City of Long Beach

Alamitos Avenue "Complete Streets" Improvements Project

Draft Initial Study

January 2017

rincon

Environmental Scientists Planners Engineers

Alamitos Avenue "Complete Streets" Improvements Project

Draft Initial Study

Prepared by:

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Appendix A – Air Quality Analysis

INITIAL STUDY

1. **Project Title:**
   Alamitos Avenue "Complete Streets" Improvements Project

2. **Lead Agency Name and Address:**
   City of Long Beach
   Development Services Department
   333 West Ocean Boulevard, 5th Floor
   Long Beach, California 90802

3. **Contact Person and Phone Number:**
   Christopher Koontz, Advance Planning Officer
   (562) 570-6288

4. **Project Location:**
   The project site encompasses the stretch of Alamitos Avenue between 7th Street and Ocean Boulevard in the City of Long Beach, California. Figure 1 shows the location of the site within the region. Figure 2 shows the project site within its local context. See Figure 3 for photos of existing site conditions.

5. **Project Sponsor's Name and Address:**
   City of Long Beach
   333 W. Ocean Boulevard, 5th Floor
   Long Beach, California 90802

6. **General Plan Designation:**
   The areas adjacent to the project site are categorized into three different Residential Land Use Districts (LUD) as designated by the City's General Plan: LUD-5 (Urban High Density), LUD-7 (Mixed Use Residential), LUD-8R (Mixed Retail/ Residential Strip), and LUD-8M (Mixed Office/ Residential Strip).

7. **Zoning:**
   Downtown Long Beach Planned Development District (PD-30)

8. **Project Description and Background:**

   The proposed project involves a modification to Alamitos Avenue between 7th Street and Ocean Boulevard to a two-lane divided roadway with on-street bike lanes that would match the roadway section north of 7th Street (see Figures 4a and 4b for conceptual site plan showing lane restriping). North of 7th Street, Alamitos Avenue has been restriped to provide a two-lane, divided roadway, separated by a two-way left-turn, with on-street parking and on-street bike lanes, as well as a buffer to separate bicycle traffic from vehicular traffic. Currently, most of the project site provides two-lanes in each direction separated by a two-way left-turn lane; south of 3rd Street, only one southbound through lane is provided to just past Broadway. Generally, on-street parking is allowed, but is restricted along certain sections of the project site during several time periods of the week. Before restriping activities, the project would remove and recycle existing asphalt within the project site and

resurface the roadway. The project site covers approximately 4.7 acres and 3,400 feet of road length.

9. Surrounding Land Uses and Setting:

The project site is an arterial roadway in Long Beach that is surrounded by commercial and residential uses. Existing uses include professional services, hotels, restaurants, auto detailing shops, a laundromat, museums, and multi-family residences. The project site extends almost to the waterfront at its southern end, with Alamitos Beach and the Long Beach Convention and Entertainment Center nearby, and transitions into a residential neighborhood above 7th Street.

The areas adjacent to the project site are categorized into three different Residential Land Use Districts (LUD) as designated by the City's General Plan: LUD-5 (Urban High Density), LUD-7 (Mixed Use Residential), LUD-8R (Mixed Retail/ Residential Strip), and LUD-8M (Mixed Office/ Residential Strip). The entire site falls within the zoning boundaries of the Downtown Long Beach Planned Development District (PD-30). Planned districts (PD) offer more comprehensive guidelines for land uses than general zoning. The City of Long Beach's Downtown Plan (Downtown Plan) specifies which uses are generally permitted within the Downtown Plan Area, which uses are permitted in the Downtown Neighborhood Overlay, and which uses are permitted in Pedestrian-Oriented Use Main Streets and Secondary Streets (Long Beach 2012). One block of the project site (the block south of 5th street on the east side of Alamitos Avenue) falls within the Downtown Neighborhood Overlay.

10. Other Public Agencies Whose Approval is Required:

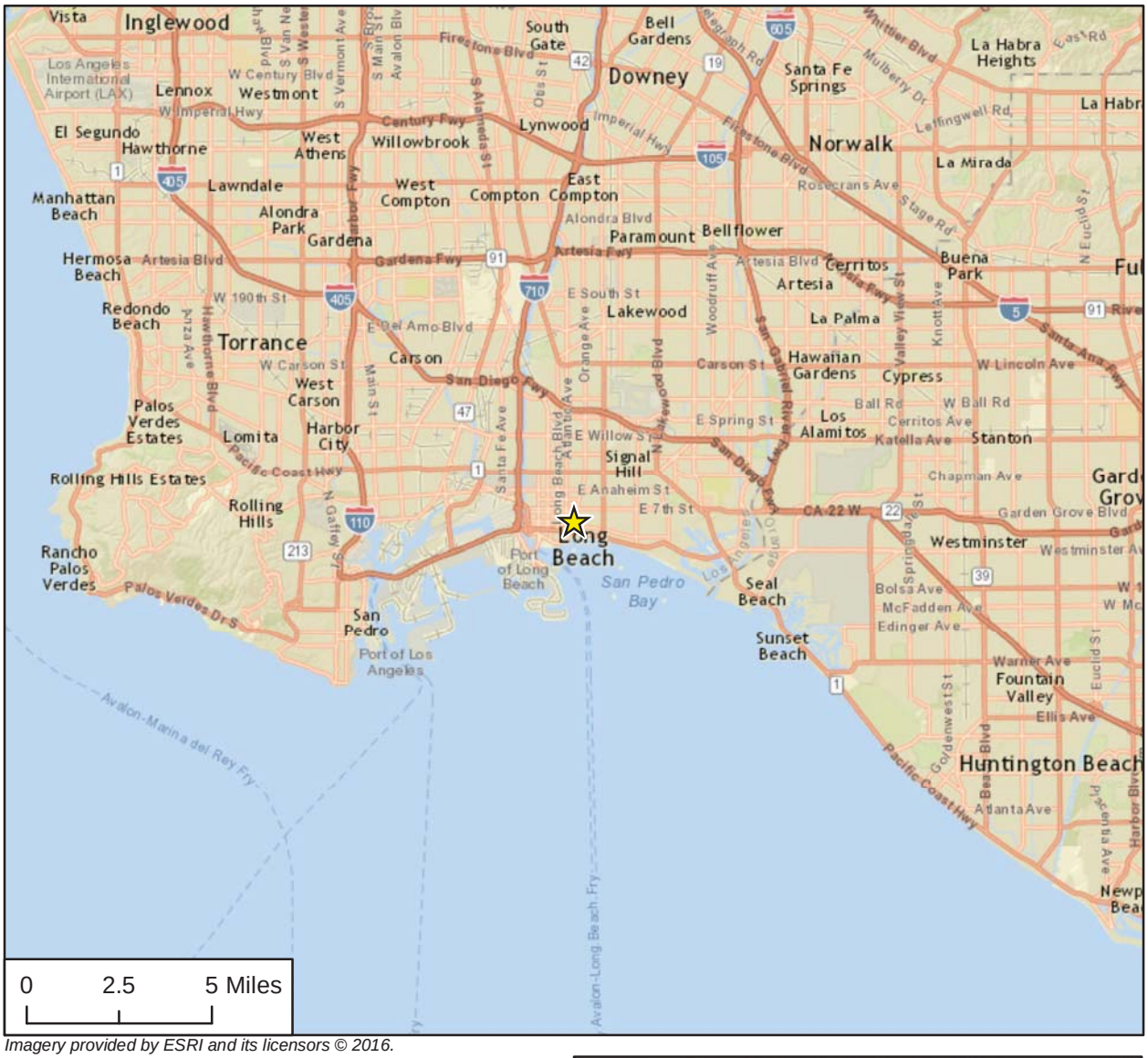
The City of Long Beach is the lead agency and the approval of other public agencies is not required.

11. California Native American Tribe Consultation:

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

Consultation has not been requested by California Native American tribes traditionally and culturally affiliated with the project area.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.



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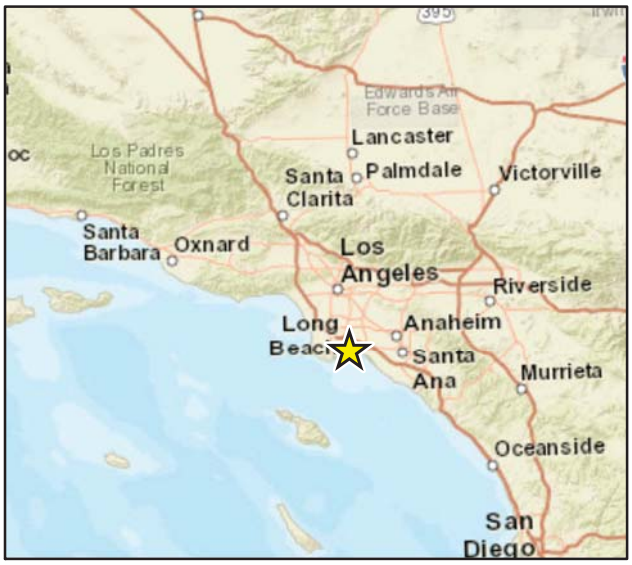
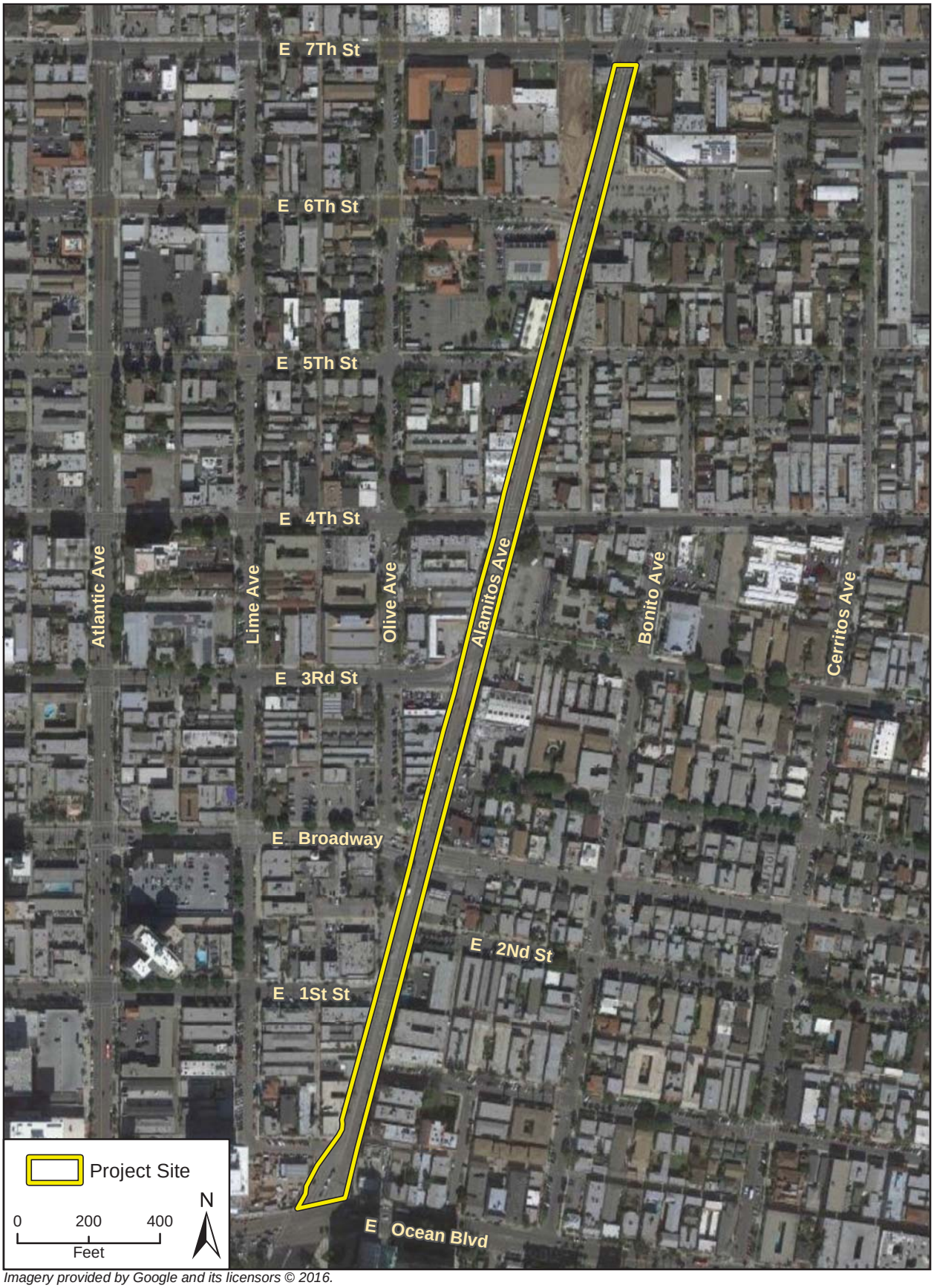
Project Location

