrian experiences.*
- **LU 11.2 Site Planning and Architectural Design.** *Require that commercial and office properties and buildings are planned and designed to exhibit a high level of site and architectural design quality and excellence.*
- **LU 11.3 Retail Street Frontages.** *Require that development and street frontages in districts containing retail uses be designed and developed to promote pedestrian activity including: (a) location and orientation of the building to the sidewalk; (b) transparency of and direct access to the ground floor elevation from the sidewalk; (c) articulation of street-facing elevations to promote interest and sense of quality; (d) inclusion of uses and public spaces that extend interior functions to the sidewalk such as cafes and plazas; and (e) use of pedestrian-oriented signage and lighting.*
- **LU 11.5 Retail Streetscapes.** *Maintain and, where deficient, improve street trees, planting, furniture, signage, public art, and other amenities that promote pedestrian activity.*
- **LU 15.1 Economic Vitality and Business Revenue.** *Sustain a vigorous economy by supporting businesses that contribute revenue, quality services and high-paying jobs.*

The Project site is located along the South Santa Monica Boulevard commercial corridor and surrounding uses include commercial retail, offices, and The Peninsula Hotel. Alternative 3 would include 5,000 square feet of retail space and 67,004 square feet of office space, which would contribute to the commercial corridor and maintain consistency with the previously listed land use goals and policies for commercial and office use and corridor development. Therefore, Alternative 3 would more closely align with the existing zoning and land uses, and would generate fewer impacts related to land use and planning when compared to the Proposed Project and July 2018 Revised Project. Nevertheless, similar to the Proposed Project, Alternative 3 would require implementation of Mitigation Measures LU-1 and LU-2 to ensure compliance with the required Development Plan Review through an Operational Measures Program (LU-1) and Construction Management Program (LU-2).

f. Noise and Vibration. Maximum daily noise levels associated with construction of Alternative 3 would be similar to those of the Proposed Project and July 2018 Revised Project; however, the overall duration of construction would be about five months longer. Nonetheless,



construction activity for any development on the Project site would be limited to daytime hours per BHMC Section 5-1-205, thus avoiding generation of high noise or vibration levels when residents are most sensitive to noise. Therefore, although construction and vibration impacts would incrementally increase under Alternative 3, they would remain less than significant.

Because Alternative 3 would replace proposed residential units with commercial and office use, Alternative 3 would not expose on-site noise-sensitive uses to ambient mobile noise along South Santa Monica Boulevard. In addition, a non-noise-sensitive mixed-use commercial and office building, the applicant-proposed noise attenuation measures for the Proposed Project and 2018 July Revised Project would not be necessary under Alternative 3. However, the addition of commercial and office space to the Project site under Alternative 3 would result in an increase in the traffic generated in the vicinity of the project site. As shown in Table 6, Alternative 3 would generate an estimated 1,182 ADT, including 143 AM peak hour trips and 172 PM peak hour trips. This is 1,002 more ADT, 128 more AM peak hour trips and 154 more PM peak hour trips when compared to the Proposed Project. Furthermore, this is 124 more ADT, 78 more AM peak hour trips and 65 more PM peak hour trips when compared to the July 2018 Revised Project.

**Table 6
 Trip Generation Comparison**

	Proposed Project	July 2018 Revised Project	Alternative 3	Difference in ADT	
				Alternative 3 vs. Proposed Project	Alternative 3 vs. July 2018 Revised Project
Average Daily Traffic (ADT)	180	1,058	1,182	+1,002	+124
A.M. Peak Hour Trips	15	65	143	+128	+78
P.M. Peak Hour Trips	18	89	172	+154	+65

Source: Fehr & Peers, August 2016 (see Appendix 5); Fehr & Peers, July 2018. (see Attachment C of Appendix 9)

According to sound measurement levels reported in Section 4.6, *Noise*, existing noise levels along Charleville Boulevard and Durant Drive were measured at 70 dBA Leq and 63.6 dBA Leq, respectively. Based on existing roadway traffic volumes reported in Fehr & Peers' *Revised Transportation Assessment of 9908 South Santa Monica Boulevard* (see Attachment C of Appendix 9), noise levels under existing conditions and without Project-generated traffic were calculated using the HUD DNL Calculator for both study roadway segments (see Attachment B). The California Department of Transportation (Caltrans) indicates that modeled noise is generally reflective of measured vehicle noise if modeled noise is within 3 dBA of the peak-hour measurement (Caltrans 2013). As shown in Table 7, modeled noise levels at the measurement locations are within 3 dBA of the measured noise levels, indicating that the model is an appropriate tool for determining existing and future noise levels for this area.



**Table 7
 Measured and Modeled Roadway Noise**

Roadway Segment	Approximate Distance of Nearest Sensitive Receptor to Centerline of Roadway	Measured Noise Level (dBA Leq)	Modeled Noise Level (dBA CNEL)	Difference (dBA)
Charleville Boulevard between South Santa Monica Boulevard and Durant Drive	25 feet	70.0	69.2	-0.8
Durant Drive between Moreno Drive and Charleville Boulevard	35 feet	63.6	65.2	+1.6

Source: Rincon Consultants, field visit on February 18, 2017 using ANSI Type 2 Integrating sound level meter; HUD DNL Calculator accessed at: <https://www.hudexchange.info/environmental-review/dnl-calculator/>. See Appendix 4 for noise monitoring data and Attachment B for HUD DNL Calculator results. CNEL is the weighted 24-hour average noise level.

As discussed in Section 4.6, *Noise*, impacts to existing off-site development in the Project site vicinity would be significant if Project-related traffic or operational noise sources would cause a noise increase equal to or exceeding the levels shown in Table 4.6.4 in Section 4.6, *Noise and Vibration*, at a noise-sensitive receptor. These thresholds reflect Policy N 1.5 of the current Noise Element of the Beverly Hills General Plan, which was adopted in 2010.

Per the noise thresholds shown in Table 4.6-4 in Section 4.6, *Noise and Vibration*, Alternative 3 would cause a noise impact on noise-sensitive receptors if roadway noise levels along Charleville Boulevard and Durant Drive increase by 1 dBA or greater. According to the *Revised Transportation Assessment* (see Attachment C of Appendix 9), Alternative 3 would generate an additional 118 daily trips above existing traffic volumes on Charleville Boulevard between South Santa Monica Boulevard and Durant Drive, and 59 daily trips above existing traffic volumes on Durant Drive between Moreno Drive and Charleville Boulevard. As shown in Table 8, traffic generated by Alternative 3 would not cause an increase in traffic noise in exceedance of the applicable thresholds. Therefore, similar to the Proposed Project and July 2018 Revised Project, Alternative 3's traffic noise impact would be less than significant.

**Table 8
 Existing and Existing Plus Alternative 3 Traffic Noise**

Roadway Segment	Noise Level (dBA, CNEL)			Significant?
	Existing [1]	Existing Plus Alternative 3 [2]	Change in Noise Level [2] – [1]	
Charleville Boulevard between South Santa Monica Boulevard and Durant Drive	69.2	69.3	0.1	No
Durant Drive between Moreno Drive and Charleville Boulevard	65.2	65.3	0.1	No

Source: HUD DNL Calculator, see Attachment B for noise model results. CNEL is the weighted 24-hour average noise level.

Cumulative development in the vicinity of the Project site would generate additional traffic volumes and cumulatively increase traffic noise levels under future conditions. Traffic noise levels under future conditions were also calculated based on traffic volumes reported in the



Revised Transportation Assessment (see Attachment C of Appendix 9). According to the *Revised Transportation Assessment*, Alternative 3 would also generate an additional 118 daily trips above existing traffic volumes on Charleville Boulevard between South Santa Monica Boulevard and Durant Drive, and 59 daily trips above existing traffic volumes on Durant Drive between Moreno Drive and Charleville Boulevard. As shown Table 9, cumulative development would not result in a substantial cumulative increase in traffic noise when compared to existing noise levels. In addition, Alternative 3’s contribution to the cumulative roadway noise level increase would not exceed the City’s applicable thresholds. Therefore, similar to the Proposed Project and July 2018 Revised Project, Alternative 3’s contribution to traffic noise levels under future conditions would be less than significant.

**Table 9
 Future and Future Plus Alternative 3 Traffic Noise**

Roadway Segment	Noise Level (dBA CNEL)					
	Existing [1]	Future [2]	Future Plus Project [3]	Cumulative Change in Noise Level [2] – [1]	Project-specific Change in Noise Level [3] – [2]	Significant?
Charleville Boulevard between South Santa Monica Boulevard and Durant Drive	69.2	69.3	69.4	0.1	0.2	No
Durant Drive between Moreno Drive and Charleville Boulevard	65.2	65.3	65.3	0.1	0.0	No

Source: HUD DNL Calculator, see Attachment B for noise model results. CNEL is the weighted 24-hour average noise level.

g. Transportation and Traffic. Fehr & Peers prepared a *Revised Transportation Assessment* of 9908 South Santa Monica Boulevard for the July Revised Project in July 2018 (included as Attachment C of Appendix 9). According to the *Revised Transportation Assessment*, Alternative 3 would generate an estimated 1,182 ADT, including 143 AM peak hour trips and 172 PM peak hour trips (see Table 6). This is 1,002 more ADT, 128 more AM peak hour trips and 154 more PM peak hour trips when compared to the Proposed Project.

Access to the Project site would be provided by one driveway, with one inbound and outbound direction of travel, located at the northeastern boundary of the Project site on Charleville Boulevard. By comparison, the Proposed Project would provide access only on South Santa Monica Boulevard, and the July 2018 Revised Project would provide access via one commercial driveway along South Santa Monica Boulevard and a residential motor court along Charleville Boulevard.

