City of Palo Alto

2747 and 3045 Park Boulevard Office Projects

Draft Initial Study

November 2015

rincon

Environmental Scientists Planners Engineers

2747 and 3045 Park Boulevard Office Projects

Initial Study

Prepared by:

City of Palo Alto
250 Hamilton Avenue
Palo Alto, California 94301
Contact: Clare Campbell, Senior Planner
(650) 617-3191

Prepared with the assistance of:

Rincon Consultants, Inc.
180 Grand Avenue, Suite 400
Oakland, California 94612

November 2015

This report is printed on 50% recycled paper.

Table of Contents

Page

List of Figures

List of Tables

Appendices

INITIAL STUDY

1. Project Title: 2747 and 3045 Park Boulevard Office Projects

2. Lead Agency: City of Palo Alto
250 Hamilton Avenue
Palo Alto, California 94301
Contact: Clare Campbell, Senior Planner, (650) 617-3191

3. Project Sponsor Name and Address: Jay Paul Company
Four Embarcadero Center, Suite 3620
San Francisco, California 94111

4. Project Location: The proposed project consists of two separate office projects on three parcels in the City of Palo Alto in Santa Clara County. Figure 1 shows the regional location and Figure 2 shows the location of both project sites.

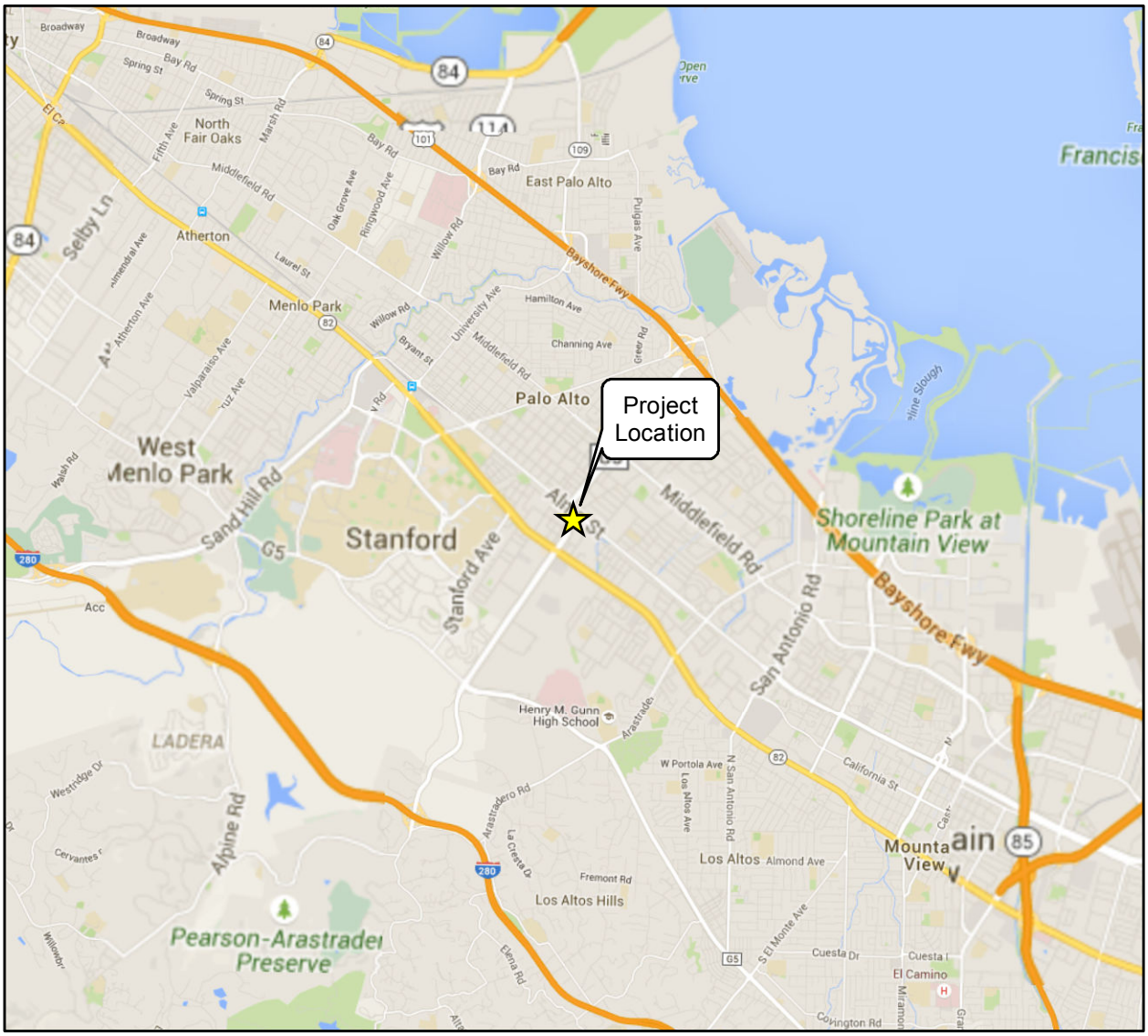
The 2747 Park Boulevard site is located on 1.53 acres and comprises two parcels (APNs #132-31-042 and -071) located at 2747 and 2785 Park Boulevard. This site is on the northwest side of Park Boulevard between Sheridan Avenue and Page Mill Road. The 3045 Park Boulevard site (APN #132-32-053) is located on one parcel of approximately 1.34 acres. This site is on the northwest side of Park Boulevard at its intersection with Olive Avenue.