N



Regional Location

Figure 1



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Project Location

Figure 2

Photo 1: Looking north on Alamitos Avenue, just south of 3rd Street.

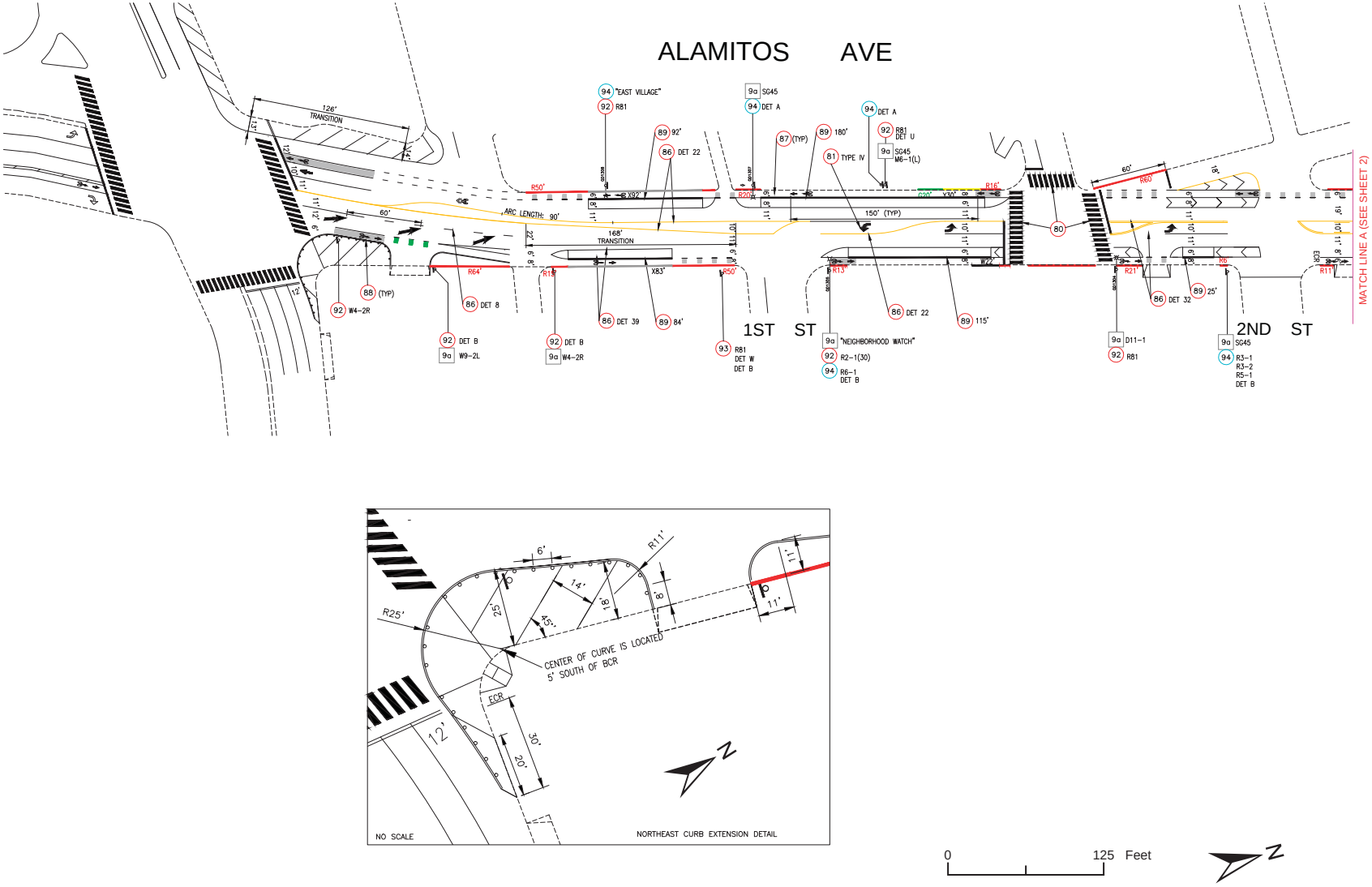
Photo 2: Facing south on Alamitos Avenue, just north of 5th Street, near St. Anthony Catholic Church and High School.

Photo 3: Looking south on Alamitos Avenue, just south of 6th Street.

Photo 4: Looking south on Alamitos Avenue, between 3rd Street and Appleton Street.

Site Photos

Figure 3



Source: City of Long Beach, 2016

Conceptual Site Plan

Figure 4a

Source: City of Long Beach, 2016

Conceptual Site Plan

Figure 4b

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is "Potentially Significant" or "Potentially Significant Unless Mitigation Incorporated" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials	☐ Hydrology/Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☐ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
■ Transportation/Traffic	☐ Tribal Cultural Resources	☐ Utilities/Service Systems
☐ Mandatory Findings of Significance		

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

■ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. A Supplemental ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

1/31/17
Date

ENVIRONMENTAL CHECKLIST

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
I. Aesthetics				
-- Would the Project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	■
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	■
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	■
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	■	☐

a) Would the project have a substantial adverse effect on a scenic vista?

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

c) Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

The proposed project involves the modification of Alamitos Avenue between 7th Street and Ocean Boulevard to provide a bike lane in both directions. Alamitos Avenue currently consists of two-lanes in each direction separated by a two-way left-turn. This would require resurfacing and restriping of the road and would not result in the construction of a structure that could impede scenic vistas, the destruction of scenic resources, or degradation of the visual character or quality of the site. There would be no impact and further study of this issue in an Environmental Impact Report (EIR) is not warranted.

NO IMPACT

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The project would add bike lanes to Alamitos Avenue between Ocean Boulevard and 7th Street. Alamitos Avenue is currently an arterial roadway in Long Beach with street lighting and light and glare from vehicle traffic. Bicycles would not be expected to substantially increase light and

glare along the roadway relative to existing conditions. Impacts would be less than significant and further study of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
II. Agriculture and Forestry Resources -- In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. -- Would the project:				
a) Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	■
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	■
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	■
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
II. Agriculture and Forestry Resources				
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	■

a) Would the project convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

There are no agricultural zones or forest lands in Long Beach, which is a fully urbanized community that has been urbanized for over half a century. The project site is a roadway that does not contain agricultural resources or forest lands. Therefore, there would be no impact to agricultural resources or forestlands and further study of this issue in an EIR is not warranted.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
III. Air Quality				
-- Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	■	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	■	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which	☐	☐	■	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
III. Air Quality				
-- Would the project:				
the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	■	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	■	☐

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

The project site is within the South Coast Air Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The local air quality management agency is required to monitor air pollutant levels to ensure that applicable air quality standards are met and, if they are not met, to develop strategies to meet the standards. The SCAQMD has adopted an Air Quality Management Plan (AQMP) that provides a strategy for the attainment of state and federal air quality standards.

A project may be inconsistent with the AQMP if it would generate population, housing, or employment growth exceeding the forecasts used in the development of the AQMP. SCAQMD has published a Draft 2016 Air Quality Management Plan, but it has not yet been adopted. The 2012 AQMP is the most recent AQMP adopted by the SCAQMD and incorporates local city general plans and the Southern California Association of Government's (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) socioeconomic forecast projections of regional population, housing and employment growth.

The proposed project does not involve the construction of any residences or commercial uses that would induce population growth in the area. The proposed resurfacing and restriping of an existing road would not result in the expansion of roadways or otherwise indirectly induce population growth. Therefore, the proposed project would not generate growth beyond AQMP forecasts and would be consistent with the AQMP. Impacts would be less than significant and further study of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

c) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

The South Coast Basin is a non-attainment area for federal standards for ozone, $PM_{2.5}$, and lead, and state standards for ozone, PM_{10}, and $PM_{2.5}$ (SCAQMD 2016). The Basin's non-attainment status is a result of several factors, the primary factors being the naturally adverse meteorological conditions that limit the dispersion and diffusion of pollutants, the limited capacity of the local airshed to eliminate air pollutants, and the number, type, and density of emission sources within the Basin.

Because air quality in the Basin currently exceeds several state and federal ambient air quality standards, the SCAQMD is required to implement strategies to reduce pollutant levels to recognized acceptable standards. To accomplish this requirement, the SCAQMD has adopted an AQMP that provides a strategy for the attainment of state and federal air quality standards.

The SCAQMD recommends the use of quantitative thresholds to determine the significance of temporary construction-related pollutant emissions and project operations. SCAQMD's project-specific and cumulative significance thresholds are the same (SCAQMD 2003). Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable (SCAQMD 2003). Conversely, projects that do not exceed the project-specific thresholds are not considered to be cumulatively significant (SCAQMD 2003).