The *Revised Transportation Assessment* analyzed Alternative 3’s potential traffic-generated impacts on the local street system under both existing and future year conditions for chosen study intersections and street segments. The projected LOS at each study intersection was calculated for existing and existing plus Alternative 3 conditions. According to the City’s adopted thresholds, project-generated traffic would cause a significant impact if it would cause an increase of:

- 0.020 or more on V/C (Vehicle to Capacity ratio) at the final LOS “F”; or
- 0.020 or more on V/C at the final LOS “E”; or



- 0.030 or more on V/C at the final LOS "D" or better.

As shown in Table 10, after applying the City's significant impact criteria, Alternative 3 would result in a significant change to the intersection of South Santa Monica Boulevard and Charleville Boulevard during the PM peak hour.

Table 10
Intersection Impacts: Existing and Existing Plus Alternative 3 Project

Intersection	Peak Hour	Existing		Existing + Alternative 3		City Significance Threshold	V/C Change	Significant Impact?
		V/C	LOS	V/C	LOS			
South Santa Monica Boulevard & Moreno Drive	AM	0.663	B	0.666	B	N/A ¹	0.003	No
	PM	0.781	C	0.788	C	N/A ¹	0.007	No
South Santa Monica Boulevard & Charleville Boulevard	AM	0.565	A	0.583	A	N/A ¹	0.018	No
	PM	0.775	C	0.838	D	Equal to or greater than 0.030	0.063	Yes

Source: Fehr & Peers, July 2018 (see Attachment C of Appendix 9)

¹N/A = Not Applicable. Does not meet threshold.

Cumulative development in Project site vicinity would cause increases in traffic area roadways in future years. Planned and pending projects in the Project site vicinity were included in the cumulative traffic forecasts of the *Revised Transportation Assessment* (see Attachment C of Appendix 9) to determine Alternative 3's traffic impacts under future conditions. As shown in Table 11, cumulative development plus Alternative 3 would result in a significant impact to the intersection of South Santa Monica Boulevard and Charleville Boulevard during the PM peak hour.

Table 11
Intersection Impacts: Cumulative (2020) and Cumulative Plus Alternative 3

Intersection	Peak Hour	Cumulative (2020)		Cumulative + Alternative 3		City Significance Threshold	V/C Change	Significant Impact?
		V/C	LOS	V/C	LOS			
South Santa Monica Boulevard & Moreno Drive	AM	0.723	C	0.726	C	N/A ¹	0.003	No
	PM	0.817	D	0.838	D	Equal to or greater than 0.030	0.021	No
South Santa Monica Boulevard & Charleville Boulevard	AM	0.624	B	0.641	B	N/A ¹	0.017	No
	PM	0.867	D	0.941	E	Equal to or greater than 0.030	0.074	Yes

Source: Fehr & Peers, July 2018 (see Attachment C of Appendix 9)

¹N/A = Not Applicable. Does not meet threshold.



Because Alternative 3 would result in a significant impact under existing and cumulative conditions to the intersection of South Santa Monica Boulevard and Charleville Boulevard during the PM peak hour (see Table 10 and Table 11), Fehr & Peers evaluated the following mitigation measure to reduce the impact of Alternative 3:

- Restripe the northbound South Santa Monica Boulevard approach to the South Santa Monica Boulevard and Charleville Boulevard intersection to provide two through lanes and a right-turn lane.

The northbound approach on South Santa Monica Boulevard currently has one through lane and one share through/ right-turn lane. According to the *Revised Transportation Assessment*, Fehr & Peers determined that providing two through lanes and a separate right-turn pocket would result in the following operations during the PM peak hour shown in Table 12.

Table 12
Mitigation Results for Alternative 3 under Existing and Cumulative Conditions

Scenario	Peak Hour	Existing/ Baseline		Alternative 3 + Mitigation		V/C Change	Significant Impact with Mitigation?
		V/C	LOS	V/C	LOS		
Existing Conditions	PM	0.775	C	0.783	C	0.008	No
Cumulative Conditions	PM	0.867	D	0.887	D	0.020	No

Source: Fehr & Peers, July 2018 (see Attachment C of Appendix 9)

As shown in Table 12, restriping the northbound approach would reduce the increase in V/C ratios to below the City’s significance threshold and reduce impacts generated by Alternative 3 under existing and cumulative conditions to less than significant levels. However, Fehr & Peers determined that limited right-of-way is available to implement this improvement. An initial review of the street width indicated that the current northbound approach is 26 feet wide with a narrow striped median approaching the intersection (ranging from 2 to 3 feet). Removing the striped median would result in between 28 to 29 feet of available roadway width to implement the striping changes. If 29 feet can be made available, this would result in two 10-foot through lanes and a 9-foot right-turn pocket. In addition to limited right-of-way, implementation of a right-turn pocket may further encourage vehicles to turn from North Santa Monica Boulevard onto Charleville Boulevard and travel through the residential neighborhood. Although the identified mitigation measure would reduce potential impacts to below City thresholds, this measure is not recommended by the City’s Transportation Department given the limited right-of-way and potential for neighborhood traffic intrusion.

Under the City of Beverly Hills guidelines, a Project would significantly impact a local residential street if the projected increase in ADT exceeds City’s thresholds. Daily and peak hour traffic volumes for the existing and proposed future conditions are summarized in Tables 13 and 14, respectively, and compared to applicable City thresholds. Alternative 3 would not result in significant impacts on any study street segments based on City criteria.



**Table 13
 Street Segment Impacts: Existing and Existing Plus Alternative 3**

Segment	Volume			Impact Analysis		
	Existing	Project Only	Existing + Alternative 3	% of Final ADT	City Significance Threshold	Significant Impact?
Daily						
Charleville Boulevard b/w Santa Monica Boulevard & Durant Drive	4,321	118	4,439	2.7%	+8.0%	No
Durant Drive b/w Moreno Drive & Charleville Boulevard	2,828	59	2,887	2.1%	+12.0%	No
Peak Hour						
Charleville Boulevard b/w Santa Monica Boulevard & Durant Drive	429	17	446	4.0%	+8.0%	No
Durant Drive b/w Moreno Drive & Charleville Boulevard	413	9	422	2.1%	+12.0%	No

Source: Fehr & Peers, July 2018 (see Attachment C of Appendix 9)

**Table 14
 Street Segment Impacts: Cumulative (2020) and Cumulative Plus Alternative 3**

Segment	Volume			Impact Analysis		
	Cumulative	Project Only	Cumulative + Alternative 3	% of Final ADT	City Significance Threshold	Significant Impact?
Daily						
Charleville Boulevard b/w Santa Monica Boulevard & Durant Drive	4,451	118	4,569	2.7%	+8.0%	No
Durant Drive b/w Moreno Drive & Charleville Boulevard	2,885	59	2,944	2.0%	+12.0%	No
Peak Hour						
Charleville Boulevard b/w Santa Monica Boulevard & Durant Drive	442	17	459	3.9%	+8.0%	No
Durant Drive b/w Moreno Drive & Charleville Boulevard	421	9	430	2.0%	+12.0%	No

Source: Fehr & Peers, July 2018 (see Attachment C of Appendix 9)

Alternative 3 would result in incrementally greater impacts to study intersections and roadway segments than the Proposed Project and July 2018 Revised Project due to the increase in ADT and peak hour trips. As with the Proposed Project, the Alternative 3 would not generate traffic exceeding CMP significance thresholds since it would not add 50 or more peak hour trips to the nearest arterial monitoring station located at North Santa Monica Boulevard and Wilshire Boulevard. Impacts related to site access and alternative transportation modes would be similar to those of the Proposed Project. Similar to the Proposed Project, Alternative 3 would require compliance with Mitigation Measures TRAF-1 through TRAF-5 to ensure the review of project features by a City Traffic Engineer (TRAF-1); review of driveways plans for safety measures (TRAF-2); and implementation of a Construction Traffic Management Plan (TRAF-3),



Construction Workers Parking Plan (TRAF-4), and a Cumulative Construction Management Plan (TRAF-5).

Conclusion

Overall, implementation of Alternative 3 would result in impacts related to aesthetics and land use and planning that would be less than those of the Proposed Project and impacts related to hazards and hazardous materials that would be equal to those of the Proposed Project.

Although Alternative 3 would generate increased impacts related to air quality, greenhouse gas emissions, and noise and vibration than the Proposed Project, impacts would remain less than significant. However, Alternative 3 would generate a significant and unavoidable traffic impact at the intersection of South Santa Monica Boulevard and Charleville Boulevard during the PM peak hour. As shown in Table 12, implementation of the following mitigation measure would reduce the increase in V/C ratios to below the City's significance threshold and reduce impacts generated by Alternative 3 under existing and cumulative conditions to less than significant levels. However, this measure is not recommended by the City's Transportation Department given the limited right-of-way and potential for neighborhood traffic intrusion.

- Restripe the northbound South Santa Monica Boulevard approach to the South Santa Monica Boulevard and Charleville Boulevard intersection to provide two through lanes and a right-turn lane.

Alternative 3 would also be subject to most of the same mitigation measures as the Proposed Project, which include Mitigation Measures LU-1, and TRAF-1 through TRAF-5. Because a Development Plan Review is required under this alternative, instead of a Planned Development Permit as required under the Proposed Project, preparation of a construction management plan (Mitigation Measure LU-2) would not be required. Table 14 shows a comparison of environmental impacts of the July 2018 Revised Project and Alternatives 1 through 4 when compared to the Proposed Project.



**Table 14
 Comparison of Environmental Impacts of the July 2018 Revised Project and
 Alternatives**

Issue	July 2018 Revised Project	No Project/ Development (Alternative 1)	Mixed Use Commercial and Residential (Alternative 2)	Mixed Use Office and Commercial (Alternative 3)	Office (Alternative 4)
Aesthetics	-	-	=	-	-
Air Quality	+	-	+	+	+
Greenhouse Gas Emissions	+	-	+	+	+
Hazards and Hazardous Materials	=	-	=	=	=
Land Use and Planning	-	-	=	-	-
Noise and Vibration	+	-	+	+	+
Transportation and Traffic	+	-	+	+	+

+ Impacts greater than those of the Proposed Project
 - Impacts less than those of the Proposed Project
 = Impacts similar to the Proposed Project

Note: Although impacts are identified as greater than or less than those of the Proposed Project, the overall magnitude of impacts (significant versus less than significant) is the same for all alternatives for each of the studied issues with the possible exception of transportation/traffic impacts associated with the Office alternative, which could be significant.