5. Comprehensive Plan Designation: Light Industrial. The Comprehensive Plan defines this category as "Wholesale and storage warehouses and the manufacturing, processing, repairing, and packaging of goods…Compatible residential and mixed use projects may also be located in this category."

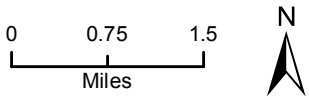
6. Zoning: General Manufacturing District. The Palo Alto Municipal Code (PAMC) defines the GM District as providing "for light manufacturing, research, and commercial service uses. Office uses are very limited in order to maintain the district as a desirable location for manufacturing uses." The 3045 Park Boulevard project site also has an Automobile Dealership (AD) overlay. The GM(AD) combining district is intended "to create and maintain areas accommodating automobile dealerships primarily engaged in new and used automobile sales and service."

7. Description of Project:

The proposed project would involve the construction and operation of two office buildings, one at 2747 Park Boulevard and one at 3045 Park Boulevard. Figures 3 and 4 show the proposed site



Imagery provided by Googleits licensors © 2015.



Regional Location

Figure 1

City of Palo Alto

Imagery provided by Google and its licensors © 2015.

Project Site Location

Figure 2

This page intentionally left blank.

2747 Park Blvd Site Plan

Source: DES Architects, Engineers, June 2015

Figure 3

3045 Park Blvd Site Plan

Source: DES Architects, Engineers, June 2015

Figure 4

plans for the 2747 and 3045 Park Boulevard project sites, respectively. The applicant is the same for both projects. For the purposes of this analysis, development of both office projects is referred to as "the proposed project." This Initial Study analyzes the impacts that would result from construction of both of the projects simultaneously.

Figures 5a-b show photographs of both project sites. The 2747 Park Boulevard project site is currently developed with a one-story, 4,800 square-foot office building and surface parking (see Figure 5a for photographs of this site). The proposed project would involve demolition of the existing building and construction of a new 33,323 square-foot, three-story research and development (R&D)/office building, parking areas, and landscaping. An existing oak tree in the center of the site would be preserved. The building would be 48 feet in height with mechanical equipment screening reaching to 57 feet. The building would be located on the southwest portion of the site, fronting on and oriented to Park Boulevard (see Figure 3).

The 3045 Park Boulevard project site is currently developed with a 17,756 square-foot two-story commercial building and surface parking (see Figure 5b for photographs of this project site). The proposed project would involve demolition of the existing structures and construction of a new 29,120 square-foot, two-story R&D/office building, parking and landscaping. The building height would be 35 feet (to top of canopy) with mechanical equipment screening reaching to 38 feet. The building would be located on the southwest portion of the site, fronting on and oriented to Park Boulevard (see Figure 4).

Table 1 summarizes the characteristics for the proposed project.

Table 1
Project Characteristics

	2747 Park Boulevard Project Component	3045 Park Boulevard Project Component
Assessor's Parcel No.	132-31-042 and -71	132-32-053
Project Site Size:	166,646 sf (1.53 acres)	58,240 sf (1.34 acres)
Building Floor Area:	33,323 sf	29,120 sf
Parking:	140 vehicle spaces (surface parking and a two-level structure) 18 bicycle parking spaces	121 vehicle spaces (surface parking and a two-level structure) 16 bicycle parking spaces
Floor Area Ratio (FAR):	0.5	0.5
Building Height:	Three stories, 48 feet (Equipment screening up to 57 feet)	Two stories, 35 feet (Equipment screening up to 38 feet)

sf = square feet

Parking and Site Access

The 2747 Park Boulevard component would include a total of 140 on-site surface parking stalls. A parking deck with 24 parking spaces would be constructed on the east side of the parking area. Eighteen bicycle parking spaces would also be provided (six lockers for 12 bikes and three racks for six bikes). Vehicular access would be provided from three driveways, two on Sheridan Avenue on the northern portion of the site and one on Page Mill Road on the southern portion

Photo 1: View of the 2747 Park Boulevard site from across Park Boulevard.

Photo 2: View of the protected oak tree on the 2747 Park Boulevard site from the Sheriden Avenue parking area.

Photographs of Project Sites and Surrounding Areas Figure 5a

Photo 3: View of the 3045 Park Boulevard site from across Park boulevard.

Photo 4: View of Caltrain railway northeast of the project sites.

Photographs of Project Sites and Surrounding Areas Figure 5b

of the site. Inbound and outbound movements would be allowed at all three access points and would be controlled by stop signs. Pedestrians would access the proposed office building through three entry points on the ground floor. One entry point would be the lobby on Park Boulevard. Another access point would be the lobby from the surface parking lot. The third access point would be on Page Mill Road.

The 3045 Park Boulevard site component would include a total of 121 on-site surface parking stalls. Some parking would be provided on a parking deck on the east side of the parking area. Sixteen bicycle parking spaces would also be provided (five lockers for 10 bikes and three racks for six bikes). The project site would be accessible from two driveways, both on Park Boulevard on the western portion of the site. Inbound and outbound movements would be allowed at both points and would be controlled by stop signs. Pedestrians would access the proposed office building through two entry points on the ground floor. One entry point would be a lobby on Park Boulevard near the vehicle driveway. The other access point would be from the surface parking lot at the northern portion of the building.