SCAQMD significance thresholds for construction emissions are as follows:

- *75 pounds per day of reactive organic gas (ROG)*
- *100 pounds per day of nitrous oxide (NO_X)*
- *550 pounds per day of carbon monoxide (CO)*
- *150 pounds per day of sulfur oxide (SO_X)*
- *150 pounds per day of particulate matter with a diameter between 2.5 and 10 micrometers (PM_{10})*
- *55 pounds per day of particulate matter with a diameter of 2.5 micrometers or less ($PM_{2.5}$)*

SCAQMD significance thresholds for operational pollutant emissions are as follows:

- *55 pounds per day ROG*
- *55 pounds per day NOx*
- *550 pounds per day CO*
- *150 pounds per day SOx*
- *150 pounds per day PM_{10}*
- *55 pounds per day $PM_{2.5}$*

The proposed project involves lane resurfacing and restriping of an existing roadway and would not involve construction or demolition of any structure. The project would, however, generate short-term construction emissions associated with lane resurfacing and restriping activities, such as mobile source emissions from roadwork vehicles and equipment, and ROG from paint. The project would also generate emissions from exporting old asphalt for recycling and importing new road base materials. Proportional estimates of import and export from similar activities on Alamitos Avenue from 7th Street to Orange Avenue (an approximately 4,720 ft road length requiring 2,000 tons of export and 590 tons of import) were used to calculate emissions from hauling activities for the project (an approximately 3,400 ft road length) (Morris 2016). The project would not generate a long term increase in emissions because although resurfacing and restriping would need to be repeated every few years, activities would be short term in nature and part of standard road maintenance procedures. Therefore, the project's short term emissions from resurfacing and restriping activities are compared to SCAQMD's short term construction thresholds. Short term construction emissions were calculated for the project using SCAQMD's California Emissions Estimator Model (CalEEMod) version 2013.2.2 and are provided in Table 1.

Table 1
Estimated Maximum Daily Air Pollutant Emissions (lbs/day)

Emissions	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Maximum lbs/day	14.6	48.0	36.1	0.1	10.3	5.7
SCAQMD Construction Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Thresholds Exceeded?	*No*	*No*	*No*	*No*	*No*	*No*

Notes: All calculations were made using CalEEMod. See Appendix A for CalEEMod inputs and results.

Project emissions would not exceed SCAQMD's recommended short term construction thresholds; therefore, impacts would be less than significant and further study of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

d) Would the project expose sensitive receptors to substantial pollutant concentrations?

Resurfacing and lane restriping is a standard, short-term road maintenance procedure that occurs in residential and non-residential areas and is not considered a significant source of air pollutant emissions for sensitive receptors. While lane resurfacing and restriping activities would not expose sensitive receptors to substantial pollutant concentrations, removing a lane in both directions to provide bike lanes may increase traffic congestion on Alamitos Avenue, which has the potential to result in CO hotspots, areas of high CO concentrations. A project's localized air quality impact is considered significant if CO emissions create a hotspot where either the California one-hour standard of 20 ppm or the federal and state eight-hour standard of 9.0 ppm is exceeded. This typically occurs at severely congested intersections (level of service [LOS] E or worse).

A detailed CO analysis was conducted during the preparation of SCAQMD's 2003 AQMP. The locations selected for microscale modeling in the 2003 AQMP included high average daily traffic (ADT) intersections in the Basin, those which would be expected to experience the highest CO concentrations. The highest CO concentration observed was at the intersection of Wilshire Boulevard and Veteran Avenue on the west side of Los Angeles near the I-405 Freeway. The concentration of CO at this intersection was 4.6 ppm, which is well below the 35-ppm 1-hour CO federal standard. The Wilshire Boulevard/Veteran Avenue intersection has an ADT of approximately 100,000 vehicles per day.

An October 2016 Traffic Impact Analysis prepared by Linscott, Law, and Greenspan, Engineers (LLG) for the Shoreline Gateway East Tower Project (LLG 2016) indicates that currently roughly 1,000 to 3,300 peak hour trips utilize intersections along Alamitos Avenue between Ocean Boulevard and 7th Street. A standard rule of thumb is that ADT equals roughly ten times peak hour trips; therefore, the total ADT for intersections along Alamitos Avenue within the project site range from about 10,000 vehicles to 33,000 vehicles, which is 10 to 33 percent of the traffic volume at the location where the highest CO concentration in the region occurs. Furthermore, due to stricter vehicle emissions standards in newer cars and new technology that increases fuel economy, CO emission factors under future land use conditions would be substantially lower than those under existing conditions. Thus, even though there may be incrementally more traffic congestion along Alamitos Avenue due to the proposed project, local mobile-source CO emissions would not result in or substantially contribute to concentrations that exceed the one-hour or eight-hour ambient air quality standards for CO. Therefore, impacts related to CO hot spots would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

e) Would the project create objectionable odors affecting a substantial number of people?

The SCAQMD has identified some common types of facilities that have been known to produce odors: agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting operations, refineries, landfills, rendering plants, dairies, rail yards, and fiberglass molding operations (SCAQMD 1993). The proposed project involves resurfacing and lane restriping and would not result in the construction of an odor-generating facility. The laying of asphalt and use of high-solvent paint may temporarily emit odors during resurfacing and restriping. However, compliance with SCAQMD Rule 1113 would limit the amount of volatile organic compounds in the paint applied to 100 grams per liter of traffic coating, reducing objectionable odors during construction. Odor from resurfacing activities would be temporary and is typical of roadway maintenance activities. The project's impacts would be less than significant and further study of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
IV. Biological Resources				
-- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	■
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	■
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	■
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	■
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	■
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	■

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Long Beach is a fully urbanized community that has been urbanized for over half a century. The proposed project would not have any significant impacts on biological resources because the project site—a road—does not support any native biological resources or habitats, and is not within the area of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The project would have no impact on biological resources and further study of this issue in an EIR is not warranted.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
V. Cultural Resources				
-- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	■
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	☐	☐	☐	■

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
V. Cultural Resources				
-- Would the project:				
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	■
d) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☐	■

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

b) Would the project cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?

c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

d) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

The project site is an urban road that has been previously disturbed. Furthermore, the proposed project would involve resurfacing and lane restriping and would not involve any excavation, demolition, or construction activities. Although the project would include removal and recycling of existing asphalt in order to resurface the roadway, the project would not disturb native soils. Therefore, the project would not disturb any historical, archaeological, or paleontological resources, or human remains that may be below the surface. Therefore, no impact related to cultural resources would occur and further study of this issue in an EIR is not warranted.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VI. Geology and Soils				
-- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☐	■
ii) Strong seismic ground shaking?	☐	☐	☐	■
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	■
iv) Landslides?	☐	☐	☐	■
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	■
c) Be located on a geologic unit or soil that is unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	■
d) Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code, creating substantial risks to life or property?	☐	☐	☐	■
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■

a.i) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

a.ii) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

a.iii) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

c) Would the project be located on a geologic unit or soil that is unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

d) Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code, creating substantial risks to life or property?

No active faults are known to traverse the project site and the project site is not located within, or immediately adjacent to an Alquist-Priolo Earthquake Fault Zone. Active faults within the City of Long Beach occur along the Newport-Inglewood Fault Zone. The Newport-Inglewood Fault Zone is a fault system consisting of a series of echelon fault segments and folds. Active or potentially active faults of the Newport-Inglewood Fault Zone include the Cherry Hill Fault, the Northeast Flank Fault and the Reservoir Hill Fault. Additionally, the Palos Verdes Fault, located approximately 4.5 miles southwest and offshore of the City, is considered an active fault. The project site would experience ground shaking from earthquakes generated along active faults located off-site. The intensity of ground shaking would depend upon the magnitude of the earthquake, distance to the epicenter and the geology of the area between the epicenter and the Project site. Lastly, the project site is not located in an area mapped as a seismic hazard zone (California Department of Conservation [CA DOC] 1999).

The project site does not lie in a seismic hazard zone and is not vulnerable to liquefaction or landslide impacts. The project would involve surface modifications to an existing flat, paved road and would not involve construction of any structures. Therefore, the project would not expose people or structures to risks due to seismic or geologic hazards. There would be no impact and further study of this issue in an EIR is not warranted.

NO IMPACT

b) Would the project result in substantial soil erosion or the loss of topsoil?

The project involves resurfacing and lane restriping of an existing paved road. The project would not disturb soil. Therefore, it would have no impact related to erosion or loss of topsoil and further study of this issue in an EIR is not warranted.

NO IMPACT

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The project involves resurfacing and lane restriping and would not construct facilities that require wastewater disposal. The project would have no impact related to septic tanks or alternative wastewater disposal systems and further study of this issue in an EIR is not warranted.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VII. Greenhouse Gas Emissions				
-- Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	■	☐
b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	■

Gases that trap heat in the atmosphere are often called greenhouse gases (GHG), analogous to the way in which a greenhouse retains heat. Common GHGs include water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases, and ozone. GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFC), and sulfur hexafluoride (SF_6) (Cal EPA 2016).

The accumulation of GHGs in the atmosphere regulates the Earth's temperature. Without the natural heat trapping effect of GHGs, Earth's surface would be about 34° C cooler (Cal EPA 2006). However, it is believed that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

Pursuant to the requirements of SB 97, the Resources Agency adopted amendments to the *CEQA Guidelines* for the feasible mitigation of GHG emissions and analysis of the effects of GHG emissions. The adopted *CEQA Guidelines* provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to

set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change; therefore, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15355).

The SCAQMD threshold, which was adopted in December 2008, considers emissions of over 10,000 MT carbon dioxide equivalents (CO_2e) per year to be significant. However, the SCAQMD's threshold applies only to stationary sources and is intended to apply only when the SCAQMD is the CEQA lead agency.

In the latest guidance provided by the SCAQMD's GHG CEQA Significance Threshold Working Group in September 2010, SCAQMD considered a tiered approach to determine the significance of residential and commercial projects. The draft-tiered approach is outlined in the meeting minutes, dated September 28, 2010:

> ***Tier 1*** *- If the project is exempt from further environmental analysis under existing statutory or categorical exemptions, there is a presumption of less than significant impacts with respect to climate change. If not, then the Tier 2 threshold should be considered.*
>
> ***Tier 2*** *- Consists of determining whether or not the project is consistent with a GHG reduction plan that may be part of a local general plan, for example. The concept embodied in this tier is equivalent to the existing concept of consistency in CEQA Guidelines section 15064(h)(3), 15125(d) or 15152(a). Under this Tier, if the proposed project is consistent with the qualifying local GHG reduction plan, it is not significant for GHG emissions. If there is not an adopted plan, then a Tier 3 approach would be appropriate.*
>
> ***Tier 3*** *- Establishes a screening significance threshold level to determine significance. The Working Group has provided a recommendation of 3,000 metric tons (MT) of CO_2e per year for all non-industrial projects.*

The City of Long Beach has not adopted a GHG reduction plan; therefore, the proposed project is evaluated based on the SCAQMD's recommended Tier 3 threshold of 3,000 MT CO_2e per year for non-industrial projects.