Recirculation Considerations

According to Section 15088.5a of the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3), a lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of a draft EIR for public review under Section 15087 but before certification. As specified in in Section 15088.5a, “significant new information” requiring circulation includes a disclosure showing that:

1. A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
2. A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
3. A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project’s proponents decline to adopt it.
4. The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

The purpose of this document is to evaluate Alternative 3 and compare its impacts to those of the original Proposed Project analyzed in the FEIR and the July 2018 Revised Project analyzed



in Appendix 9. Notable changes associated with Alternative 3 include replacement of all residential units associated with the Proposed Project and July 2018 Revised Project with 5,000 square feet of commercial use and 67,004 square feet of office use. In addition, Alternative 3 would add four levels of subterranean parking to provide 205 parking spaces, which is three more levels than the Proposed Project and one more level than the July 2018 Revised Project. Excavation for the second, third, and fourth subterranean garage floors would extend the construction period by approximately five months in comparison to the Proposed Project; however, this extension would be similar to the construction schedule under the July 2018 Revised Project. As such, overall impacts associated with air quality, greenhouse gas emissions, and noise would be slightly greater. Alternative 3 would result in a significant impact (project level and cumulative) to the one study intersection (South Santa Monica Boulevard and Charleville Boulevard) during the PM peak hour. If the City decision-makers wish to consider approving a revised project similar to this alternative, recirculation of the document may be required due to this significant and unavoidable traffic impact that was not disclosed in the Draft EIR circulated for public review and comment. Further, if mitigation was not available to address the impact, a statement of overriding considerations would be required in order to approve a project similar to Alternative 3.



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Attachment A

CalEEMod Results



9908 Santa Monica Boulevard - Revised Project - South Coast Air Basin, Winter

9908 Santa Monica Boulevard - Revised Project
South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	205.00	Space	0.00	91,435.00	0
General Office Building	67.00	1000sqft	0.72	67,004.00	0
Strip Mall	5.00	1000sqft	0.11	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

9908 Santa Monica Boulevard - Revised Project - South Coast Air Basin, Winter

Project Characteristics - Per project description.

Land Use - Lot acreage and SF from PD.

Construction Phase - Applicant supplied schedule, start date revised to October 2018. Five months added to schedule for 26 months.

Off-road Equipment - Revised per applicant provided construction equipment. (same as Proposed Project)

Off-road Equipment - Revised per applicant provided equipment. (same as Proposed Project)

Off-road Equipment - Revised per applicant provided equipment details. (same from Proposed Project)

Trips and VMT - CalEEMod defaults.

Grading - From project description, increased export from 20,500 to 60,000 due to second, third, and fourth subterranean levels for Alternative 3.

Architectural Coating - Assumed compliance with SCAQMD Rule 1113.

Vehicle Trips - Per F&P's Revised Transportation Assessment April 2018.

Woodstoves - Assumed compliance with SCAQMD Rule 445

Area Coating - Assumed compliance with SCAQMD Rule 1113

Energy Use -

Construction Off-road Equipment Mitigation - Assumed compliance with SCAQMD Rule 403

Mobile Land Use Mitigation - Santa Monica/Wilshire Transit stop.

Area Mitigation - Assumed compliance with SCAQMD Rule 1113.

Energy Mitigation -

9908 Santa Monica Boulevard - Revised Project - South Coast Air Basin, Winter

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	5.00	132.00
tblConstructionPhase	NumDays	100.00	435.00
tblConstructionPhase	NumDays	2.00	110.00
tblConstructionPhase	PhaseEndDate	2/26/2019	12/1/2020
tblConstructionPhase	PhaseEndDate	2/19/2019	11/1/2020
tblConstructionPhase	PhaseEndDate	10/2/2018	3/1/2019
tblConstructionPhase	PhaseStartDate	2/20/2019	5/31/2020
tblConstructionPhase	PhaseStartDate	10/3/2018	3/2/2019
tblGrading	MaterialExported	0.00	60,000.00
tblLandUse	LandUseSquareFeet	82,000.00	91,435.00
tblLandUse	LotAcreage	1.84	0.00
tblLandUse	LotAcreage	1.54	0.72
tblVehicleTrips	WD_TR	11.03	14.45
tblVehicleTrips	WD_TR	44.32	42.70

2.0 Emissions Summary

9908 Santa Monica Boulevard - Revised Project - South Coast Air Basin, Winter

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	1.7594	31.2168	12.7006	0.0665	2.7181	0.7082	3.4264	0.9266	0.6761	1.6027	0.0000	7,058.630 2	7,058.630 2	0.6680	0.0000	7,075.330 8
2019	1.6092	29.2182	12.4575	0.0657	3.4693	0.6316	4.0845	1.1110	0.5872	1.6982	0.0000	6,974.418 9	6,974.418 9	0.6574	0.0000	6,990.854 6
2020	4.1825	13.6219	12.6833	0.0289	0.9887	0.6538	1.6426	0.2661	0.6109	0.8771	0.0000	2,884.126 5	2,884.126 5	0.4515	0.0000	2,895.412 6
Maximum	4.1825	31.2168	12.7006	0.0665	3.4693	0.7082	4.0845	1.1110	0.6761	1.6982	0.0000	7,058.630 2	7,058.630 2	0.6680	0.0000	7,075.330 8

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	1.7594	31.2168	12.7006	0.0665	2.2702	0.7082	2.9784	0.6939	0.6761	1.3699	0.0000	7,058.630 2	7,058.630 2	0.6680	0.0000	7,075.330 8
2019	1.6092	29.2182	12.4575	0.0657	3.0213	0.6316	3.6366	0.8783	0.5872	1.4655	0.0000	6,974.418 9	6,974.418 9	0.6574	0.0000	6,990.854 6
2020	4.1825	13.6219	12.6833	0.0289	0.9887	0.6538	1.6426	0.2661	0.6109	0.8771	0.0000	2,884.126 5	2,884.126 5	0.4515	0.0000	2,895.412 6
Maximum	4.1825	31.2168	12.7006	0.0665	3.0213	0.7082	3.6366	0.8783	0.6761	1.4655	0.0000	7,058.630 2	7,058.630 2	0.6680	0.0000	7,075.330 8

9908 Santa Monica Boulevard - Revised Project - 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	0.00	0.00	0.00	0.00	12.48	0.00	9.79	20.20	0.00	11.14	0.00	0.00	0.00	0.00	0.00	0.00

9908 Santa Monica Boulevard - Revised Project - 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	1.5556	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0606	0.0606	1.6000e-004		0.0647
Energy	0.0209	0.1896	0.1592	1.1400e-003		0.0144	0.0144		0.0144	0.0144		227.4655	227.4655	4.3600e-003	4.1700e-003	228.8172
Mobile	1.9803	10.0373	24.9582	0.0885	7.4924	0.0739	7.5663	2.0045	0.0690	2.0735		9,007.1757	9,007.1757	0.4589		9,018.6472
Total	3.5567	10.2271	25.1458	0.0897	7.4924	0.0885	7.5808	2.0045	0.0836	2.0880		9,234.7018	9,234.7018	0.4634	4.1700e-003	9,247.5291

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	1.5556	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0606	0.0606	1.6000e-004		0.0647
Energy	0.0209	0.1896	0.1592	1.1400e-003		0.0144	0.0144		0.0144	0.0144		227.4655	227.4655	4.3600e-003	4.1700e-003	228.8172
Mobile	1.8145	8.8280	20.8216	0.0711	5.9262	0.0601	5.9862	1.5855	0.0561	1.6415		7,233.7621	7,233.7621	0.3832		7,243.3410
Total	3.3910	9.0178	21.0093	0.0722	5.9262	0.0746	6.0007	1.5855	0.0706	1.6560		7,461.2882	7,461.2882	0.3877	4.1700e-003	7,472.2229

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	ROG	NOx	CO	SO2	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	4.66	11.82	16.45	19.45	20.90	15.70	20.84	20.90	15.54	20.69	0.00	19.20	19.20	16.34	0.00	19.20

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	10/1/2018	3/1/2019	5	110	
2	Building Construction	Building Construction	3/2/2019	11/1/2020	5	435	
3	Architectural Coating	Architectural Coating	5/31/2020	12/1/2020	5	132	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 108,006; Non-Residential Outdoor: 36,002; Striped Parking Area: 5,486 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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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
Grading	4	10.00	0.00	7,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	61.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8145	0.0000	0.8145	0.4231	0.0000	0.4231			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943		1,169.3502	1,169.3502	0.2254		1,174.9857
Total	1.0643	9.4295	7.7762	0.0120	0.8145	0.6228	1.4372	0.4231	0.5943	1.0174		1,169.3502	1,169.3502	0.2254		1,174.9857

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3.2 Grading - 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	0.6366	21.7449	4.4684	0.0534	1.7919	0.0846	1.8765	0.4738	0.0809	0.5548		5,774.9547	5,774.9547	0.4387		5,785.9220
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	0.0586	0.0423	0.4559	1.1500e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		114.3253	114.3253	3.9200e-003		114.4231
Total	0.6952	21.7873	4.9243	0.0545	1.9037	0.0855	1.9892	0.5035	0.0818	0.5853		5,889.2799	5,889.2799	0.4426		5,900.3452

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					0.3665	0.0000	0.3665	0.1904	0.0000	0.1904			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857
Total	1.0643	9.4295	7.7762	0.0120	0.3665	0.6228	0.9893	0.1904	0.5943	0.7847	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857