Landscaping

The 2747 Park Boulevard site would have landscape coverage, including a number of new trees, of approximately 16,456 square feet (approximately 24% of the 2747 Park Boulevard site). The 35 existing landscaping trees on the site would be removed. The mature live oak tree at the center of the project site would remain.

The 3045 Park Boulevard site would have landscape coverage, including new trees, of approximately 13,723 square feet (approximately 24% of the 3045 Park Boulevard site). There are eight existing trees on the project site (5 Chinese hackberry, 2 flowering plum, and 1 Chinese pistache). All eight on-site trees would be removed. There are also eight trees on the adjacent eastern property which overhang onto the site between five to 12 feet. These eight trees would be preserved.

Utilities

The City of Palo Alto provides electric, natural gas, refuse, recycled water, storm drain, and wastewater collection, treatment and disposal to both sites. Water would be provided by the San Francisco Public Utilities Commission (SFPUC). Police and Fire protection services would be provided by the City of Palo Alto.

Construction and Grading

Development of the 2747 Park Boulevard project site as proposed would require approximately 3,300 cubic yards (CY) of cut and 200 CY of fill for an estimated net export of 3,100 cubic yards (CY) of earth material.

Development of the 3045 Park Boulevard project as proposed would require approximately 100 CY of cut and 1,700 CY of fill for an estimated net import of 1,600 CY of earth material.

8. Surrounding Land Uses and Setting:

The two sites are located in a neighborhood characterized by a mix of research/office park, light industrial, transit-oriented residential, and single-family residential. The California Avenue Caltrain Station is located approximately 0.2 miles northwest of the 2747 Park Boulevard site. The Park Plaza three-story mixed use project is currently under construction on the site in between the two project sites at 195 Page Mill Road.

The 2747 Park Boulevard site is bordered to the north and east by Page Mill Road, Sheridan Ave to the west, and Park Boulevard to the south. Caltrain railway tracks run north of the site on the other side of Page Mill Road (see Figure 2). Two overpasses, including the Park Boulevard overpass, link the site to the California Avenue commercial area and California Avenue Caltrain Station. On the other side of Sheridan Avenue is a landscaped area and the Oregon Expressway underpass. Multi-family residential and office buildings are located across Oregon Expressway. This site is zoned General Manufacturing District and has a Comprehensive Plan land use designation of Light Industrial.

The 3045 Park Boulevard site is bordered to the south by Park Boulevard, to the east by a two-story office building, to the north by Caltrain railway track, and to the west by the Park Plaza project. Across Park Boulevard are one-story office buildings and parking areas. There is a narrow strip of single-family homes along Olive Avenue and further west (Ash and Pepper) of the site. This site is zoned General Manufacturing District with an Auto Dealership Overlay and has a Comprehensive Plan land use designation of Light Industrial.

9. Other Public Agencies Whose Approval is Required:

The proposed projects would require the discretionary approval of the City of Palo Alto.

No approvals from other public agencies are required.

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 Forest 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	☐ 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. An 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

11-02-2015

Date

ENVIRONMENTAL CHECKLIST

The City of Palo Alto has adopted CEQA thresholds that augment the thresholds contained in the *State CEQA Guidelines* Appendix G checklist. The following checklist is based on the City's thresholds as well as the Appendix G checklist. This checklist has been formulated by the City to determine the potential for the project to result in significant environmental effects.

	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) ***LESS THAN SIGNIFICANT IMPACT***. The project sites are located in a fully urbanized area of Palo Alto that supports a mix of development types and land uses, including transit-oriented residential, single-family residential, research/office park and commercial light industrial. The Caltrain Station is located approximately 0.2 miles northwest of the 2747 Park Boulevard site. The Caltrain railway track is to the north. The project sites and their surrounding areas are currently developed with structures and landscaping. The topography of the area is generally flat and there are no scenic views available from or through either of the project sites (see figures 5a and 5b).

The 2747 Park Boulevard project site is currently developed with a one-story office building and surface parking. The proposed development at this site involves the construction of a new 33,323 square-foot, three-story office building, parking and landscape improvements. The building would be 48 feet in height with mechanical equipment reaching to 57 feet. The 3045 Park Boulevard project site currently has an auto body shop facility, a two-story office building and surface parking area. The proposed development at this site involves the construction of a new 29,120 square-foot, two-story R&D/office building, parking and landscape improvements. The building height would be 35 feet (to the top of the parapet).