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The proposed project would generate GHG emissions during resurfacing and lane restriping activities, which would re-occur every few years to maintain lane markings after initial implementation. CalEEMod version 2013.2.2 was used to calculate annual GHG emissions from resurfacing and lane restriping activities (model inputs and results are presented in Appendix

A). CalEEMod includes emissions from resurfacing and striping activities when calculating construction emissions for parking lot land uses (California Air Pollution Control Officers Association [CAPCOA] 2016). Project-related emissions would generate an estimated 14 MT of CO_2e per year, which is below the significance threshold of 3,000 MT of CO_2e per year.

The project would provide bike lanes with buffers on Alamitos Avenue that would connect existing bike lanes on Alamitos Avenue north of 7th Street to downtown Long Beach; this improvement would likely increase bike ridership in the area, offsetting the project's GHG emissions. Impacts would be less than significant and further study in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

b) Would the project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As discussed above, the project would emit GHGs during resurfacing and lane restriping activities, which would generate a nominal amount of GHG emissions. There would be no conflict with any plan, policy or regulation adopted to reduce GHG emissions. Furthermore, the project is consistent with City, regional, and State policies to reduce vehicle GHG emissions by encouraging increased alternative transportation, such as bicycle use. One of the City's sustainability goals is to "create a system of at least 200 miles of interconnected bike routes by 2020" (Sustainable City Action Plan 2010). The 2013 Mobility Element of the General Plan restates the City Council's vision to become the most bicycle friendly large city in the United States and includes a Bicycle Master Plan with existing and proposed improvements to realize this vision. The proposed project would improve bike facilities on Alamitos Avenue beyond the existing scope of the Mobility Element, which designates the project site as a Class III route, which allows for shared bicycle and vehicle use. The proposed project would upgrade the Alamitos Avenue to a Class II route with a buffered bike lane. The project would also align with regional goals expressed in the Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS) to increase the use of bicycles to access regional transit. The project site lies along the route of five different Long Beach Transit bus routes (71, 72, 111, 112, 151) and is about a half of a mile from the Metro Blue Line light rail. Bicyclists could use Alamitos Avenue in conjunction with existing east-west bike routes on Broadway and 3rd Street to access the Blue Line and connect with other regional transit. There would be no impact and further study in an EIR is not warranted.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VIII. Hazards and Hazardous Materials				
-- Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	■	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	■	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?	☐	☐	■	☐
d) Be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	■	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	■
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	■
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	■

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?

The proposed project involves resurfacing and restriping an existing roadway, Alamitos Avenue, to include a bike lane in either direction. There is one school directly adjacent to the project site, St. Anthony School, which is located on 855 East 5th Street. Franklin Middle School is also less than a quarter of mile away from the project site and is located one block east of Alamitos Avenue between 5th and 7th Street. Resurfacing and lane marking is a standard road maintenance procedure and is subject to City, State, and federal regulations regarding the transport, use, and disposal of hazardous materials. Therefore, impacts would be less than significant and further study of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

d) Would the project be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The following databases compiled pursuant to Government Code Section 65962.5 were checked (September 27, 2016) for known hazardous materials contamination at the project site:

- *U.S. EPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Search*
- *State Water Resources Control Board's (SWRCB) Geotracker search for leaking underground storage tanks (LUST) and other Cleanup Sites*
- *Department of Toxic Substances Control's (DTSC) Cortese list of Hazardous Waste and Substances Sites and Cleanup Site and Hazardous Waste Facilities Database*

Neither Alamitos Avenue nor its vicinity contains any active Superfund sites (US EPA 2016) or any hazardous waste and substances sites on the Cortese List. However, the project site is adjacent to four LUST sites on Alamitos Avenue (SWRCB 2016). All four sites have been remediated and their cases closed (SWRCB 2016). In addition, there are two open LUST sites less than 1,000 feet from the project site: a LUST site at 907 East 7Th Street is currently undergoing remediation and a LUST site at 402 Atlantic Avenue (approximately 670 feet away) that is undergoing site assessment. Both LUST sites present a potential source of concern to groundwater resources due to the fuel leakage. Additionally, the project site is adjacent to two DTSC sites for which cleanup has been completed.

The project site is not located on a hazardous material site and would not create a significant hazard to the public or the environment. Furthermore, all hazardous sites within 1,000 feet of the project site have been remediated or are in the process of being remediated. The project involves resurfacing and lane restriping and would not involve excavation or construction

activities that could disturb hazardous materials in the soil or groundwater. Impacts would be less than significant and further study in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

The project site is located approximately 2.5 miles from the Long Beach Municipal Airport and is located outside of the Airport Influence Area (L.A. County 2003). The project would have no impact and further study of this issue in an EIR is not warranted.

NO IMPACT

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

The project site is not within the vicinity of a private airstrip. The project would have no impact and further study of this issue in an EIR is not warranted.

NO IMPACT

g) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The proposed project would not alter through-traffic operations for emergency vehicles or eliminate existing roads or cause more circuitous access conditions. In addition, the proposed project is consistent with recommendations outlined in the Public Safety Element of the City's General Plan to reduce risks of emergencies and ensure that emergency response is not impeded. For example, the project will not result in increased density, which is identified as a factor increasing hazard risks, nor does it involve the construction of any structures that may impede access to a hazard or reduce road space available for use by emergency vehicles. As such, the proposed project would not introduce features that would interfere with an adopted emergency plan. No impact would occur and further study of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

h) Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The project site is located in a fully urbanized area of Long Beach and is not near any wildland areas. There would be no risk of wildland fires and no impact. Further study of this issue in an EIR is not warranted.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
IX. Hydrology and Water Quality				
-- Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	■
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering or the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	■
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	■
d) Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	■
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	■
f) Otherwise substantially degrade water quality?	☐	☐	☐	■
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	■
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	■

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
IX. Hydrology and Water Quality				
-- Would the project:				
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	■
j) Result in inundation by seiche, tsunami, or mudflow?	☐	☐	☐	■

a) Would the project violate any water quality standards or waste discharge requirements?

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering or the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

d) Would the project substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

e) Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

f) Would the project otherwise substantially degrade water quality?

The proposed project involves resurfacing and lane restriping of an existing urban road. Project implementation would not discharge any wastewater, require the use of groundwater supplies, or involve construction that could interfere with groundwater recharge. The proposed project would not impact the existing storm drainage system, cause an increase in surface runoff, provide additional sources of polluted runoff, or otherwise degrade water quality. The project would have no impact and further study of these issues in an EIR is not warranted.

NO IMPACT

g) Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h) Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

i) Would the project create expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

j) Would the project result in inundation by seiche, tsunami, or mudflow?

The project site is located in Zone X of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) (Map# 06037C1970F). Zone X is defined as "Areas determined to be outside 500-year flood-plain." In addition, according to Plate 11 of the Seismic Safety Element of the General Plan, Tsunami and Seiche Influence Areas, areas above Ocean Boulevard, which is the southern boundary of the project site, are not susceptible to tsunami or seiche. Furthermore, there are no dams or levees in the vicinity of the area. In addition, the project would involve lane resurfacing and restriping and would not involve construction of structures. Therefore, the proposed project would have no impact related to exposing people or structures to risk from flooding, seiche, tsunami, or mudflows and further study of these issues in an EIR is not warranted.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
X. Land Use and Planning				
-- Would the project:				
a) Physically divide an established community?	☐	☐	☐	■
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	■
c) Conflict with an applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	■

a) Would the project physically divide an established community?

The proposed project involves the resurfacing and restriping of an existing road. It would not result in the construction of any structure that could divide an established community. The project would have no impact.

NO IMPACT

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

The proposed project is consistent with and supports the visions and goals laid out in the Long Beach Downtown Plan and the General Plan. A discussion of the proposed project's consistency with the Downtown Plan and Mobility Element visions and goals is provided below.

Downtown Plan

1. Guiding Principle #3: We encourage an infrastructure to accommodate a future that is less dependent on fossil fuels and more focused on walking, bicycling, and public transportation

2. Destination Downtown-Goal #3: Strengthen connectivity between Downtown and areas south of Pine Avenue, such as the convention center, The Pike, Shoreline Village, and the Alamitos Beach bike path, to attract visitors to and from the waterfront.

3. Destination Downtown-Goal #6: Uphold the title of The Most Bicycle Friendly City in America through the enhancement of existing bicycle amenities, such as the Bikestation; building on the successes of Downtown's dedicated 3rd Street and Broadway bicycle lanes; and integrating the Downtown's bicycle-friendly roads and bikeways with the City's greater bicycle path network.

4. Sustainability Framework-Goal #7: Continue promotion of alternative transportation as a means to, from, and within Downtown.

The proposed project would provide a safe bike route to key local and regional transit routes and destinations. It would provide a north-south bike route in the Downtown area to the waterfront and connect with 3rd Street and Broadway bicycle lanes. It would also facilitate the use of alternative transportation to, from, and within Downtown.

Mobility Element

1. Vision statement: This Mobility Element establishes the vision, goals, policies, and implementation measures required to improve and enhance the City's local and regional transportation networks, transforming Long Beach into a community that:
   - Offers flexible, convenient, affordable, and energy-efficient transportation options
   - Integrates land use planning with a multimodal mobility network, providing people with options to choose various forms of convenient transportation.

2. Goals:
   - Balance the needs of all mobility users
   - Multimodal connectivity - Better bicycle access: More bike routes and bike lanes will be added to provide better bicycle access to transit stations and stops.
   - Support active transportation and living
   - Protect natural resources

By providing a safe bike route along Alamitos Avenue, the proposed project would support the vision and goals of the City's Mobility Element. It would provide an energy-efficient transportation option in the Downtown area that connects with other bike routes, transit options, and provides access to key destinations. Facilitating bike use would reduce the dependence of residents on licensed drivers and encourage an active mode of transport and reduce environmental impacts related to automobile use.

Because the proposed project is consistent with land use plans and policies and would not result in any modification to the existing land use designations specified in the General Plan, there would be no impact and further study in an EIR is not warranted.

NO IMPACT

Would the project conflict with an applicable habitat conservation plan or natural community conservation plan?