9908 Santa Monica Boulevard - Revised Project - South Coast Air Basin, Winter

3.2 Grading - 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	0.6366	21.7449	4.4684	0.0534	1.7919	0.0846	1.8765	0.4738	0.0809	0.5548		5,774.9547	5,774.9547	0.4387		5,785.9220
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	0.0586	0.0423	0.4559	1.1500e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		114.3253	114.3253	3.9200e-003		114.4231
Total	0.6952	21.7873	4.9243	0.0545	1.9037	0.0855	1.9892	0.5035	0.0818	0.5853		5,889.2799	5,889.2799	0.4426		5,900.3452

3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8145	0.0000	0.8145	0.4231	0.0000	0.4231			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125		1,159.6570	1,159.6570	0.2211		1,165.1847
Total	0.9530	8.6039	7.6917	0.0120	0.8145	0.5371	1.3515	0.4231	0.5125	0.9356		1,159.6570	1,159.6570	0.2211		1,165.1847

9908 Santa Monica Boulevard - Revised Project - South Coast Air Basin, Winter

3.2 Grading - 2019

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	0.6028	20.5769	4.3588	0.0527	2.5431	0.0773	2.6204	0.6582	0.0740	0.7322		5,704.0451	5,704.0451	0.4329		5,714.8664
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	0.0533	0.0373	0.4070	1.1100e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		110.7167	110.7167	3.4700e-003		110.8035
Total	0.6561	20.6143	4.7657	0.0538	2.6548	0.0782	2.7330	0.6879	0.0748	0.7626		5,814.7618	5,814.7618	0.4363		5,825.6699

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					0.3665	0.0000	0.3665	0.1904	0.0000	0.1904			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847
Total	0.9530	8.6039	7.6917	0.0120	0.3665	0.5371	0.9036	0.1904	0.5125	0.7029	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847

9908 Santa Monica Boulevard - Revised Project - South Coast Air Basin, Winter

3.2 Grading - 2019

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	0.6028	20.5769	4.3588	0.0527	2.5431	0.0773	2.6204	0.6582	0.0740	0.7322		5,704.045 1	5,704.045 1	0.4329		5,714.866 4
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	0.0533	0.0373	0.4070	1.1100e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		110.7167	110.7167	3.4700e-003		110.8035
Total	0.6561	20.6143	4.7657	0.0538	2.6548	0.0782	2.7330	0.6879	0.0748	0.7626		5,814.761 8	5,814.761 8	0.4363		5,825.669 9

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569		1,127.669 6	1,127.669 6	0.3568		1,136.589 2
Total	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569		1,127.669 6	1,127.669 6	0.3568		1,136.589 2

9908 Santa Monica Boulevard - Revised Project - South Coast Air Basin, Winter

3.3 Building Construction - 2019

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	0.1098	3.1032	0.8464	6.7600e-003	0.1728	0.0209	0.1936	0.0497	0.0200	0.0697		721.2751	721.2751	0.0533		722.6085
Worker	0.3252	0.2277	2.4825	6.7800e-003	0.6818	5.3400e-003	0.6872	0.1808	4.9200e-003	0.1857		675.3721	675.3721	0.0212		675.9015
Total	0.4350	3.3309	3.3290	0.0135	0.8546	0.0262	0.8808	0.2306	0.0249	0.2554		1,396.6472	1,396.6472	0.0745		1,398.5100

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	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569	0.0000	1,127.6696	1,127.6696	0.3568		1,136.5892
Total	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569	0.0000	1,127.6696	1,127.6696	0.3568		1,136.5892

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3.3 Building Construction - 2019

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	0.1098	3.1032	0.8464	6.7600e-003	0.1728	0.0209	0.1936	0.0497	0.0200	0.0697		721.2751	721.2751	0.0533		722.6085
Worker	0.3252	0.2277	2.4825	6.7800e-003	0.6818	5.3400e-003	0.6872	0.1808	4.9200e-003	0.1857		675.3721	675.3721	0.0212		675.9015
Total	0.4350	3.3309	3.3290	0.0135	0.8546	0.0262	0.8808	0.2306	0.0249	0.2554		1,396.6472	1,396.6472	0.0745		1,398.5100

3.3 Building Construction - 2020

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	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806		1,102.9781	1,102.9781	0.3567		1,111.8962
Total	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806		1,102.9781	1,102.9781	0.3567		1,111.8962

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3.3 Building Construction - 2020

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	0.0937	2.8426	0.7665	6.7000e-003	0.1728	0.0143	0.1871	0.0497	0.0137	0.0634		716.5190	716.5190	0.0504		717.7786
Worker	0.3010	0.2032	2.2545	6.5700e-003	0.6818	5.2000e-003	0.6870	0.1808	4.7900e-003	0.1856		654.4393	654.4393	0.0188		654.9102
Total	0.3947	3.0458	3.0209	0.0133	0.8546	0.0195	0.8741	0.2306	0.0185	0.2490		1,370.9582	1,370.9582	0.0692		1,372.6888

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	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806	0.0000	1,102.9781	1,102.9781	0.3567		1,111.8962
Total	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806	0.0000	1,102.9781	1,102.9781	0.3567		1,111.8962

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3.3 Building Construction - 2020

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	0.0937	2.8426	0.7665	6.7000e-003	0.1728	0.0143	0.1871	0.0497	0.0137	0.0634		716.5190	716.5190	0.0504		717.7786
Worker	0.3010	0.2032	2.2545	6.5700e-003	0.6818	5.2000e-003	0.6870	0.1808	4.7900e-003	0.1856		654.4393	654.4393	0.0188		654.9102
Total	0.3947	3.0458	3.0209	0.0133	0.8546	0.0195	0.8741	0.2306	0.0185	0.2490		1,370.9582	1,370.9582	0.0692		1,372.6888

3.4 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.6246					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	2.8668	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

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3.4 Architectural Coating - 2020

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	0.0592	0.0400	0.4435	1.2900e-003	0.1341	1.0200e-003	0.1352	0.0356	9.4000e-004	0.0365		128.7422	128.7422	3.7100e-003		128.8348
Total	0.0592	0.0400	0.4435	1.2900e-003	0.1341	1.0200e-003	0.1352	0.0356	9.4000e-004	0.0365		128.7422	128.7422	3.7100e-003		128.8348

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.6246					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	2.8668	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928

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3.4 Architectural Coating - 2020

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	0.0592	0.0400	0.4435	1.2900e-003	0.1341	1.0200e-003	0.1352	0.0356	9.4000e-004	0.0365		128.7422	128.7422	3.7100e-003		128.8348
Total	0.0592	0.0400	0.4435	1.2900e-003	0.1341	1.0200e-003	0.1352	0.0356	9.4000e-004	0.0365		128.7422	128.7422	3.7100e-003		128.8348

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8145	8.8280	20.8216	0.0711	5.9262	0.0601	5.9862	1.5855	0.0561	1.6415		7,233.762 1	7,233.762 1	0.3832		7,243.341 0
Unmitigated	1.9803	10.0373	24.9582	0.0885	7.4924	0.0739	7.5663	2.0045	0.0690	2.0735		9,007.175 7	9,007.175 7	0.4589		9,018.647 2

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	968.21	164.83	70.35	2,336,122	1,847,779
Enclosed Parking with Elevator	0.00	0.00	0.00		
Strip Mall	213.50	210.20	102.15	375,042	296,643
Total	1,181.71	375.03	172.50	2,711,164	2,144,423

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.551391	0.043400	0.201050	0.120272	0.016162	0.005864	0.021029	0.030512	0.002059	0.001866	0.004766	0.000706	0.000924
Enclosed Parking with Elevator	0.551391	0.043400	0.201050	0.120272	0.016162	0.005864	0.021029	0.030512	0.002059	0.001866	0.004766	0.000706	0.000924
Strip Mall	0.551391	0.043400	0.201050	0.120272	0.016162	0.005864	0.021029	0.030512	0.002059	0.001866	0.004766	0.000706	0.000924

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0209	0.1896	0.1592	1.1400e-003		0.0144	0.0144		0.0144	0.0144		227.4655	227.4655	4.3600e-003	4.1700e-003	228.8172
NaturalGas Unmitigated	0.0209	0.1896	0.1592	1.1400e-003		0.0144	0.0144		0.0144	0.0144		227.4655	227.4655	4.3600e-003	4.1700e-003	228.8172

9908 Santa Monica Boulevard - Revised Project - South Coast Air Basin, Winter

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					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	1910.99	0.0206	0.1874	0.1574	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.8225	224.8225	4.3100e-003	4.1200e-003	226.1585
Strip Mall	22.4658	2.4000e-004	2.2000e-003	1.8500e-003	1.0000e-005		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		2.6430	2.6430	5.0000e-005	5.0000e-005	2.6587
Total		0.0209	0.1896	0.1592	1.1300e-003		0.0144	0.0144		0.0144	0.0144		227.4655	227.4655	4.3600e-003	4.1700e-003	228.8172

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	1.91099	0.0206	0.1874	0.1574	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.8225	224.8225	4.3100e-003	4.1200e-003	226.1585
Strip Mall	0.0224658	2.4000e-004	2.2000e-003	1.8500e-003	1.0000e-005		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		2.6430	2.6430	5.0000e-005	5.0000e-005	2.6587
Total		0.0209	0.1896	0.1592	1.1300e-003		0.0144	0.0144		0.0144	0.0144		227.4655	227.4655	4.3600e-003	4.1700e-003	228.8172

6.0 Area Detail

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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
- No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5556	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0606	0.0606	1.6000e-004		0.0647
Unmitigated	1.5556	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0606	0.0606	1.6000e-004		0.0647

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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	0.0949					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4581					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6500e-003	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0606	0.0606	1.6000e-004		0.0647
Total	1.5556	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0606	0.0606	1.6000e-004		0.0647

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	0.0949					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4581					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6500e-003	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0606	0.0606	1.6000e-004		0.0647
Total	1.5556	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0606	0.0606	1.6000e-004		0.0647

7.0 Water Detail

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7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	205.00	Space	0.00	91,435.00	0
General Office Building	67.00	1000sqft	0.72	67,004.00	0
Strip Mall	5.00	1000sqft	0.11	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - Per project description.