The City of Palo Alto's CEQA thresholds state that a proposed project would have a significant impact if it would "have a substantial adverse effect on a public view or view corridor." According to Policy Program L-71 from the Land Use and Design Chapter of the City of Palo Alto Comprehensive Plan, roads with high scenic value are Sand Hill Road, University Avenue, Embarcadero Road, Page Mill Road, Oregon Expressway, Interstate 280, Arastradero Road (west of Foothill Expressway), Junipero Serra Boulevard/Foothill Expressway, and Skyline Boulevard (City of Palo Alto Comprehensive Plan Update, 2014). These roads are to be maintained as local scenic routes. The project sites are within ½-mile of Page Mill Road and Oregon Expressway. However, the proposed projects would not be visible from motorists traveling on Oregon Expressway, and only the 2747 Park Boulevard project would be visible from Page Mill Road. However, the proposed 2747 Park Boulevard project would not substantially affect the viewshed from motorists, pedestrians or cyclists traveling on Page Mill Road. The proposed structure would be similar in height to surrounding structures and background views of scenic resources are not available from Page Mill Road at this location. Therefore, the proposed projects would not have a substantial adverse effect on identified scenic views or vistas or on a public view or view corridor. No further analysis of this issue in an EIR is warranted.

b) ***LESS THAN SIGNIFICANT IMPACT***. The 3045 Park Boulevard project site contains eight trees (5 Chinese hackberry, 2 flowering plum, and 1 Chinese pistache) on-site that would be removed. The 2747 Park Boulevard project site contains approximately 35 landscaping trees that would be removed as part of the proposed project. These trees are non-native landscaping trees that do not have scenic value individually (with the exception of one mature valley oak, discussed below) but their presence and distribution contribute substantially to the sites' visual character. Although their removal would result in a temporary adverse visual effect, the conceptual landscape plans show a number of new perimeter and interior trees that would replace this visual characteristic of the sites. In addition, the project would be required to comply with PAMC Section 18.54.040, Landscaping of Parking Areas, which includes minimum standards for trees in and around parking lots.

The 2747 Park Boulevard site contains one mature tree, a valley oak, which has scenic value. As detailed in Section III, *Biological Resources,* with implementation of Mitigation Measure BIO-2, the oak tree would be preserved and would still be visible from adjacent streets, and would not lose its scenic value. Therefore, the proposed project would not impact this scenic resource.

According to the City's CEQA thresholds, a significant impact would also occur if the proposed project violates existing Comprehensive Plan policies regarding visual resources. The Natural Environment Chapter of the Comprehensive Plan also recognizes the City's wetlands as important scenic, recreational and wildlife habitat resources. However, there are no wetlands within the vicinity of the proposed project site (U.S. Fish and Wildlife Service [USFWS], 2015). There are also no known historic buildings on or adjacent to the project site (California Office of Historic Preservation, 2015). Therefore, impacts to scenic vistas or scenic resources would be less than significant. No further analysis of this issue in an EIR is warranted.

c) ***LESS THAN SIGNIFICANT IMPACT***. The visual character of the area surrounding the project site includes one- to three-story office and residential buildings and ornamental landscaping. A three-story mixed-use project is currently under construction between the two

sites, at 195 Page Mill Road. The maximum height of each of the two office buildings would be two-to three stories.

The proposed project at the 2747 Park Boulevard project site involves the construction of a new 33,323 square-foot, three-story office building, parking and landscape improvements, and the proposed project at the 3045 Park Boulevard project site involves the construction of a new 29,120 square-foot, two-story R&D/office building, parking and landscape improvements. Both project components would be consistent with the height and FAR requirements set forth in the Palo Alto Municipal Code (PAMC). No variances related to height or FAR are proposed as part of the proposed project.

The proposed new structure at 2747 Park Boulevard would be three stories in height, which would increase the massing and intensity of development on the project site (see Figure 6). As such, the proposed project would represent a change in the visual character of the project site. The site's visual permeability and open character as seen from Park Boulevard would be replaced by the frontage of the new building, although the open character would be somewhat preserved as seen from Sheridan Avenue due to the location of the main surface parking area. However, there are similar buildings west and south of the project site, including 395 Page Mill Road and 200 Page Mill Road, as well as the four- to five-story mixed-use project under construction directly adjacent at 195 Page Mill Road. Thus the project would be consistent with the dominant type and scale of development in the immediate area – two- to four-story commercial or mixed use buildings – and so would be generally compatible in massing and scale in relation to its urban surroundings. Proposed project landscaping would help soften the appearance of the new building and parking deck, and the mature valley oak would be visible to the public from portions of Sheridan Avenue and Page Mill Road fronting the site.

The proposed two-story 3045 Park Boulevard project component would be lower in height compared to several buildings surrounding the site (see Figure 7), and still generally consistent with the range of building heights in the vicinity. As with the proposed 2747 Park Boulevard building, the project would be consistent with the dominant type and scale of development in the immediate area – two- to four-story commercial or mixed use buildings – and so would be generally compatible in massing and scale in relation to its urban surroundings. Proposed project landscaping would help soften the appearance of the new building and parking deck.

Finally, both project components require Architectural Review under PAMC Section 18.76.020. As stated in this section, the purposes of the City's architectural review process are to:

- *Promote orderly and harmonious development in the city;*
- *Enhance the desirability of residence or investment in the city;*
- *Encourage the attainment of the most desirable use of land and improvements;*
- *Enhance the desirability of living conditions upon the immediate site or in adjacent areas; and*
- *Promote visual environments which are of high aesthetic quality and variety and which, at the same time, are considerate of each other.*

This process helps ensure that approved projects are consistent with the City's adopted goals, policies and guidelines related to architectural and site design.