As discussed under Item IV, *Biological Resources*, the project site is not located within an area subject to a habitat conservation plan or natural community conservation plan. Therefore, the proposed project would not conflict with such a plan. There would be no impact and further study of this issue in an EIR is not warranted.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XI. Mineral Resources				
-- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	■
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	■

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

The project site is not utilized for mineral resource recovery and the General Plan does not identify the project site as an important mineral resource recovery site (Long Beach 1973). The proposed project would have no impact related to mineral resources and further study of these issues in an EIR is not warranted.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XII. Noise				
-- Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	■	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	■	☐
c) A substantial permanent increase in ambient noise levels above levels existing without the project?	☐	☐	■	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	■	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	■
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise?	☐	☐	☐	■

Noise is defined as unwanted sound that disturbs human activity. Environmental noise levels typically fluctuate over time, and different types of noise descriptors are used to account for this variability. Noise level measurements include intensity, frequency, and duration, as well as time of occurrence. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA).

Some land uses are considered more sensitive to ambient noise levels than other uses due to the amount of noise exposure and the types of activities involved. Residences, motels, hotels, schools, libraries, churches, nursing homes, auditoriums, parks and outdoor recreation areas are more sensitive to noise than are commercial and industrial land uses.

The City of Long Beach uses the State Noise/Land Use Compatibility Standards, which suggests a desirable exterior noise exposure at 65 dBA Community Noise Equivalent Level (CNEL) for sensitive land uses such as residences. Less sensitive commercial and industrial uses may be compatible with ambient noise levels up to 70 dBA CNEL. The City of Long Beach has adopted a Noise Ordinance (Long Beach Municipal Code Chapter 8.80) that sets exterior and interior noise standards. Exterior noise standards are designated for different city areas, referred to as districts. The project site lies in Noise Districts 1 and 2 (LBMC 8.80.160). Exterior noise limits for Districts 1 and 2 are given in Table 2. Interior noise standards apply based on land use and are given in Table 3.

Table 2
Exterior Noise Limits

District	Time Period	Noise Level (dBA*)
1	10 PM to 7 AM	45
	7 AM to 10 PM	50
2	10 PM to 7 AM	55
	7 AM to 10 PM	60

** Cannot be exceeded more than 30 minutes cumulatively in an hour.*

Table 3
Interior Noise Limits

Receiving Land Use	Source Land Use	Time Period	Noise Level (dBA*)
	Residential	10 PM to 7 AM	35
		7 AM to 10 PM	45
	School	7 AM to 10 PM (while school is in session)	45
Hospital, designated quiet zones and noise sensitive zones		Any time	40

** Cannot be exceeded more than 5 minutes cumulatively in an hour.*

Vibration is a unique form of noise. It is unique because its energy is carried through buildings, structures, and the ground, whereas noise is simply carried through the air. Thus, vibration is

generally felt rather than heard. Some vibration effects can be caused by noise; e.g., the rattling of windows from passing trucks. This phenomenon is caused by the coupling of the acoustic energy at frequencies that are close to the resonant frequency of the material being vibrated. Typically, groundborne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases. The ground motion caused by vibration is measured as particle velocity in inches per second and is referenced as vibration decibels (VdB) in the U.S.

The most common source of noise in the vicinity of the project site is traffic on Alamitos Avenue and surrounding roads. Motor vehicle noise is of concern because it is characterized by a high number of individual events that can create sustained noise levels. Ambient noise levels would be expected to be highest during the daytime and rush hour unless congestion slows speeds substantially. Noise impacts could affect sensitive receptors along or near Alamitos Avenue, which include residences, hotels, churches, and schools. For example, St. Anthony Elementary School is located at the corner of Alamitos Avenue and 5th Street and there are residences along Alamitos Avenue.

a) Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

c) Would the project result in a substantial permanent increase in ambient noise levels above levels existing without the project?

d) Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

The proposed project would generate noise from resurfacing and lane restriping activities. There would be no additional roadway noise generated by the project as it would not generate any new vehicle trips. In fact, the project would reduce the number of vehicle lanes on Alamitos Avenue between Ocean Boulevard and 7th Street to allow for bike lanes, which would reduce vehicle speed and increase the distance between vehicle lanes and adjacent land uses. Therefore, the project would not result in a substantial permanent increase in ambient noise levels above levels existing without the project.

Resurfacing and lane restriping would occur at project implementation and every few years thereafter to maintain road surfaces and lane markings and would be temporary and short-term, as lane restriping activities would likely be completed in less than a week. Noise sources during resurfacing and restriping would include sounds from roadwork crew and their vehicles, such as engines idling, conversations, and car door slamming, and noise generated by any equipment used in resurfacing and lane restriping, such as a backhoe, loader, paver, and air compressor. Typical noise levels generated by construction equipment are given in Table 2.

Due to the temporary nature of noises associated with restriping, the proposed project would not result in a substantial permanent increase in ambient noise levels. The project would, however, result in a periodic increase in ambient noise levels. The project site lies in Noise Districts 1 and 2 (LBMC 8.80.160), which have an exterior noise limit of 50 and 60 dBA for a cumulative period of 30 minutes in any hour, respectively, between 7 AM and 10 PM. In comparison, a paver generates a maximum noise level of about 85 dBA Lmax and an air

compressor generates a maximum noise level of about 80 dBA Lmax at 50 feet from the source. However, resurfacing and restriping activities would be temporary and comply with City restrictions for construction activities, which restricts construction activities to between the hours of 7:00 AM and 7:00 PM during weekdays and 9:00 AM and 6:00 PM on Saturdays (LBMC Section 8.80.020). In addition, future maintenance of lane markings would be exempt from Noise Ordinance provisions according to LBMC Section 8.80.330, which applies to construction maintenance and repair operations conducted by public agencies that are deemed necessary to serve the best interests of the public and protect public health, and includes road repair. Because noise impacts from the proposed project would be temporary and activities would comply with applicable timing restrictions, impacts would be less than significant and further analysis of these issues in an EIR is not warranted.

Table 41
Typical Noise Levels Generated by Construction Equipment

Equipment	Typical Lmax (dBA) 50 Feet from the Source
Air Compressor	80
Generator	70
Pickup Truck	55
Pneumatic Tools	85
Front End Loader	80
Scraper	85
Paver	85
Warning Horn	83

Source: Caltrans 2013.

LESS THAN SIGNIFICANT IMPACT

b) Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. The vibration thresholds established by the Federal Transit Administration (FTA) are 65 VdB for buildings where low ambient vibration is essential for interior operations (such as hospitals and recording studios), 80 VdB for residences and buildings where people normally sleep, including hotels, and 83 VdB for institutional land uses with primary daytime use (such as churches and schools). In terms of ground-borne vibration impacts on structures, the FTA states that ground-borne vibration levels in excess of 100 VdB could damage fragile buildings and levels in excess of 95 VdB could damage extremely fragile historic buildings.

Resurfacing and lane restriping activities would not utilize heavy construction equipment that generate high levels of vibration, such as pile drivers or vibratory rollers, but rather would use medium duty trucks, loaders, pavers, and air compressors typical of standard road maintenance activities (FTA 2006). Moreover, project activities would be temporary and would be restricted

to the hours of 7:00 AM and 7:00 PM during weekdays and 9:00 AM and 6:00 PM on Saturdays (LBMC Section 8.80.020). Because the proposed project would not involve the use of heavy construction machinery that generates high volumes of vibration and activities would be restricted to daytime hours, impacts would be less than significant and further study of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise?

The project is located approximately 2.5 miles from the Long Beach Municipal Airport and is located outside of the Airport Influence Area (L.A. County 2003). The project is not within the vicinity of a private airstrip. The project would have no impact and further study of these issues in an EIR is not warranted.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XIII. Population and Housing				
-- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	■
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

a) Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The proposed project involves resurfacing and lane restriping and does not involve the construction of any structure and would not directly induce population growth by providing new homes and businesses. Additionally, the proposed project would not extend any roads or

infrastructure that might indirectly enable further population growth. There would be no impact to the City's population and further analysis of this issue in an EIR is not warranted.

NO IMPACT

b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The project site is a road. The proposed project would not displace any housing or people that would require the construction of replacement housing elsewhere. There would be no impact and further analysis of these issues in an EIR is not warranted.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XIV. Public Services				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?	☐	☐	■	☐
ii) Police protection?	☐	☐	■	☐
iii) Schools?	☐	☐	☐	■
iv) Parks?	☐	☐	☐	■
v) Other public facilities?	☐	☐	☐	■

a.i) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection?

Fire protection at the project site is provided by the Long Beach Fire Department (LBFD). The proposed project would involve resurfacing and lane restriping and would not increase population and thus, demand on LBFD services. The project is anticipated to reduce collisions between vehicles, bicycles and pedestrians, thus reducing the need for public safety personnel to respond to such incidents. The proposed project may result in increased traffic congestion, which could incrementally affect response time. However, such a change would not necessitate new or expanded fire facilities, lane widths would remain sufficient for safety and emergency vehicles to travel and impacts would be less than significant. Further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

a.ii) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection?

Police protection is provided by the Long Beach Police Department (LBPD). The proposed project would involve resurfacing and lane restriping and would not increase population and thus, demand on LBPD services. The project is anticipated to reduce collisions between vehicles, bicycles and pedestrians, thus reducing the need for public safety personnel to respond to such incidents. The proposed project may result in increased traffic congestion, which could incrementally affect response time. However, such a change would not necessitate new or expanded police facilities and impacts would be less than significant. Further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

a.iii) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools?

The proposed project involves resurfacing and lane restriping and would not increase area population. Therefore, it will not increase student enrollment in area schools and would not require new or altered school facilities. There would be no impact and further analysis of this issue in an EIR is not warranted.

NO IMPACT

a.iv) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental

facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks?

See Section XV, *Recreation*, below. No impact would occur and further analysis of this issue in an EIR is not warranted.

NO IMPACT

a.v) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities?

The proposed project involves resurfacing and lane restriping and would not increase area population. Therefore, it would not increase the number of users at libraries or other government facilities. There would be no impact and further analysis of this issue in an EIR is not warranted.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XV. Recreation				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	■
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	■

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The proposed project involves resurfacing and lane restriping and would not increase area population. Therefore, it would not increase the number of park users or increase demand for park facilities. The project would enhance opportunities for recreational bicycling. There would be no impact and further analysis of these issues in an EIR is not warranted.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVI. Transportation/Traffic				
-- Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?	■	☐	☐	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	■	☐	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	■
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	■	☐	☐	☐
e) Result in inadequate emergency access?	☐	☐	■	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?	☐	☐	☐	■

a) Would the project conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?

b) Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Traffic impacts in Long Beach are assessed using a level of service (LOS) approach, which ranks traffic conditions at a specific location on a scale from A to F. Level A indicates an excellent level of traffic operation, while Level F indicates forced flow (i.e. traffic jam) conditions. Four intersections in the project site (Alamitos Avenue and 7th Street, 3rd Street, Broadway, and Ocean Boulevard) were identified as having poor traffic operations (LOS of E or F) in the City's Mobility Element, and the proposed project would potentially increase congestion at these intersections due to the proposed modification.