Land Use - Lot acreage and SF from PD.

Construction Phase - Applicant supplied schedule, start date revised to October 2018. Five months added to schedule for 26 months.

Off-road Equipment - Revised per applicant provided construction equipment. (same as Proposed Project)

Off-road Equipment - Revised per applicant provided equipment. (same as Proposed Project)

Off-road Equipment - Revised per applicant provided equipment details. (same from Proposed Project)

Trips and VMT - CalEEMod defaults.

Grading - From project description, increased export from 20,500 to 60,000 due to second, third, and fourth subterranean levels for Alternative 3.

Architectural Coating - Assumed compliance with SCAQMD Rule 1113.

Vehicle Trips - Per F&P's Revised Transportation Assessment April 2018.

Woodstoves - Assumed compliance with SCAQMD Rule 445

Area Coating - Assumed compliance with SCAQMD Rule 1113

Energy Use -

Construction Off-road Equipment Mitigation - Assumed compliance with SCAQMD Rule 403

Mobile Land Use Mitigation - Santa Monica/Wilshire Transit stop.

Area Mitigation - Assumed compliance with SCAQMD Rule 1113.

Energy Mitigation -

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Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	5.00	132.00
tblConstructionPhase	NumDays	100.00	435.00
tblConstructionPhase	NumDays	2.00	110.00
tblConstructionPhase	PhaseEndDate	2/26/2019	12/1/2020
tblConstructionPhase	PhaseEndDate	2/19/2019	11/1/2020
tblConstructionPhase	PhaseEndDate	10/2/2018	3/1/2019
tblConstructionPhase	PhaseStartDate	2/20/2019	5/31/2020
tblConstructionPhase	PhaseStartDate	10/3/2018	3/2/2019
tblGrading	MaterialExported	0.00	60,000.00
tblLandUse	LandUseSquareFeet	82,000.00	91,435.00
tblLandUse	LotAcreage	1.84	0.00
tblLandUse	LotAcreage	1.54	0.72
tblVehicleTrips	WD_TR	11.03	14.45
tblVehicleTrips	WD_TR	44.32	42.70

2.0 Emissions Summary

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2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0576	1.0440	0.4137	2.2100e-003	0.0899	0.0233	0.1133	0.0305	0.0223	0.0528	0.0000	213.0619	213.0619	0.0197	0.0000	213.5547
2019	0.1825	2.0855	1.4529	4.1900e-003	0.1683	0.0820	0.2504	0.0491	0.0760	0.1251	0.0000	391.0124	391.0124	0.0552	0.0000	392.3932
2020	0.3262	1.4171	1.2880	2.9900e-003	0.1002	0.0664	0.1666	0.0270	0.0618	0.0888	0.0000	271.4810	271.4810	0.0435	0.0000	272.5686
Maximum	0.3262	2.0855	1.4529	4.1900e-003	0.1683	0.0820	0.2504	0.0491	0.0760	0.1251	0.0000	391.0124	391.0124	0.0552	0.0000	392.3932

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0576	1.0440	0.4137	2.2100e-003	0.0744	0.0233	0.0978	0.0227	0.0223	0.0450	0.0000	213.0619	213.0619	0.0197	0.0000	213.5547
2019	0.1825	2.0855	1.4529	4.1900e-003	0.1574	0.0820	0.2394	0.0438	0.0760	0.1198	0.0000	391.0123	391.0123	0.0552	0.0000	392.3931
2020	0.3262	1.4171	1.2880	2.9900e-003	0.1002	0.0664	0.1666	0.0270	0.0618	0.0888	0.0000	271.4809	271.4809	0.0435	0.0000	272.5684
Maximum	0.3262	2.0855	1.4529	4.1900e-003	0.1574	0.0820	0.2394	0.0438	0.0760	0.1198	0.0000	391.0123	391.0123	0.0552	0.0000	392.3931

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	ROG	NOx	CO	SO2	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	0.00	0.00	0.00	0.00	7.39	0.00	5.00	12.27	0.00	4.90	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	10-1-2018	12-31-2018	1.0835	1.0835
2	1-1-2019	3-31-2019	0.8164	0.8164
3	4-1-2019	6-30-2019	0.4708	0.4708
4	7-1-2019	9-30-2019	0.4760	0.4760
5	10-1-2019	12-31-2019	0.4779	0.4779
6	1-1-2020	3-31-2020	0.4275	0.4275
7	4-1-2020	6-30-2020	0.4773	0.4773
8	7-1-2020	9-30-2020	0.5831	0.5831
		Highest	1.0835	1.0835

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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	0.2838	3.0000e-005	3.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.8700e-003	6.8700e-003	2.0000e-005	0.0000	7.3300e-003
Energy	3.8100e-003	0.0346	0.0291	2.1000e-004		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	507.2090	507.2090	0.0201	4.7000e-003	509.1126
Mobile	0.2722	1.4400	3.5516	0.0126	1.0297	0.0103	1.0400	0.2759	9.6300e-003	0.2855	0.0000	1,160.3687	1,160.3687	0.0581	0.0000	1,161.8205
Waste						0.0000	0.0000		0.0000	0.0000	13.7141	0.0000	13.7141	0.8105	0.0000	33.9760
Water						0.0000	0.0000		0.0000	0.0000	3.8954	77.5803	81.4757	0.4033	0.0101	94.5709
Total	0.5598	1.4747	3.5842	0.0128	1.0297	0.0130	1.0426	0.2759	0.0123	0.2882	17.6095	1,745.1649	1,762.7744	1.2920	0.0148	1,799.4874

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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	0.2838	3.0000e-005	3.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.8700e-003	6.8700e-003	2.0000e-005	0.0000	7.3300e-003
Energy	3.8100e-003	0.0346	0.0291	2.1000e-004		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	507.2090	507.2090	0.0201	4.7000e-003	509.1126
Mobile	0.2488	1.2673	2.9570	0.0101	0.8144	8.3700e-003	0.8228	0.2182	7.8200e-003	0.2260	0.0000	932.7184	932.7184	0.0484	0.0000	933.9284
Waste						0.0000	0.0000		0.0000	0.0000	13.7141	0.0000	13.7141	0.8105	0.0000	33.9760
Water						0.0000	0.0000		0.0000	0.0000	3.8954	77.5803	81.4757	0.4033	0.0101	94.5709
Total	0.5364	1.3019	2.9896	0.0103	0.8144	0.0110	0.8255	0.2182	0.0105	0.2287	17.6095	1,517.5146	1,535.1241	1.2823	0.0148	1,571.5953

	ROG	NOx	CO	SO2	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	4.18	11.71	16.59	19.33	20.90	15.05	20.83	20.91	14.75	20.64	0.00	13.04	12.91	0.75	0.00	12.66

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	10/1/2018	3/1/2019	5	110	
2	Building Construction	Building Construction	3/2/2019	11/1/2020	5	435	
3	Architectural Coating	Architectural Coating	5/31/2020	12/1/2020	5	132	

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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 108,006; Non-Residential Outdoor: 36,002; Striped Parking Area: 5,486 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	4	10.00	0.00	7,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	61.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

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3.2 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0282	0.0000	0.0282	0.0142	0.0000	0.0142	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0351	0.3112	0.2566	4.0000e-004		0.0206	0.0206		0.0196	0.0196	0.0000	35.0070	35.0070	6.7500e-003	0.0000	35.1757
Total	0.0351	0.3112	0.2566	4.0000e-004	0.0282	0.0206	0.0488	0.0142	0.0196	0.0338	0.0000	35.0070	35.0070	6.7500e-003	0.0000	35.1757

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	0.0207	0.7314	0.1417	1.7800e-003	0.0581	2.7600e-003	0.0608	0.0154	2.6400e-003	0.0180	0.0000	174.5785	174.5785	0.0128	0.0000	174.8996
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	1.7500e-003	1.4400e-003	0.0154	4.0000e-005	3.6200e-003	3.0000e-005	3.6500e-003	9.6000e-004	3.0000e-005	9.9000e-004	0.0000	3.4765	3.4765	1.2000e-004	0.0000	3.4795
Total	0.0224	0.7328	0.1571	1.8200e-003	0.0617	2.7900e-003	0.0645	0.0163	2.6700e-003	0.0190	0.0000	178.0550	178.0550	0.0130	0.0000	178.3790

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3.2 Grading - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0127	0.0000	0.0127	6.3800e-003	0.0000	6.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0351	0.3112	0.2566	4.0000e-004		0.0206	0.0206		0.0196	0.0196	0.0000	35.0069	35.0069	6.7500e-003	0.0000	35.1756
Total	0.0351	0.3112	0.2566	4.0000e-004	0.0127	0.0206	0.0333	6.3800e-003	0.0196	0.0260	0.0000	35.0069	35.0069	6.7500e-003	0.0000	35.1756

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	0.0207	0.7314	0.1417	1.7800e-003	0.0581	2.7600e-003	0.0608	0.0154	2.6400e-003	0.0180	0.0000	174.5785	174.5785	0.0128	0.0000	174.8996
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	1.7500e-003	1.4400e-003	0.0154	4.0000e-005	3.6200e-003	3.0000e-005	3.6500e-003	9.6000e-004	3.0000e-005	9.9000e-004	0.0000	3.4765	3.4765	1.2000e-004	0.0000	3.4795
Total	0.0224	0.7328	0.1571	1.8200e-003	0.0617	2.7900e-003	0.0645	0.0163	2.6700e-003	0.0190	0.0000	178.0550	178.0550	0.0130	0.0000	178.3790

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3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0200	0.0000	0.0200	9.6200e-003	0.0000	9.6200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0210	0.1893	0.1692	2.6000e-004		0.0118	0.0118		0.0113	0.0113	0.0000	23.1445	23.1445	4.4100e-003	0.0000	23.2548
Total	0.0210	0.1893	0.1692	2.6000e-004	0.0200	0.0118	0.0318	9.6200e-003	0.0113	0.0209	0.0000	23.1445	23.1445	4.4100e-003	0.0000	23.2548