Park Ave Elevation 2747 Park Blvd

Caltrain Side Elevation 2747 Park Blvd

Pagemill Blvd Elevation 2747 Park Blvd

Sheridan Ave Elevation 2747 Park Blvd

Proposed 2747 ParkBoulevard Elevations

Source: DES Architects, Engineers, June 2015

Figure 6

Park Ave Elevation

3045 Park Blvd

Caltrain Side Elevation

3045 Park Blvd

Proposed 3045 Park Boulevard Elevations

Figure 7

Source: DES Architects, Engineers, June 2015

Based on the discussion above and the required Architectural Review and approval, the two new buildings would not significantly degrade the existing visual character or quality of the site and its surroundings. The proposed project would follow the development guidelines set forth in section 18.20.040 of the PAMC. Therefore, impacts related to visual character would be less than significant. No further analysis of this issue in an EIR is warranted.

d) ***LESS THAN SIGNIFICANT IMPACT***. The project site is in an urbanized area with high levels of existing lighting. The adjacent commercial, residential, and roadway uses generate light and glare along all sides of the property. Primary sources of light adjacent to the project site include lighting associated with the existing commercial and residential buildings including building mounted lighting and headlights from vehicles on nearby streets. The primary source of glare adjacent to the project site is the sun's reflection from metallic, glass and light-colored surfaces on buildings and on vehicles parked on adjacent streets and in adjacent parking areas.

According to Palo Alto Municipal Code Section 18.20.030, outdoor lighting in Office, Research, and Manufacturing districts must be sufficient to provide illumination and clear visibility to all outdoor areas, with minimal shadows or light leaving the property. The lighting must be stationary and directed away from adjacent properties and public rights-of-way.

The proposed projects would incorporate exterior lighting in the form of pedestrian walkway lighting and other safety related lighting. These light sources would not have a significant impact on the night sky, as they would only incrementally add to the existing background light levels already present as a result of the surrounding urban development. Because of the existing, relatively high ambient lighting levels in the vicinity of the project sites, project development would not substantially alter this condition. With required adherence to the standards in PAMC Section 18.20.030, impacts would be less than significant.

Both proposed office projects include metal sun shades and panels over project windows that would prevent substantial amounts of glare from building windows. Glare from vehicles parked in project parking lots would be similar to glare from vehicles parked on adjacent streets and parking lots. The proposed project would not create a substantial source of glare.

In addition, according to the City's CEQA thresholds a significant impact would occur if the proposed project would "substantially shadow public space (other than public streets and adjacent sidewalks) between 9:00 AM and 3:00 PM from September 21 to March 21." Both of the proposed structures are two stories or higher in height; therefore, they may cast shadows in the immediate area. There are no public open space areas (besides public streets and sidewalks) adjacent to the project sites. Other shadow-sensitive uses include nurseries, outdoor-oriented retail uses (e.g., certain restaurants), or routinely useable outdoor spaces associated with recreational, institutional, or residential land uses. These uses are considered sensitive because sunlight is important to their function, physical comfort, and/or commerce. Plans for the 195 Page Mill Road project (under construction as of this writing) include shadow-sensitive uses such as useable outdoor spaces associated with recreational or residential land uses. However, these uses would be located in the center portion of the site in the courtyard. As a result, the two proposed structures (2747 Park Boulevard and 3045 Park Boulevard) would not cast shadows to the sensitive uses at 195 Page Mill Road. Impacts would be less than significant. No further analysis of this issue in an EIR is warranted.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
II. AGRICULTURE AND FOREST 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?	☐	☐	☐	■
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-e) ***NO IMPACT***. The Land Use and Design Chapter of the City's Comprehensive Plan show the various farmland types throughout the City. Neither the two project sites nor adjacent properties are identified as any farmland type or enrolled in Williamson Act contracts, or support forest land or resources. The two project sites are not located on or adjacent to agricultural land or forest land and the proposed project would not involve any development that could result in the conversion of farmland to non-agricultural uses. For these reasons, the project would have no impact with respect to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use; conflict with existing agricultural zoning or Williamson Act contract; result in the loss of forest land or conversion of forest land to non-forest use; or other conversion of farmland to non-agricultural use. No further analysis of this issue in an EIR is warranted.

	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 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?	☐	☐	■	☐

Air Quality Standards and Attainment

The project site is located within the San Francisco Bay Area Air Basin (the Basin), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). As the local air quality management agency, the BAAQMD is required to monitor air pollutant levels to ensure that state and federal air quality standards are met and, if they are not met, to develop strategies to meet the standards.

Depending on whether or not the standards are met or exceeded, the Basin is classified as being in "attainment" or "nonattainment." Under state law, air districts are required to prepare

a plan for air quality improvement for pollutants for which the district is in non-compliance. The BAAQMD is in non-attainment for the state and federal ozone standards, the state and federal $PM_{2.5}$ (particulate matter up to 2.5 microns[1] in size) standards and the state PM_{10} (particulate matter up to 10 microns in size) standards and is required to prepare a plan for improvement (BAAQMD, "Air Quality Standards and Attainment Status" webpage, accessed July 2015). The health effects associated with criteria pollutants for which the Basin is in non-attainment are described in Table 2.