The significance of the potential impacts of the Proposed Project at each key intersection was then evaluated using the traffic impact thresholds from the City of Long Beach. A project is considered to have impacts to local and regional transportation systems if:

- The Project causes a study intersection to deteriorate from LOS D to LOS E or F. The City of Long Beach considers LOS D (ICU = 0.801 - 0.900) to be the minimum acceptable LOS for all intersections; or
- The Project increases traffic demand at the study intersection by 2% of capacity (Intersection Capacity Utilization [ICU] increase 0.020), caus
  or F (ICU > 0.901) when an intersection is operating at LOS E or F in the baseline condition.

Congestion Management Program (CMP) for Los Angeles County requires that the traffic impact of individual development projects of potential regional significance be analyzed. A significant impact would occur when the proposed project increases traffic demand on a CMP facility by two percent of capacity, causing a level of service (LOS) of the lowest rank, F. If the facility is already at LOS F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by two percent of capacity. Implementation of the proposed project would generate temporary traffic associated with resurfacing and lane restriping activities, such as roadwork crew traffic and delivery of materials to the project site.

Long-term traffic impacts of the proposed project on traffic levels of service would be potentially significant and will be analyzed further in an EIR. Future investigations will look at the proposed project's impacts to key intersections in and near the project site under existing and under a cumulative future scenario that will take into account planned and pending projects in the area.

POTENTIALLY SIGNIFICANT IMPACT

c) Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The project site is not in the vicinity of a private air strip and is located approximately 2.5 miles from the Long Beach Municipal Airport outside of the Airport Influence Area (L.A. County 2003). The project would have no impact and further study of this issue in an EIR is not warranted.

NO IMPACT

d) Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

The proposed project would generate temporary traffic associated with resurfacing and lane restriping activities, such as roadwork crew traffic and delivery of materials to the project site. The project would also introduce bike lanes to Alamitos Avenue and alter long-term traffic conditions due to the modification of the existing two-lane roadway with a two-way left turn to a two-lane roadway with buffered bike lanes in either direction. This traffic and the proposed changes to traffic circulation are designed to improve safety and reduce traffic collisions. The efficacy of this design may have the potential to increase hazards due to design features. This impact will be analyzed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

e) Would the project result in inadequate emergency access?

The proposed project would not alter through-traffic operations for emergency vehicles or eliminate existing roads or cause more circuitous access conditions. Therefore, impacts related to emergency access would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

f) Would the project conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?

The proposed project does not conflict with policies, plans, and programs regarding public transit, and would serve to meet goals set out by City and regional policies, plans and programs related to alternative transportation and encouraging bicycle use. As previously discussed in Section V, *Greenhouse Gas Emissions,* expanding bike transit is a key component of the City's Sustainable City Action Plan, Mobility Element, Downtown Plan, and SCAG's 2016/2040 RTP/SCS. Furthermore, the project would improve bike safety in the project site by upgrading the roadway from a Class III bike route, which allows for shared road use by bicycles and vehicles, to a Class II bike route, which provides a designated lane for bike use. The proposed project would also facilitate safe access by bike to local bus routes and the Metro Blue Line. There would be no impact and further study of this issue in an EIR is not warranted.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVII. Tribal Cultural Resources				
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☐	■
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☐	■

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1

The project site is an urban road that has been previously disturbed. Furthermore, the proposed project would involve resurfacing and lane restriping and would not involve any demolition excavation, demolition, or construction activities. Although the project would include removal and recycling of existing asphalt in order to resurface the roadway, the project would not disturb native soils. It would not affect a tribal cultural resource listed or eligible for listing in the state or local register of historical resources, or determined by the lead agency to be significant to a California Native American tribe. No impact would occur and further analysis of this issue in an EIR is not warranted.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVII. Utilities and Service Systems				
-- Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	■
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	■
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	■
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	■
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?	☐	☐	☐	■
f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?	☐	☐	■	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	■	☐

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

b) Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

c) Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

d) Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

e) Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The proposed project involves resurfacing and restriping an existing urban road. It would not generate any wastewater, utilize water supplies, or result in additional storm water runoff. Therefore, it would not impact treatment capability or capacity at existing wastewater facilities, water supplies, or require any modification of existing storm water drainage facilities. There would be no impact and further analysis of these issues in an EIR is not warranted.

NO IMPACT

f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

g) Would the project comply with federal, state, and local statutes and regulations related to solid waste?

The proposed project would not involve the construction or demolition of any structures that would generate large amounts of solid waste or the continuous generation of solid waste from project operations. Resurfacing activities would remove existing asphalt, which would be recycled for future road resurfacing activities. Restriping activities may generate minimal amounts of solid waste that is typical of road maintenance activities and would present a nominal impact on landfills serving Long Beach. Disposal of any waste associated with the proposed project would have to comply with federal, state and local statutes and regulations related to solid waste. Impacts would be less than significant and further study of these issues in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVIII. Mandatory Findings of Significance				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self- sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	■
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	■	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	■	☐

a) Does the project have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self- sustaining levels, eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

As discussed under Section IV, *Biological Resources*, and Section V, *Cultural Resources*, no impact to biological resources or cultural resources would occur and further study of this issue in an EIR is not warranted.

NO IMPACT

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

As described in the discussion of environmental checklist Sections I through XVII, the Proposed Project would have no impact or a less than significant impact with respect to all environmental issues, except Transportation/ Traffic. Resurfacing and restriping activities would have short-term, less than significant impacts to air quality, greenhouse gases, noise, emissions, and utilities and therefore would not contribute to cumulative impacts in these areas. Some of the other resource areas (agricultural, biological resources, cultural resources, and mineral) were determined to have no impact in comparison to existing conditions and, therefore, would not contribute to cumulative impacts. Cumulative impacts to Transportation/ Traffic would be significant (cumulatively considerable) and will be analyzed further in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

In general, impacts to human beings are associated with air quality, hazards and hazardous materials, and noise impacts. As detailed in the preceding sections, the project would not result, either directly or indirectly, in adverse hazards related to air quality, hazardous materials or noise. Compliance with applicable rules and regulations would reduce potential impacts on human beings to a less than significant level. Further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

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Appendix A

Air Quality Analysis

Alamitos Avenue "Road Diet" Improvements Project

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	4.68	Acre	4.68	203,860.80	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Estimated area of Project site is 60 ft wide by 3400 ft long.

Construction Phase - Construction days reduced from defaults for more conservative estimate of daily emissions.

Off-road Equipment -

Area Coating - Assumed compliance with SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Area Mitigation - Assumed compliance with Rule 1113

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading - Proportional to activities on Alamitos from 7th to Orange (4,720 ft versus project 3,280 ft = 0.7) required 2,000 tons export and 590 tons import.

Architectural Coating - Assume compliance with SCAQMD Rule 1113

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	50
tblConstructionPhase	NumDays	18.00	2.00
tblConstructionPhase	NumDays	18.00	2.00
tblConstructionPhase	NumDays	8.00	4.00
tblConstructionPhase	PhaseEndDate	1/9/2017	1/13/2017
tblConstructionPhase	PhaseStartDate	1/14/2017	1/16/2017
tblConstructionPhase	PhaseStartDate	1/6/2017	1/12/2017
tblGrading	AcresOfGrading	2.00	4.00
tblGrading	MaterialExported	0.00	1,400.00
tblGrading	MaterialImported	0.00	413.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	WorkerTripNumber	15.00	13.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.0310	0.1156	0.0882	1.6000e-004	0.0165	5.6000e-003	0.0221	7.4700e-003	5.1700e-003	0.0126	0.0000	14.1321	14.1321	2.3100e-003	0.0000	14.1805
Total	**0.0310**	**0.1156**	**0.0882**	**1.6000e-004**	**0.0165**	**5.6000e-003**	**0.0221**	**7.4700e-003**	**5.1700e-003**	**0.0126**	**0.0000**	**14.1321**	**14.1321**	**2.3100e-003**	**0.0000**	**14.1805**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.0310	0.1156	0.0882	1.6000e-004	0.0165	5.6000e-003	0.0221	7.4700e-003	5.1700e-003	0.0126	0.0000	14.1321	14.1321	2.3100e-003	0.0000	14.1805
Total	**0.0310**	**0.1156**	**0.0882**	**1.6000e-004**	**0.0165**	**5.6000e-003**	**0.0221**	**7.4700e-003**	**5.1700e-003**	**0.0126**	**0.0000**	**14.1321**	**14.1321**	**2.3100e-003**	**0.0000**	**14.1805**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Removal	Grading	1/1/2017	1/5/2017	5	4	
2	Resurfacing	Paving	1/12/2017	1/13/2017	5	2	
3	Restriping	Architectural Coating	1/16/2017	1/17/2017	5	2	

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: 9,174; Non-Residential Outdoor: 3,058 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Restriping	Air Compressors	1	6.00	78	0.48
Resurfacing	Cement and Mortar Mixers	2	6.00	9	0.56
Asphalt Removal	Excavators	1	8.00	162	0.38
Asphalt Removal	Graders	1	8.00	174	0.41
Resurfacing	Pavers	1	8.00	125	0.42
Resurfacing	Paving Equipment	2	6.00	130	0.36
Resurfacing	Rollers	2	6.00	80	0.38
Asphalt Removal	Rubber Tired Dozers	1	8.00	255	0.40
Asphalt Removal	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Resurfacing	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Restriping	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Removal	6	13.00	0.00	179.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Resurfacing	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Asphalt Removal - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0143	0.0000	0.0143	6.8600e-003	0.0000	6.8600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9100e-003	0.0720	0.0508	6.0000e-005		4.0800e-003	4.0800e-003		3.7500e-003	3.7500e-003	0.0000	5.5223	5.5223	1.6900e-003	0.0000	5.5579
Total	**6.9100e-003**	**0.0720**	**0.0508**	**6.0000e-005**	**0.0143**	**4.0800e-003**	**0.0183**	**6.8600e-003**	**3.7500e-003**	**0.0106**	**0.0000**	**5.5223**	**5.5223**	**1.6900e-003**	**0.0000**	**5.5579**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5500e-003	0.0243	0.0193	7.0000e-005	1.5300e-003	3.4000e-004	1.8700e-003	4.2000e-004	3.1000e-004	7.3000e-004	0.0000	6.0061	6.0061	4.0000e-005	0.0000	6.0070
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	1.5000e-004	1.5600e-003	0.0000	2.8000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2676	0.2676	1.0000e-005	0.0000	0.2679
Total	**1.6500e-003**	**0.0244**	**0.0209**	**7.0000e-005**	**1.8100e-003**	**3.4000e-004**	**2.1600e-003**	**5.0000e-004**	**3.1000e-004**	**8.1000e-004**	**0.0000**	**6.2737**	**6.2737**	**5.0000e-005**	**0.0000**	**6.2749**