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	0.0131	0.4614	0.0922	1.1700e-003	0.0549	1.6800e-003	0.0566	0.0142	1.6100e-003	0.0158	0.0000	114.9708	114.9708	8.4500e-003	0.0000	115.1821
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	1.0600e-003	8.4000e-004	9.1900e-003	2.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2446	2.2446	7.0000e-005	0.0000	2.2463
Total	0.0141	0.4622	0.1014	1.1900e-003	0.0573	1.7000e-003	0.0590	0.0149	1.6300e-003	0.0165	0.0000	117.2154	117.2154	8.5200e-003	0.0000	117.4284

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3.2 Grading - 2019

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					8.9800e-003	0.0000	8.9800e-003	4.3300e-003	0.0000	4.3300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0210	0.1893	0.1692	2.6000e-004		0.0118	0.0118		0.0113	0.0113	0.0000	23.1445	23.1445	4.4100e-003	0.0000	23.2548
Total	0.0210	0.1893	0.1692	2.6000e-004	8.9800e-003	0.0118	0.0208	4.3300e-003	0.0113	0.0156	0.0000	23.1445	23.1445	4.4100e-003	0.0000	23.2548

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	0.0131	0.4614	0.0922	1.1700e-003	0.0549	1.6800e-003	0.0566	0.0142	1.6100e-003	0.0158	0.0000	114.9708	114.9708	8.4500e-003	0.0000	115.1821
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	1.0600e-003	8.4000e-004	9.1900e-003	2.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2446	2.2446	7.0000e-005	0.0000	2.2463
Total	0.0141	0.4622	0.1014	1.1900e-003	0.0573	1.7000e-003	0.0590	0.0149	1.6300e-003	0.0165	0.0000	117.2154	117.2154	8.5200e-003	0.0000	117.4284

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3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1039	1.0656	0.8184	1.2400e-003		0.0657	0.0657		0.0604	0.0604	0.0000	110.9960	110.9960	0.0351	0.0000	111.8740
Total	0.1039	1.0656	0.8184	1.2400e-003		0.0657	0.0657		0.0604	0.0604	0.0000	110.9960	110.9960	0.0351	0.0000	111.8740

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	0.0116	0.3430	0.0875	7.4000e-004	0.0185	2.2400e-003	0.0207	5.3300e-003	2.1500e-003	7.4700e-003	0.0000	72.1313	72.1313	5.0600e-003	0.0000	72.2579
Worker	0.0319	0.0254	0.2764	7.5000e-004	0.0726	5.8000e-004	0.0732	0.0193	5.3000e-004	0.0198	0.0000	67.5252	67.5252	2.1200e-003	0.0000	67.5781
Total	0.0435	0.3685	0.3639	1.4900e-003	0.0911	2.8200e-003	0.0939	0.0246	2.6800e-003	0.0273	0.0000	139.6565	139.6565	7.1800e-003	0.0000	139.8360

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3.3 Building Construction - 2019**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	0.1039	1.0655	0.8184	1.2400e-003		0.0657	0.0657		0.0604	0.0604	0.0000	110.9959	110.9959	0.0351	0.0000	111.8738
Total	0.1039	1.0655	0.8184	1.2400e-003		0.0657	0.0657		0.0604	0.0604	0.0000	110.9959	110.9959	0.0351	0.0000	111.8738

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	0.0116	0.3430	0.0875	7.4000e-004	0.0185	2.2400e-003	0.0207	5.3300e-003	2.1500e-003	7.4700e-003	0.0000	72.1313	72.1313	5.0600e-003	0.0000	72.2579
Worker	0.0319	0.0254	0.2764	7.5000e-004	0.0726	5.8000e-004	0.0732	0.0193	5.3000e-004	0.0198	0.0000	67.5252	67.5252	2.1200e-003	0.0000	67.5781
Total	0.0435	0.3685	0.3639	1.4900e-003	0.0911	2.8200e-003	0.0939	0.0246	2.6800e-003	0.0273	0.0000	139.6565	139.6565	7.1800e-003	0.0000	139.8360

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3.3 Building Construction - 2020

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	0.0939	0.9649	0.8052	1.2400e-003		0.0569	0.0569		0.0524	0.0524	0.0000	109.0659	109.0659	0.0353	0.0000	109.9478
Total	0.0939	0.9649	0.8052	1.2400e-003		0.0569	0.0569		0.0524	0.0524	0.0000	109.0659	109.0659	0.0353	0.0000	109.9478

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	9.9600e-003	0.3156	0.0796	7.4000e-004	0.0186	1.5400e-003	0.0201	5.3500e-003	1.4800e-003	6.8300e-003	0.0000	71.9997	71.9997	4.8000e-003	0.0000	72.1198
Worker	0.0296	0.0228	0.2523	7.3000e-004	0.0730	5.7000e-004	0.0735	0.0194	5.2000e-004	0.0199	0.0000	65.7340	65.7340	1.8900e-003	0.0000	65.7813
Total	0.0396	0.3384	0.3318	1.4700e-003	0.0915	2.1100e-003	0.0936	0.0247	2.0000e-003	0.0267	0.0000	137.7337	137.7337	6.6900e-003	0.0000	137.9011

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3.3 Building Construction - 2020

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	0.0939	0.9649	0.8052	1.2400e-003		0.0569	0.0569		0.0524	0.0524	0.0000	109.0658	109.0658	0.0353	0.0000	109.9477
Total	0.0939	0.9649	0.8052	1.2400e-003		0.0569	0.0569		0.0524	0.0524	0.0000	109.0658	109.0658	0.0353	0.0000	109.9477

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	9.9600e-003	0.3156	0.0796	7.4000e-004	0.0186	1.5400e-003	0.0201	5.3500e-003	1.4800e-003	6.8300e-003	0.0000	71.9997	71.9997	4.8000e-003	0.0000	72.1198
Worker	0.0296	0.0228	0.2523	7.3000e-004	0.0730	5.7000e-004	0.0735	0.0194	5.2000e-004	0.0199	0.0000	65.7340	65.7340	1.8900e-003	0.0000	65.7813
Total	0.0396	0.3384	0.3318	1.4700e-003	0.0915	2.1100e-003	0.0936	0.0247	2.0000e-003	0.0267	0.0000	137.7337	137.7337	6.6900e-003	0.0000	137.9011

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3.4 Architectural Coating - 2020

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	0.1732					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0160	0.1111	0.1209	2.0000e-004		7.3200e-003	7.3200e-003		7.3200e-003	7.3200e-003	0.0000	16.8515	16.8515	1.3000e-003	0.0000	16.8841
Total	0.1892	0.1111	0.1209	2.0000e-004		7.3200e-003	7.3200e-003		7.3200e-003	7.3200e-003	0.0000	16.8515	16.8515	1.3000e-003	0.0000	16.8841

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	3.5300e-003	2.7100e-003	0.0301	9.0000e-005	8.6900e-003	7.0000e-005	8.7600e-003	2.3100e-003	6.0000e-005	2.3700e-003	0.0000	7.8300	7.8300	2.3000e-004	0.0000	7.8356
Total	3.5300e-003	2.7100e-003	0.0301	9.0000e-005	8.6900e-003	7.0000e-005	8.7600e-003	2.3100e-003	6.0000e-005	2.3700e-003	0.0000	7.8300	7.8300	2.3000e-004	0.0000	7.8356

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3.4 Architectural Coating - 2020

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	0.1732					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0160	0.1111	0.1209	2.0000e-004		7.3200e-003	7.3200e-003		7.3200e-003	7.3200e-003	0.0000	16.8515	16.8515	1.3000e-003	0.0000	16.8841
Total	0.1892	0.1111	0.1209	2.0000e-004		7.3200e-003	7.3200e-003		7.3200e-003	7.3200e-003	0.0000	16.8515	16.8515	1.3000e-003	0.0000	16.8841

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	3.5300e-003	2.7100e-003	0.0301	9.0000e-005	8.6900e-003	7.0000e-005	8.7600e-003	2.3100e-003	6.0000e-005	2.3700e-003	0.0000	7.8300	7.8300	2.3000e-004	0.0000	7.8356
Total	3.5300e-003	2.7100e-003	0.0301	9.0000e-005	8.6900e-003	7.0000e-005	8.7600e-003	2.3100e-003	6.0000e-005	2.3700e-003	0.0000	7.8300	7.8300	2.3000e-004	0.0000	7.8356

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2488	1.2673	2.9570	0.0101	0.8144	8.3700e-003	0.8228	0.2182	7.8200e-003	0.2260	0.0000	932.7184	932.7184	0.0484	0.0000	933.9284
Unmitigated	0.2722	1.4400	3.5516	0.0126	1.0297	0.0103	1.0400	0.2759	9.6300e-003	0.2855	0.0000	1,160.3687	1,160.3687	0.0581	0.0000	1,161.8205

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	968.21	164.83	70.35	2,336,122	1,847,779
Enclosed Parking with Elevator	0.00	0.00	0.00		
Strip Mall	213.50	210.20	102.15	375,042	296,643
Total	1,181.71	375.03	172.50	2,711,164	2,144,423

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.551391	0.043400	0.201050	0.120272	0.016162	0.005864	0.021029	0.030512	0.002059	0.001866	0.004766	0.000706	0.000924
Enclosed Parking with Elevator	0.551391	0.043400	0.201050	0.120272	0.016162	0.005864	0.021029	0.030512	0.002059	0.001866	0.004766	0.000706	0.000924
Strip Mall	0.551391	0.043400	0.201050	0.120272	0.016162	0.005864	0.021029	0.030512	0.002059	0.001866	0.004766	0.000706	0.000924

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	469.5495	469.5495	0.0194	4.0100e-003	471.2294
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	469.5495	469.5495	0.0194	4.0100e-003	471.2294
Natural Gas Mitigated	3.8100e-003	0.0346	0.0291	2.1000e-004		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	37.6595	37.6595	7.2000e-004	6.9000e-004	37.8833
Natural Gas Unmitigated	3.8100e-003	0.0346	0.0291	2.1000e-004		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	37.6595	37.6595	7.2000e-004	6.9000e-004	37.8833