Table 2
Health Effects Associated with Non-Attainment Criteria Pollutants

Pollutant	Adverse Effects
Ozone	(1) Short-term exposures: (a) pulmonary function decrements and localized lung edema in humans and animals and (b) risk to public health implied by alterations in pulmonary morphology and host defense in animals; (2) long-term exposures: risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (3) vegetation damage; and (4) property damage.
Suspended particulate matter (PM_{10})	(1) Excess deaths from short-term and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease (including asthma).[a]
Suspended particulate matter ($PM_{2.5}$)	(1) Excess deaths from short- and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes, including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children, such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease, including asthma.[a]

Source: U.S. EPA, http://www.epa.gov/airquality/urbanair/*, accessed November 21, 2014.*
[a] *More detailed discussions on the health effects associated with exposure to suspended particulate matter can be found in the following documents: EPA, Air Quality Criteria for Particulate Matter, October 2004.*

Air Quality Management

The Bay Area 2010 Clean Air Plan (CAP) provides a plan to improve Bay Area air quality and protect public health. The legal impetus for the CAP is to update the most recent ozone plan, the Bay Area 2005 Ozone Strategy, to comply with state air quality planning requirements as codified in the California Health & Safety Code. Although steady progress in reducing ozone levels in the Bay Area has been made, the region continues to be designated as non-attainment for both the one-hour and eight-hour state ozone standards as noted previously. In addition, emissions of ozone precursors in the Bay Area contribute to air quality problems in neighboring air basins. Under these circumstances, state law requires the CAP to include all feasible measures to reduce emissions of ozone precursors and reduce transport of ozone precursors to neighboring air basins (BAAQMD, September 2010).

In 2006, the U.S. EPA tightened the national 24-hour $PM_{2.5}$ standard regarding short-term exposure to fine particulate matter from 65 $\mu g/m^3$ (micro-grams per cubic meter) to 35 $\mu g/m^3$.

[1] *One micron equals one-millionth of a meter; i.e.* 10^{-6}

Based on air quality monitoring data for years 2006-2008 showing that the region was slightly above the standard, U.S. EPA designated the Bay Area as non-attainment for the 24-hour national standard in December 2008. This triggered the requirement for the Bay Area to prepare a State Implementation Plan (SIP) submittal to demonstrate how the region would attain the standard. However, data for both the 2008-2010 and the 2009-2011 cycles showed that Bay Area $PM_{2.5}$ levels currently meet the standard. On October 29, 2012, the U.S. EPA issued a proposed rule-making to determine that the Bay Area now attains the 24-hour $PM_{2.5}$ national standard. Based on this, the Bay Area is required to prepare an abbreviated SIP submittal which includes an emission inventory for primary (directly-emitted) $PM_{2.5}$, as well as precursor pollutants that contribute to formation of secondary PM in the atmosphere; and amendments to the BAAQMD New Source Review (NSR) to address $PM_{2.5}$ (adopted December 2012).[2] However, key SIP requirements to demonstrate how a region will achieve the standard (i.e. the requirement to develop a plan to attain the standard) will be suspended as long as monitoring data continues to show that the Bay Area attains the standard.

In addition to preparing the "abbreviated" SIP submittal, the BAAQMD has prepared a report entitled "Understanding Particulate Matter: Protecting Public Health in the San Francisco Bay Area" (2012). The report will help to guide the BAAQMD's on-going efforts to analyze and reduce PM in the Bay Area in order to better protect public health. The Bay Area will continue to be designated as "non-attainment" for the national 24-hour $PM_{2.5}$ standard until such time as the Air District elects to submit a "redesignation request" and a "maintenance plan" to the U.S. EPA, and the U.S. EPA approves the proposed redesignation.

Air Emission Thresholds

On March 5, 2012 the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds contained in the BAAQMD's 2010 CEQA Guidelines. The court did not determine whether the thresholds were valid on the merits, but found that the adoption of the thresholds was a project under CEQA. The court issued a writ of mandate ordering the District to set aside the thresholds and cease dissemination of them until the Air District had complied with CEQA. The Air District has appealed the Alameda County Superior Court's decision. The Court of Appeal of the State of California, First Appellate District, reversed the trial court's decision. The Court of Appeal's decision was appealed to the California Supreme Court, which granted limited review, and the matter is currently pending there (BAAQMD, "Updated CEQA Guidelines" webpage, updated January 16, 2014). In view of the trial court's order which remains in place pending final resolution of the case, BAAQMD is no longer recommending that the thresholds be used as a generally applicable measure of a project's significant air quality impacts. As such, lead agencies need to determine appropriate air quality thresholds of significance based on substantial evidence in the record. Lead agencies may rely on the BAAQMD's CEQA Guidelines (updated May 2012) for assistance in calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures. However, the BAAQMD has been ordered to set aside the thresholds and is no longer recommending that these thresholds be used as a general measure of a project's

[2] *PM is made up of particles that are emitted directly, such as soot and fugitive dust, as well as secondary particles that are formed in the atmosphere from chemical reactions involving precursor pollutants such as oxides of nitrogen (NO_x), sulfur oxides (SO_x), volatile organic compounds (VOCs), and ammonia (NH_3).*

significant air quality impacts. Lead agencies may continue to rely on the BAAQMD's 1999 Thresholds of Significance and to make determinations regarding the significance of an individual project's air quality impacts based on substantial evidence in the record for that project.