3.2 Asphalt Removal - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0143	0.0000	0.0143	6.8600e-003	0.0000	6.8600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9100e-003	0.0720	0.0508	6.0000e-005		4.0800e-003	4.0800e-003		3.7500e-003	3.7500e-003	0.0000	5.5223	5.5223	1.6900e-003	0.0000	5.5579
Total	**6.9100e-003**	**0.0720**	**0.0508**	**6.0000e-005**	**0.0143**	**4.0800e-003**	**0.0183**	**6.8600e-003**	**3.7500e-003**	**0.0106**	**0.0000**	**5.5223**	**5.5223**	**1.6900e-003**	**0.0000**	**5.5579**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5500e-003	0.0243	0.0193	7.0000e-005	1.5300e-003	3.4000e-004	1.8700e-003	4.2000e-004	3.1000e-004	7.3000e-004	0.0000	6.0061	6.0061	4.0000e-005	0.0000	6.0070
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	1.5000e-004	1.5600e-003	0.0000	2.8000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2676	0.2676	1.0000e-005	0.0000	0.2679
Total	**1.6500e-003**	**0.0244**	**0.0209**	**7.0000e-005**	**1.8100e-003**	**3.4000e-004**	**2.1600e-003**	**5.0000e-004**	**3.1000e-004**	**8.1000e-004**	**0.0000**	**6.2737**	**6.2737**	**5.0000e-005**	**0.0000**	**6.2749**

3.3 Resurfacing - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6600e-003	0.0168	0.0125	2.0000e-005		1.0100e-003	1.0100e-003		9.3000e-004	9.3000e-004	0.0000	1.6999	1.6999	5.1000e-004	0.0000	1.7106
Paving	6.1300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.7900e-003**	**0.0168**	**0.0125**	**2.0000e-005**		**1.0100e-003**	**1.0100e-003**		**9.3000e-004**	**9.3000e-004**	**0.0000**	**1.6999**	**1.6999**	**5.1000e-004**	**0.0000**	**1.7106**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	1.2000e-004	1.2000e-003	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2058	0.2058	1.0000e-005	0.0000	0.2061
Total	**8.0000e-005**	**1.2000e-004**	**1.2000e-003**	**0.0000**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.2058**	**0.2058**	**1.0000e-005**	**0.0000**	**0.2061**

3.3 Resurfacing - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6600e-003	0.0168	0.0125	2.0000e-005		1.0100e-003	1.0100e-003		9.3000e-004	9.3000e-004	0.0000	1.6999	1.6999	5.1000e-004	0.0000	1.7106
Paving	6.1300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.7900e-003**	**0.0168**	**0.0125**	**2.0000e-005**		**1.0100e-003**	**1.0100e-003**		**9.3000e-004**	**9.3000e-004**	**0.0000**	**1.6999**	**1.6999**	**5.1000e-004**	**0.0000**	**1.7106**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	1.2000e-004	1.2000e-003	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2058	0.2058	1.0000e-005	0.0000	0.2061
Total	**8.0000e-005**	**1.2000e-004**	**1.2000e-003**	**0.0000**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.2058**	**0.2058**	**1.0000e-005**	**0.0000**	**0.2061**

3.4 Restriping - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0142					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3000e-004	2.1900e-003	1.8700e-003	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	0.2553	0.2553	3.0000e-005	0.0000	0.2559
Total	**0.0145**	**2.1900e-003**	**1.8700e-003**	**0.0000**		**1.7000e-004**	**1.7000e-004**		**1.7000e-004**	**1.7000e-004**	**0.0000**	**0.2553**	**0.2553**	**3.0000e-005**	**0.0000**	**0.2559**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	1.0000e-004	1.0200e-003	0.0000	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1750	0.1750	1.0000e-005	0.0000	0.1752
Total	**7.0000e-005**	**1.0000e-004**	**1.0200e-003**	**0.0000**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1750**	**0.1750**	**1.0000e-005**	**0.0000**	**0.1752**

3.4 Restriping - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0142					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3000e-004	2.1900e-003	1.8700e-003	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	0.2553	0.2553	3.0000e-005	0.0000	0.2559
Total	**0.0145**	**2.1900e-003**	**1.8700e-003**	**0.0000**		**1.7000e-004**	**1.7000e-004**		**1.7000e-004**	**1.7000e-004**	**0.0000**	**0.2553**	**0.2553**	**3.0000e-005**	**0.0000**	**0.2559**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	1.0000e-004	1.0200e-003	0.0000	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1750	0.1750	1.0000e-005	0.0000	0.1752
Total	**7.0000e-005**	**1.0000e-004**	**1.0200e-003**	**0.0000**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1750**	**0.1750**	**1.0000e-005**	**0.0000**	**0.1752**

Alamitos Avenue "Road Diet" Improvements Project

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	4.68	Acre	4.68	203,860.80	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Estimated area of Project site is 60 ft wide by 3400 ft long.

Construction Phase - Construction days reduced from defaults for more conservative estimate of daily emissions.

Off-road Equipment -

Area Coating - Assumed compliance with SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Area Mitigation - Assumed compliance with Rule 1113

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading - Proportional to activities on Alamitos from 7th to Orange (4,720 ft versus project 3,280 ft = 0.7) required 2,000 tons export and 590 tons import.

Architectural Coating - Assume compliance with SCAQMD Rule 1113

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	50
tblConstructionPhase	NumDays	18.00	2.00
tblConstructionPhase	NumDays	18.00	2.00
tblConstructionPhase	NumDays	8.00	4.00
tblConstructionPhase	PhaseEndDate	1/9/2017	1/13/2017
tblConstructionPhase	PhaseStartDate	1/14/2017	1/16/2017
tblConstructionPhase	PhaseStartDate	1/6/2017	1/12/2017
tblGrading	AcresOfGrading	2.00	4.00
tblGrading	MaterialExported	0.00	1,400.00
tblGrading	MaterialImported	0.00	413.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	WorkerTripNumber	15.00	13.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	14.5742	47.5702	34.7281	0.0650	8.0479	2.2098	10.2577	3.6828	2.0330	5.7159	0.0000	6,511.0296	6,511.0296	0.9650	0.0000	6,531.2953
Total	**14.5742**	**47.5702**	**34.7281**	**0.0650**	**8.0479**	**2.2098**	**10.2577**	**3.6828**	**2.0330**	**5.7159**	**0.0000**	**6,511.0296**	**6,511.0296**	**0.9650**	**0.0000**	**6,531.2953**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	14.5742	47.5702	34.7281	0.0650	8.0479	2.2098	10.2577	3.6828	2.0330	5.7159	0.0000	6,511.0296	6,511.0296	0.9650	0.0000	6,531.2953
Total	**14.5742**	**47.5702**	**34.7281**	**0.0650**	**8.0479**	**2.2098**	**10.2577**	**3.6828**	**2.0330**	**5.7159**	**0.0000**	**6,511.0296**	**6,511.0296**	**0.9650**	**0.0000**	**6,531.2953**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Removal	Grading	1/1/2017	1/5/2017	5	4	
2	Resurfacing	Paving	1/12/2017	1/13/2017	5	2	
3	Restriping	Architectural Coating	1/16/2017	1/17/2017	5	2	

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: 9,174; Non-Residential Outdoor: 3,058 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Restriping	Air Compressors	1	6.00	78	0.48
Resurfacing	Cement and Mortar Mixers	2	6.00	9	0.56
Asphalt Removal	Excavators	1	8.00	162	0.38
Asphalt Removal	Graders	1	8.00	174	0.41
Resurfacing	Pavers	1	8.00	125	0.42
Resurfacing	Paving Equipment	2	6.00	130	0.36
Resurfacing	Rollers	2	6.00	80	0.38
Asphalt Removal	Rubber Tired Dozers	1	8.00	255	0.40
Asphalt Removal	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Resurfacing	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Restriping	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Removal	6	13.00	0.00	179.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Resurfacing	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Asphalt Removal - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.1231	0.0000	7.1231	3.4309	0.0000	3.4309			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757		3,043.6667	3,043.6667	0.9326		3,063.2507
Total	**3.4555**	**35.9825**	**25.3812**	**0.0297**	**7.1231**	**2.0388**	**9.1619**	**3.4309**	**1.8757**	**5.3066**		**3,043.6667**	**3,043.6667**	**0.9326**		**3,063.2507**

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	0.7453	11.5218	8.5298	0.0334	0.7795	0.1697	0.9491	0.2134	0.1561	0.3695		3,313.5694	3,313.5694	0.0244		3,314.0822
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	0.0520	0.0659	0.8171	1.8900e-003	0.1453	1.3200e-003	0.1466	0.0385	1.2100e-003	0.0398		153.7936	153.7936	8.0400e-003		153.9624
Total	**0.7974**	**11.5877**	**9.3469**	**0.0353**	**0.9248**	**0.1710**	**1.0958**	**0.2520**	**0.1573**	**0.4093**		**3,467.3629**	**3,467.3629**	**0.0325**		**3,468.0446**

3.2 Asphalt Removal - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.1231	0.0000	7.1231	3.4309	0.0000	3.4309			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757	0.0000	3,043.6667	3,043.6667	0.9326		3,063.2507
Total	**3.4555**	**35.9825**	**25.3812**	**0.0297**	**7.1231**	**2.0388**	**9.1619**	**3.4309**	**1.8757**	**5.3066**	**0.0000**	**3,043.6667**	**3,043.6667**	**0.9326**		**3,063.2507**

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	0.7453	11.5218	8.5298	0.0334	0.7795	0.1697	0.9491	0.2134	0.1561	0.3695		3,313.5694	3,313.5694	0.0244		3,314.0822
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	0.0520	0.0659	0.8171	1.8900e-003	0.1453	1.3200e-003	0.1466	0.0385	1.2100e-003	0.0398		153.7936	153.7936	8.0400e-003		153.9624
Total	**0.7974**	**11.5877**	**9.3469**	**0.0353**	**0.9248**	**0.1710**	**1.0958**	**0.2520**	**0.1573**	**0.4093**		**3,467.3629**	**3,467.3629**	**0.0325**		**3,468.0446**

3.3 Resurfacing - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269		1,873.8264	1,873.8264	0.5588		1,885.5609
Paving	6.1308					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**7.7862**	**16.8035**	**12.4837**	**0.0186**		**1.0056**	**1.0056**		**0.9269**	**0.9269**		**1,873.8264**	**1,873.8264**	**0.5588**		**1,885.5609**