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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					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	697512	3.7600e-003	0.0342	0.0287	2.1000e-004		2.6000e-003	2.6000e-003		2.6000e-003	2.6000e-003	0.0000	37.2219	37.2219	7.1000e-004	6.8000e-004	37.4431
Strip Mall	8200	4.0000e-005	4.0000e-004	3.4000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4376	0.4376	1.0000e-005	1.0000e-005	0.4402
Total		3.8000e-003	0.0346	0.0291	2.1000e-004		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	37.6595	37.6595	7.2000e-004	6.9000e-004	37.8833

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	697512	3.7600e-003	0.0342	0.0287	2.1000e-004		2.6000e-003	2.6000e-003		2.6000e-003	2.6000e-003	0.0000	37.2219	37.2219	7.1000e-004	6.8000e-004	37.4431
Strip Mall	8200	4.0000e-005	4.0000e-004	3.4000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4376	0.4376	1.0000e-005	1.0000e-005	0.4402
Total		3.8000e-003	0.0346	0.0291	2.1000e-004		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	37.6595	37.6595	7.2000e-004	6.9000e-004	37.8833

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	535809	170.7203	7.0500e-003	1.4600e-003	171.3310
General Office Building	870382	277.3223	0.0115	2.3700e-003	278.3145
Strip Mall	67500	21.5070	8.9000e-004	1.8000e-004	21.5839
Total		469.5496	0.0194	4.0100e-003	471.2294

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	535809	170.7203	7.0500e-003	1.4600e-003	171.3310
General Office Building	870382	277.3223	0.0115	2.3700e-003	278.3145
Strip Mall	67500	21.5070	8.9000e-004	1.8000e-004	21.5839
Total		469.5496	0.0194	4.0100e-003	471.2294

6.0 Area Detail

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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
- No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive 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	0.2838	3.0000e-005	3.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.8700e-003	6.8700e-003	2.0000e-005	0.0000	7.3300e-003
Unmitigated	0.2838	3.0000e-005	3.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.8700e-003	6.8700e-003	2.0000e-005	0.0000	7.3300e-003

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0173					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2661					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.3000e-004	3.0000e-005	3.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.8700e-003	6.8700e-003	2.0000e-005	0.0000	7.3300e-003
Total	0.2838	3.0000e-005	3.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.8700e-003	6.8700e-003	2.0000e-005	0.0000	7.3300e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0173					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2661					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.3000e-004	3.0000e-005	3.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.8700e-003	6.8700e-003	2.0000e-005	0.0000	7.3300e-003
Total	0.2838	3.0000e-005	3.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.8700e-003	6.8700e-003	2.0000e-005	0.0000	7.3300e-003

7.0 Water Detail

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7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	81.4757	0.4033	0.0101	94.5709
Unmitigated	81.4757	0.4033	0.0101	94.5709

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	11.9082 / 7.29855	79.0182	0.3911	9.8000e-003	91.7183
Strip Mall	0.370363 / 0.226996	2.4576	0.0122	3.0000e-004	2.8526
Total		81.4757	0.4033	0.0101	94.5709

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	11.9082 / 7.29855	79.0182	0.3911	9.8000e-003	91.7183
Strip Mall	0.370363 / 0.226996	2.4576	0.0122	3.0000e-004	2.8526
Total		81.4757	0.4033	0.0101	94.5709

8.0 Waste Detail**8.1 Mitigation Measures Waste**

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	13.7141	0.8105	0.0000	33.9760
Unmitigated	13.7141	0.8105	0.0000	33.9760

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	62.31	12.6484	0.7475	0.0000	31.3358
Strip Mall	5.25	1.0657	0.0630	0.0000	2.6402
Total		13.7141	0.8105	0.0000	33.9760

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8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	62.31	12.6484	0.7475	0.0000	31.3358
Strip Mall	5.25	1.0657	0.0630	0.0000	2.6402
Total		13.7141	0.8105	0.0000	33.9760

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number
----------------	--------

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11.0 Vegetation

Greenhouse Gas Emission Worksheet
N2O Mobile Emissions

9908 S Santa Monica Boulevard - Revised Project

From CalEEMod v.2016.3.1 Vehicle Fleet Mix Output:

Annual VMT: 2,144,423

Vehicle Type	Percent Type	CH4 Emission Factor (g/mile)*	CH4 Emission (g/mile)**	N2O Emission Factor (g/mile)*	N2O Emission (g/mile)**
Light Auto	55.1%	0.04	0.02204	0.04	0.02204
Light Truck < 3750 lbs	4.3%	0.05	0.00215	0.06	0.00258
Light Truck 3751-5750 lbs	20.1%	0.05	0.01005	0.06	0.01206
Med Truck 5751-8500 lbs	12.0%	0.12	0.0144	0.2	0.024
Lite-Heavy Truck 8501-10,000 lbs	1.6%	0.12	0.00192	0.2	0.0032
Lite-Heavy Truck 10,001-14,000 lbs	0.6%	0.09	0.00054	0.125	0.00075
Med-Heavy Truck 14,001-33,000 lbs	2.1%	0.06	0.00126	0.05	0.00105
Heavy-Heavy Truck 33,001-60,000 lbs	3.1%	0.06	0.00186	0.05	0.00155
Other Bus	0.2%	0.06	0.00012	0.05	0.0001
Urban Bus	0.2%	0.06	0.00012	0.05	0.0001
Motorcycle	0.5%	0.09	0.00045	0.01	0.00005
School Bus	0.1%	0.06	0.00006	0.05	0.00005
Motor Home	0.1%	0.09	0.00009	0.125	0.000125
Total	100.0%		0.05506		0.067655

Total Emissions (metric tons) =
Emission Factor by Vehicle Mix (g/mi) x Annual VMT(mi) x 0.000001 metric tons/g

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)

CH4 21 GWP
 N2O 310 GWP
 1 ton (short, US) = 0.90718474 metric ton

Annual Mobile Emissions:

	Total Emissions	Total CO2e units
N2O Emissions:	0.1451 metric tons N2O	44.98 metric tons CO2e
Project Total:		44.98 metric tons CO2e

References

* from Table C.4: Methane and Nitrous Oxide Emission Factors for Mobile Sources by Vehicle and Fuel Type (g/mile).
 in California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.
 Assume Model year 2000-present, gasoline fueled.
 ** Source: California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.
 *** CalEEMod v.2016.3.1 results for mobile sources.

Attachment B

Noise Calculations



[Home \(/\)](#) > [Programs \(/programs/\)](/programs/) > [Environmental Review \(/programs/environmental-review/\)](/programs/environmental-review/) > DNL Calculator

DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the [Day/Night Noise Level Calculator Electronic Assessment Tool Overview \(/programs/environmental-review/day-night-noise-level-electronic-assessment-tool/\)](/programs/environmental-review/day-night-noise-level-electronic-assessment-tool/).

Note: HUD updated the Calculator December 12, 2017. If you used the Calculator prior to December 12, you may need to clear your cache to perform an accurate calculation. **View instructions to clear your cache** (<https://support.google.com/accounts/answer/32050>).

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	9908 South Santa Monica Boulevard - Existing		
Record Date	04/23/2017		
User's Name	Rincon Consultants, Inc.		
Road # 1 Name:	Charleville Boulevard b/w South Santa Monica Bouelvard and Durant D		
Road #1			
Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	25	25	25

Effective Distance	<input type="text" value="25"/>	<input type="text" value="25"/>	<input type="text" value="25"/>
Distance to Stop Sign	<input type="text"/>	<input type="text"/>	<input type="text"/>
Average Speed	<input type="text" value="30"/>	<input type="text" value="30"/>	<input type="text" value="30"/>
Average Daily Trips (ADT)	<input type="text" value="4105"/>	<input type="text" value="130"/>	<input type="text" value="86"/>
Night Fraction of ADT	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="15"/>
Road Gradient (%)	<input type="text"/>	<input type="text"/>	<input type="text" value="0"/>
Vehicle DNL	<input type="text" value="63.6171"/>	<input type="text" value="58.6234"/>	<input type="text" value="67.1866"/>
<input type="button" value="Calculate Road #1 DNL"/>	<input type="text" value="69.1763"/>	<input type="button" value="Reset"/>	

Road # 2 Name:

Road #2

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	<input type="text" value="35"/>	<input type="text" value="35"/>	<input type="text" value="35"/>
Distance to Stop Sign	<input type="text"/>	<input type="text"/>	<input type="text"/>
Average Speed	<input type="text" value="30"/>	<input type="text" value="30"/>	<input type="text" value="30"/>
Average Daily Trips (ADT)	<input type="text" value="2687"/>	<input type="text" value="85"/>	<input type="text" value="57"/>
Night Fraction of ADT	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="15"/>
Road Gradient (%)	<input type="text"/>	<input type="text"/>	<input type="text" value="0"/>
Vehicle DNL	<input type="text" value="59.5848"/>	<input type="text" value="54.5863"/>	<input type="text" value="63.2084"/>
<input type="button" value="Calculate Road #2 DNL"/>	<input type="text" value="65.1815"/>	<input type="button" value="Reset"/>	

	<input type="text"/>
Loud Impulse Sounds?	<input type="radio"/> Yes <input type="radio"/> No
Combined DNL for all Road and Rail sources	<input type="text" value="0"/>
Combined DNL including Airport	<input type="text"/>
Site DNL with Loud Impulse Sound	<input type="text"/>
<input type="button" value="Calculate"/>	

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative:** Cancel the project at this location
- **Other Reasonable Alternatives:** Choose an alternate site
- **Mitigation**
 - **Contact your Field or Regional Environmental Officer** (</programs/environmental-review/hud-environmental-staff-contacts/>)
 - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
 - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
 - Incorporate natural or man-made barriers. See *The Noise Guidebook* (</resource/313/hud-noise-guidebook/>)
 - Construct noise barrier. See the **Barrier Performance Module** (</programs/environmental-review/bpm-calculator/>)

Tools and Guidance

[Day/Night Noise Level Assessment Tool User Guide](/resource/3822/day-night-noise-level-assessment-tool-user-guide/) (</resource/3822/day-night-noise-level-assessment-tool-user-guide/>)

[Day/Night Noise Level Assessment Tool Flowcharts](/resource/3823/day-night-noise-level-assessment-tool-flowcharts/) (</resource/3823/day-night-noise-level-assessment-tool-flowcharts/>)

[Home \(/\)](#) > [Programs \(/programs/\)](/programs/) > [Environmental Review \(/programs/environmental-review/\)](/programs/environmental-review/) > DNL Calculator

DNL Calculator

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Note: HUD updated the Calculator December 12, 2017. If you used the Calculator prior to December 12, you may need to clear your cache to perform an accurate calculation. **View instructions to clear your cache** (<https://support.google.com/accounts/answer/32050>).