For this Initial Study, the City of Palo Alto has determined that the BAAQMD's significance thresholds in the updated May 2011 CEQA Guidelines for project operations within the San Francisco Bay Area Air Basin are the most appropriate thresholds for use in determining air quality impacts of the proposed project. These thresholds are lower than the 1999 BAAQMD thresholds, and thus use of the thresholds in the May 2011 CEQA Guidelines is more conservative. Therefore, these thresholds are considered reasonable for use in this Initial Study.

Table 4 presents the significance thresholds for operational-related criteria air pollutant and precursor emissions being used for the purposes of this analysis. These represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the Basin's existing air quality conditions. For the purposes of this analysis, the proposed project would result in a significant impact if construction emissions would exceed any of the thresholds shown in Table 3:[3]

Table 3
Operational Thresholds of Significance

Pollutant/ Precursor	Maximum Annual Emissions (tpy)	Average Daily Emissions (lbs/day)
ROG	10	54
NO_X	10	54
PM_{10}	15	82
$PM_{2.5}$	10	54

Source: Table 2-2, Bay Area Air Quality Management District, CEQA Air Quality Guidelines, May 2011.

Notes: tpy = tons per year; lbs/day = pounds per day; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases; tpy = tons per year.

In addition, a significant air quality impact would occur if the project design or project construction does not incorporate control measures recommended by the BAAQMD to control emissions during construction (as listed in Table 8-1 of the BAAQMD CEQA Guidelines).

a) ***LESS THAN SIGNIFICANT IMPACT***. Vehicle use, energy consumption, and associated air pollutant emissions are directly related to population growth. A project may be inconsistent with the applicable air quality plan if it would result in either population or employment growth that exceeds growth estimates included in the plan. Such growth would generate emissions not accounted for in the applicable air quality plan emissions budget. Therefore, projects need to be evaluated to determine whether they would generate population and employment growth and, if so, whether that growth would exceed the growth rates included

[3] *Note the thresholds for PM_{10} and $PM_{2.5}$ apply to construction exhaust emissions only.*

in the applicable air quality plan. The most recent and applicable adopted air quality plan is the 2010 Clean Air Plan (CAP). Therefore, consistent with the City's CEQA thresholds, the proposed project would result in a significant impact if it would conflict with or obstruct with implementation of the 2010 CAP.

The proposed project would increase employment opportunities in Palo Alto. Given the nature of the proposed project, it would not substantially induce population growth directly as it does not include or directly facilitate provision of housing. The two proposed research and development office buildings would increase employment by an estimated 483 jobs (358 employees at 2747 Park Boulevard and 125 employees at 3045 Park Boulevard) (see Section XIII, *Population and Housing)*. According to the Association of Bay Area Government's employment growth projections for the City of Palo Alto, there would be approximately 104,430 employees in 2015 and 112,560 employees by 2025 (City of Palo Alto, 2009). The addition of 483 employees would increase employment to approximately 104,913 people, which is well within the projected employment growth for 2025. As a result, a substantial change in employment growth in Palo Alto would not occur; therefore, the proposed project would not induce employment growth beyond the forecasts. Impacts related to conflict or obstruction of applicable air quality plans would be less than significant. Further analysis of this issue in an EIR is not warranted.

B, c) ***LESS THAN SIGNIFICANT IMPACT***. According to the City's CEQA thresholds, the proposed project would result in a significant impact if it would result in direct and/or indirect operational emissions that exceed BAAQMD thresholds or contribute to carbon monoxide (CO) levels exceed state standards. The proposed project would generate temporary construction emissions (direct emissions) and long-term operational emissions (indirect emissions). Emissions associated with the proposed project were estimated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2. Complete CalEEMod results and assumptions can be viewed in Appendix A. Since this analysis assumes both project sites would be developed concurrently, air quality calculations include both office projects.

Construction Emissions

Project construction would generate temporary air pollutant emissions. These impacts are associated with fugitive dust (PM_{10} and $PM_{2.5}$) and exhaust emissions from heavy construction vehicles, in addition to reactive organic gases (ROG) that would be released during the drying phase upon application of architectural coatings. The proposed project would be required to comply with all BAAQMD rules and regulations regarding construction emission control measures.

The proposed combined project would involve approximately 4,000 cubic yards of grading or excavation. Construction was estimated to occur over approximately two years between January 2016 and April 2017.

Table 4 summarizes the estimated maximum daily emissions of pollutants during construction on the project site. As shown in the table, the BAAQMD thresholds would not be exceeded. Therefore, impacts would be less than significant. Further analysis of this issue in an EIR is not warranted.

Table 4
Estimated Construction Maximum Daily Air Pollutant Emissions

	Maximum Daily Emissions (lbs/day)					
	ROG	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**SO_X**
Maximum Daily Emissions[a]	25.60	57.53	45.97	11.24	7.22	0.08
BAAQMD Thresholds	*75*	*100*	*550*	*150*	*55*	*150*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

[a] *See Table 2.1 "Overall Construction-Mitigated" of winter emissions CalEEMod worksheets in Appendix A.*
[b] *LST's only include on-site emissions. LSTs for a 0.6-acre site in SRA-2, see Table 4*
N/A = not applicable

Long-Term Emissions

Long-term emissions associated with project operation, as shown in Table 5, would include emissions from vehicle trips (mobile sources), natural gas and electricity use (energy sources), and landscape maintenance equipment, consumer products and architectural coating associated with onsite development (area sources).