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	0.0801	0.1014	1.2570	2.9100e-003	0.2236	2.0300e-003	0.2256	0.0593	1.8700e-003	0.0612		236.6055	236.6055	0.0124		236.8652
Total	**0.0801**	**0.1014**	**1.2570**	**2.9100e-003**	**0.2236**	**2.0300e-003**	**0.2256**	**0.0593**	**1.8700e-003**	**0.0612**		**236.6055**	**236.6055**	**0.0124**		**236.8652**

3.3 Resurfacing - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269	0.0000	1,873.8264	1,873.8264	0.5588		1,885.5609
Paving	6.1308					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**7.7862**	**16.8035**	**12.4837**	**0.0186**		**1.0056**	**1.0056**		**0.9269**	**0.9269**	**0.0000**	**1,873.8264**	**1,873.8264**	**0.5588**		**1,885.5609**

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	0.0801	0.1014	1.2570	2.9100e-003	0.2236	2.0300e-003	0.2256	0.0593	1.8700e-003	0.0612		236.6055	236.6055	0.0124		236.8652
Total	**0.0801**	**0.1014**	**1.2570**	**2.9100e-003**	**0.2236**	**2.0300e-003**	**0.2256**	**0.0593**	**1.8700e-003**	**0.0612**		**236.6055**	**236.6055**	**0.0124**		**236.8652**

3.4 Restriping - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.1738					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**14.5061**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

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	0.0680	0.0862	1.0685	2.4700e-003	0.1900	1.7200e-003	0.1917	0.0504	1.5900e-003	0.0520		201.1147	201.1147	0.0105		201.3354
Total	**0.0680**	**0.0862**	**1.0685**	**2.4700e-003**	**0.1900**	**1.7200e-003**	**0.1917**	**0.0504**	**1.5900e-003**	**0.0520**		**201.1147**	**201.1147**	**0.0105**		**201.3354**

3.4 Restriping - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.1738					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**14.5061**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

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	0.0680	0.0862	1.0685	2.4700e-003	0.1900	1.7200e-003	0.1917	0.0504	1.5900e-003	0.0520		201.1147	201.1147	0.0105		201.3354
Total	**0.0680**	**0.0862**	**1.0685**	**2.4700e-003**	**0.1900**	**1.7200e-003**	**0.1917**	**0.0504**	**1.5900e-003**	**0.0520**		**201.1147**	**201.1147**	**0.0105**		**201.3354**

Alamitos Avenue "Road Diet" Improvements Project

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	4.68	Acre	4.68	203,860.80	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Estimated area of Project site is 60 ft wide by 3400 ft long.

Construction Phase - Construction days reduced from defaults for more conservative estimate of daily emissions.

Off-road Equipment -

Area Coating - Assumed compliance with SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Area Mitigation - Assumed compliance with Rule 1113

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading - Proportional to activities on Alamitos from 7th to Orange (4,720 ft versus project 3,280 ft = 0.7) required 2,000 tons export and 590 tons import.

Architectural Coating - Assume compliance with SCAQMD Rule 1113

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	50
tblConstructionPhase	NumDays	18.00	2.00
tblConstructionPhase	NumDays	18.00	2.00
tblConstructionPhase	NumDays	8.00	4.00
tblConstructionPhase	PhaseEndDate	1/9/2017	1/13/2017
tblConstructionPhase	PhaseStartDate	1/14/2017	1/16/2017
tblConstructionPhase	PhaseStartDate	1/6/2017	1/12/2017
tblGrading	AcresOfGrading	2.00	4.00
tblGrading	MaterialExported	0.00	1,400.00
tblGrading	MaterialImported	0.00	413.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	WorkerTripNumber	15.00	13.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	14.5768	47.9819	36.1000	0.0649	8.0479	2.2102	10.2581	3.6828	2.0334	5.7162	0.0000	6,494.6015	6,494.6015	0.9654	0.0000	6,514.8739
Total	**14.5768**	**47.9819**	**36.1000**	**0.0649**	**8.0479**	**2.2102**	**10.2581**	**3.6828**	**2.0334**	**5.7162**	**0.0000**	**6,494.6015**	**6,494.6015**	**0.9654**	**0.0000**	**6,514.8739**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	14.5768	47.9819	36.1000	0.0649	8.0479	2.2102	10.2581	3.6828	2.0334	5.7162	0.0000	6,494.6015	6,494.6015	0.9654	0.0000	6,514.8739
Total	**14.5768**	**47.9819**	**36.1000**	**0.0649**	**8.0479**	**2.2102**	**10.2581**	**3.6828**	**2.0334**	**5.7162**	**0.0000**	**6,494.6015**	**6,494.6015**	**0.9654**	**0.0000**	**6,514.8739**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Removal	Grading	1/1/2017	1/5/2017	5	4	
2	Resurfacing	Paving	1/12/2017	1/13/2017	5	2	
3	Restriping	Architectural Coating	1/16/2017	1/17/2017	5	2	

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: 9,174; Non-Residential Outdoor: 3,058 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Restriping	Air Compressors	1	6.00	78	0.48
Resurfacing	Cement and Mortar Mixers	2	6.00	9	0.56
Asphalt Removal	Excavators	1	8.00	162	0.38
Asphalt Removal	Graders	1	8.00	174	0.41
Resurfacing	Pavers	1	8.00	125	0.42
Resurfacing	Paving Equipment	2	6.00	130	0.36
Resurfacing	Rollers	2	6.00	80	0.38
Asphalt Removal	Rubber Tired Dozers	1	8.00	255	0.40
Asphalt Removal	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Resurfacing	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Restriping	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Removal	6	13.00	0.00	179.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Resurfacing	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Asphalt Removal - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.1231	0.0000	7.1231	3.4309	0.0000	3.4309			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757		3,043.6667	3,043.6667	0.9326		3,063.2507
Total	**3.4555**	**35.9825**	**25.3812**	**0.0297**	**7.1231**	**2.0388**	**9.1619**	**3.4309**	**1.8757**	**5.3066**		**3,043.6667**	**3,043.6667**	**0.9326**		**3,063.2507**

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	0.7856	11.9264	9.9547	0.0333	0.7795	0.1701	0.9495	0.2134	0.1565	0.3699		3,305.7852	3,305.7852	0.0247		3,306.3048
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	0.0540	0.0731	0.7641	1.7800e-003	0.1453	1.3200e-003	0.1466	0.0385	1.2100e-003	0.0398		145.1496	145.1496	8.0400e-003		145.3184
Total	**0.8396**	**11.9995**	**10.7188**	**0.0351**	**0.9248**	**0.1714**	**1.0961**	**0.2520**	**0.1577**	**0.4096**		**3,450.9348**	**3,450.9348**	**0.0328**		**3,451.6232**

3.2 Asphalt Removal - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.1231	0.0000	7.1231	3.4309	0.0000	3.4309			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757	0.0000	3,043.6667	3,043.6667	0.9326		3,063.2507
Total	**3.4555**	**35.9825**	**25.3812**	**0.0297**	**7.1231**	**2.0388**	**9.1619**	**3.4309**	**1.8757**	**5.3066**	**0.0000**	**3,043.6667**	**3,043.6667**	**0.9326**		**3,063.2507**

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	0.7856	11.9264	9.9547	0.0333	0.7795	0.1701	0.9495	0.2134	0.1565	0.3699		3,305.7852	3,305.7852	0.0247		3,306.3048
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	0.0540	0.0731	0.7641	1.7800e-003	0.1453	1.3200e-003	0.1466	0.0385	1.2100e-003	0.0398		145.1496	145.1496	8.0400e-003		145.3184
Total	**0.8396**	**11.9995**	**10.7188**	**0.0351**	**0.9248**	**0.1714**	**1.0961**	**0.2520**	**0.1577**	**0.4096**		**3,450.9348**	**3,450.9348**	**0.0328**		**3,451.6232**

3.3 Resurfacing - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269		1,873.8264	1,873.8264	0.5588		1,885.5609
Paving	6.1308					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**7.7862**	**16.8035**	**12.4837**	**0.0186**		**1.0056**	**1.0056**		**0.9269**	**0.9269**		**1,873.8264**	**1,873.8264**	**0.5588**		**1,885.5609**

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	0.0831	0.1124	1.1755	2.7400e-003	0.2236	2.0300e-003	0.2256	0.0593	1.8700e-003	0.0612		223.3071	223.3071	0.0124		223.5668
Total	**0.0831**	**0.1124**	**1.1755**	**2.7400e-003**	**0.2236**	**2.0300e-003**	**0.2256**	**0.0593**	**1.8700e-003**	**0.0612**		**223.3071**	**223.3071**	**0.0124**		**223.5668**

3.3 Resurfacing - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269	0.0000	1,873.8264	1,873.8264	0.5588		1,885.5609
Paving	6.1308					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**7.7862**	**16.8035**	**12.4837**	**0.0186**		**1.0056**	**1.0056**		**0.9269**	**0.9269**	**0.0000**	**1,873.8264**	**1,873.8264**	**0.5588**		**1,885.5609**

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	0.0831	0.1124	1.1755	2.7400e-003	0.2236	2.0300e-003	0.2256	0.0593	1.8700e-003	0.0612		223.3071	223.3071	0.0124		223.5668
Total	**0.0831**	**0.1124**	**1.1755**	**2.7400e-003**	**0.2236**	**2.0300e-003**	**0.2256**	**0.0593**	**1.8700e-003**	**0.0612**		**223.3071**	**223.3071**	**0.0124**		**223.5668**

3.4 Restriping - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.1738					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**14.5061**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

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	0.0706	0.0956	0.9992	2.3300e-003	0.1900	1.7200e-003	0.1917	0.0504	1.5900e-003	0.0520		189.8110	189.8110	0.0105		190.0318
Total	**0.0706**	**0.0956**	**0.9992**	**2.3300e-003**	**0.1900**	**1.7200e-003**	**0.1917**	**0.0504**	**1.5900e-003**	**0.0520**		**189.8110**	**189.8110**	**0.0105**		**190.0318**

3.4 Restriping - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.1738					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**14.5061**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

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	0.0706	0.0956	0.9992	2.3300e-003	0.1900	1.7200e-003	0.1917	0.0504	1.5900e-003	0.0520		189.8110	189.8110	0.0105		190.0318
Total	**0.0706**	**0.0956**	**0.9992**	**2.3300e-003**	**0.1900**	**1.7200e-003**	**0.1917**	**0.0504**	**1.5900e-003**	**0.0520**		**189.8110**	**189.8110**	**0.0105**		**190.0318**