Guidelines

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- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	9908 South Santa Monica Boulevard - Existing plus Alternative 3		
Record Date	04/24/2018		
User's Name	Rincon Consultants, Inc.		
Road # 1 Name:	Charleville Boulevard b/w South Santa Monica Bouelvard and Durant D		
Road #1			
Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	25	25	25

Effective Distance	<input type="text" value="25"/>	<input type="text" value="25"/>	<input type="text" value="25"/>
Distance to Stop Sign	<input type="text"/>	<input type="text"/>	<input type="text"/>
Average Speed	<input type="text" value="30"/>	<input type="text" value="30"/>	<input type="text" value="30"/>
Average Daily Trips (ADT)	<input type="text" value="4217"/>	<input type="text" value="133"/>	<input type="text" value="89"/>
Night Fraction of ADT	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="15"/>
Road Gradient (%)	<input type="text"/>	<input type="text"/>	<input type="text" value="0"/>
Vehicle DNL	<input type="text" value="63.734"/>	<input type="text" value="58.7225"/>	<input type="text" value="67.3355"/>
<input type="button" value="Calculate Road #1 DNL"/>	<input type="text" value="69.3144"/>	<input type="button" value="Reset"/>	

Road # 2 Name:

Durant Drive b/w Moreno Drive and Charleville Boulevard**Road #2**

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	<input type="text" value="35"/>	<input type="text" value="35"/>	<input type="text" value="35"/>
Distance to Stop Sign	<input type="text"/>	<input type="text"/>	<input type="text"/>
Average Speed	<input type="text" value="30"/>	<input type="text" value="30"/>	<input type="text" value="30"/>
Average Daily Trips (ADT)	<input type="text" value="2743"/>	<input type="text" value="87"/>	<input type="text" value="58"/>
Night Fraction of ADT	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="15"/>
Road Gradient (%)	<input type="text"/>	<input type="text"/>	<input type="text" value="0"/>
Vehicle DNL	<input type="text" value="59.6743"/>	<input type="text" value="54.6873"/>	<input type="text" value="63.2839"/>
<input type="button" value="Calculate Road #2 DNL"/>	<input type="text" value="65.2622"/>	<input type="button" value="Reset"/>	

	<input type="text"/>
Loud Impulse Sounds?	<input type="radio"/> Yes <input type="radio"/> No
Combined DNL for all Road and Rail sources	<input type="text" value="0"/>
Combined DNL including Airport	<input type="text"/>
Site DNL with Loud Impulse Sound	<input type="text"/>
<input type="button" value="Calculate"/>	

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative:** Cancel the project at this location
- **Other Reasonable Alternatives:** Choose an alternate site
- **Mitigation**
 - **Contact your Field or Regional Environmental Officer** (</programs/environmental-review/hud-environmental-staff-contacts/>)
 - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
 - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
 - Incorporate natural or man-made barriers. See *The Noise Guidebook* (</resource/313/hud-noise-guidebook/>)
 - Construct noise barrier. See the **Barrier Performance Module** (</programs/environmental-review/bpm-calculator/>)

Tools and Guidance

[Day/Night Noise Level Assessment Tool User Guide](/resource/3822/day-night-noise-level-assessment-tool-user-guide/) (</resource/3822/day-night-noise-level-assessment-tool-user-guide/>)

[Day/Night Noise Level Assessment Tool Flowcharts](/resource/3823/day-night-noise-level-assessment-tool-flowcharts/) (</resource/3823/day-night-noise-level-assessment-tool-flowcharts/>)

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DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the [Day/Night Noise Level Calculator Electronic Assessment Tool Overview \(/programs/environmental-review/day-night-noise-level-electronic-assessment-tool/\)](#).

Note: HUD updated the Calculator December 12, 2017. If you used the Calculator prior to December 12, you may need to clear your cache to perform an accurate calculation. **View instructions to clear your cache** (<https://support.google.com/accounts/answer/32050>).

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	9908 South Santa Monica Boulevard - Future		
Record Date	04/23/2017		
User's Name	Rincon Consultants, Inc.		
Road # 1 Name:	Charleville Boulevard b/w South Santa Monica Bouelvard and Durant D		
Road #1			
Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	25	25	25

Effective Distance	25	25	25
Distance to Stop Sign			
Average Speed	30	30	30
Average Daily Trips (ADT)	4228	134	89
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	63.7454	58.7551	67.3355
Calculate Road #1 DNL	69.3193	Reset	

Road # 2 Name:

Durant Drive b/w Moreno Drive and Charleville Boulevard

Road #2

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	35	35	35
Distance to Stop Sign			
Average Speed	30	30	30
Average Daily Trips (ADT)	2740	87	58
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	59.6696	54.6873	63.2839
Calculate Road #2 DNL	65.2612	Reset	

Road # 3 Name:

Road #3

Vehicle Type	Cars <input type="checkbox"/>	Medium Trucks <input type="checkbox"/>	Heavy Trucks <input type="checkbox"/>
Effective Distance	<input type="text"/>	<input type="text"/>	<input type="text"/>
Distance to Stop Sign	<input type="text"/>	<input type="text"/>	<input type="text"/>
Average Speed	<input type="text"/>	<input type="text"/>	<input type="text"/>
Average Daily Trips (ADT)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Night Fraction of ADT	<input type="text"/>	<input type="text"/>	<input type="text"/>
Road Gradient (%)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Vehicle DNL	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="button" value="Calculate Road #3 DNL"/>	<input type="text"/>	<input type="button" value="Reset"/>	

Airport Noise Level	<input type="text"/>
Loud Impulse Sounds?	<input type="radio"/> Yes <input type="radio"/> No
Combined DNL for all Road and Rail sources	<input type="text" value="0"/>
Combined DNL including Airport	<input type="text"/>
Site DNL with Loud Impulse Sound	<input type="text"/>

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

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- **Mitigation**
 - **Contact your Field or Regional Environmental Officer** (</programs/environmental-review/hud-environmental-staff-contacts/>)
 - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
 - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
 - Incorporate natural or man-made barriers. See *The Noise Guidebook* (</resource/313/hud-noise-guidebook/>)
 - Construct noise barrier. See the **Barrier Performance Module** (</programs/environmental-review/bpm-calculator/>)

Tools and Guidance

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DNL Calculator

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- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
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DNL Calculator

Site ID	9908 South Santa Monica Boulevard - Future plus Alternative 3		
Record Date	04/24/2018		
User's Name	Rincon Consultants, Inc.		
Road # 1 Name:	Charleville Boulevard b/w South Santa Monica Bouelvard and Durant D		
Road #1			
Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	25	25	25

Effective Distance	<input type="text" value="25"/>	<input type="text" value="25"/>	<input type="text" value="25"/>
Distance to Stop Sign	<input type="text"/>	<input type="text"/>	<input type="text"/>
Average Speed	<input type="text" value="30"/>	<input type="text" value="30"/>	<input type="text" value="30"/>
Average Daily Trips (ADT)	<input type="text" value="4341"/>	<input type="text" value="137"/>	<input type="text" value="91"/>
Night Fraction of ADT	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="15"/>
Road Gradient (%)	<input type="text"/>	<input type="text"/>	<input type="text" value="0"/>
Vehicle DNL	<input type="text" value="63.8599"/>	<input type="text" value="58.8512"/>	<input type="text" value="67.432"/>
<input type="button" value="Calculate Road #1 DNL"/>	<input type="text" value="69.4198"/>	<input type="button" value="Reset"/>	

Road # 2 Name:

Road #2

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	<input type="text" value="35"/>	<input type="text" value="35"/>	<input type="text" value="35"/>
Distance to Stop Sign	<input type="text"/>	<input type="text"/>	<input type="text"/>
Average Speed	<input type="text" value="30"/>	<input type="text" value="30"/>	<input type="text" value="30"/>
Average Daily Trips (ADT)	<input type="text" value="2797"/>	<input type="text" value="88"/>	<input type="text" value="59"/>
Night Fraction of ADT	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="15"/>
Road Gradient (%)	<input type="text"/>	<input type="text"/>	<input type="text" value="0"/>
Vehicle DNL	<input type="text" value="59.759"/>	<input type="text" value="54.7369"/>	<input type="text" value="63.3582"/>
<input type="button" value="Calculate Road #2 DNL"/>	<input type="text" value="65.3371"/>	<input type="button" value="Reset"/>	

	<input type="text"/>
Loud Impulse Sounds?	<input type="radio"/> Yes <input type="radio"/> No
Combined DNL for all Road and Rail sources	<input type="text" value="0"/>
Combined DNL including Airport	<input type="text"/>
Site DNL with Loud Impulse Sound	<input type="text"/>
<input type="button" value="Calculate"/>	

Mitigation Options

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Tools and Guidance

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[Day/Night Noise Level Assessment Tool Flowcharts](/resource/3823/day-night-noise-level-assessment-tool-flowcharts/) (</resource/3823/day-night-noise-level-assessment-tool-flowcharts/>)