Emissions would not exceed BAAQMD thresholds for any criteria pollutant. Consequently, the impact of the proposed project's operational emissions on regional air quality under thresholds b) and c), would be less than significant. Further analysis of this issue in an EIR is not warranted.

Table 5
Estimated Project Operational Emissions

Sources	Estimated Emissions (lbs/day)					
	ROG	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**SO_X**
Area	3.78	<0.01	0.03	<0.01	<0.01	0
Energy	0.03	0.29	0.24	0.02	0.02	<0.01
Mobile	2.29	5.26	23.93	3.56	1.00	0.05
Total Emissions (lbs/day)	**6.10**	**5.55**	**24.21**	**3.58**	**1.02**	**0.05**
BAAQMD Thresholds	*54*	*54*	*550*	*82*	*54*	*150*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Calculations were made in CalEEMod. See Table 2.2 "Unmitigated Operational" in CalEEMod winter emissions worksheets in Appendix A.
Note: numbers may not add up due to rounding.

Carbon Monoxide

According to the City's CEQA thresholds, CO modeling should occur when

a) project CO emissions exceed 550 pounds per day or 100 tons per year; or
b) project traffic would impact intersections of roadway links operating at Level of Service (LOS) D, E, or F, or would cause LOS to decline to D, E, or F; or

c) the project would increase traffic volumes on nearby roadways by 10% or more.

The proposed project would not meet any of the criteria outlined above. Therefore, CO impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

d) ***LESS THAN SIGNIFICANT IMPACT***. As discussed above under subpart (b, c) of this section, the proposed project would not exceed BAAQMD thresholds for any pollutant; therefore, it would not expose sensitive receptors to substantial pollutant concentrations. According to the City's CEQA thresholds, the proposed project would have a significant impact if it would exposure sensitive receptors to substantial levels of toxic air contaminants (TAC). The proposed project involves office uses and would not emit substantial levels of TACs. TAC emissions are mostly associated with industrial sources, not office uses, as well as with diesel exhaust. The proposed project may involve heavy truck usage associated with deliveries and trash hauling; however, heavy truck usage would be similar to other office uses and would not result in substantial TAC emissions. Impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

e) ***LESS THAN SIGNIFICANT IMPACT***. Odors are typically associated with industrial projects involving the use of chemicals, solvents, petroleum products, and other strong-smelling elements used in manufacturing processes, as well as sewage treatment facilities and landfills. The proposed office projects involve office and R&D uses. This type of use would not generate objectionable odors that would affect a substantial number of people. Therefore, impacts related to odor are less than significant. No further analysis of this issue in an EIR is warranted.

	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?	☐	■	☐	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES				
-- Would the project:				
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, b, d) ***POTENTIALLY SIGNIFICANT UNLESS MITIGATION INCORPORATED***. The project sites are located in an urbanized area of Palo Alto, and have been graded and developed/paved for the existing buildings and surface parking lots. The proposed project would involve construction of two new office buildings, one on each project site, as well as surface parking and parking structures on each site. The project sites do not contain vegetation or biological habitat suitable to provide habitat for sensitive or special status species. The project sites do not contain riparian habitat or sensitive natural communities. No federal-or-state-listed endangered, threatened, rare, or otherwise sensitive flora or fauna were observed at the project site. The project is not located within any known regional wildlife movement corridors or other sensitive biological areas as indicated by the USFWS Critical Habitat portal or CDFW BIOS.

A total of 35 trees are located on the 2747 Park Boulevard site, including one protected oak tree (per PAMC Chapter 8.10), and 16 trees are located on the 3045 Park Boulevard site. Thirty-four trees (most are along property lines) would be removed at the 2747 Park Boulevard site and eight trees would be removed from the 3045 Park Boulevard site. The protected tree, *Quercus lobata* (Valley Oak), on the 2747 Park Boulevard site would not be removed as part of the proposed project.

The on-site trees may support nesting birds protected under the Migratory Bird Treaty Act. The removal of approximately 42 trees may affect protected nesting birds. Therefore, Mitigation Measure BIO-1 is required to protect nesting birds.

Mitigation Measure

The following mitigation measure would be required to reduce impacts to protected nesting birds to a less than significant level. With implementation of Mitigation Measure BIO-1, impacts would be less than significant and no further analysis of this issue in an EIR is warranted. This measure will be carried over into the EIR's Executive Summary and Mitigation Monitoring and Reporting Program.

BIO 1 **Nesting Habitat**. To avoid disturbance of nesting and special-status birds, activities related to the project, including, but not limited to, vegetation removal, ground disturbance, and construction and demolition shall occur outside of the bird breeding season (typically February through August in the project region). If construction must begin within the breeding season, then a pre-construction nesting bird survey shall be conducted no more than 3 days prior to initiation of ground disturbance and vegetation removal activities. The nesting bird pre-construction survey shall be conducted within the Project Boundary, including a 300-foot buffer (500-foot for raptors), on foot, and within inaccessible areas (i.e., private lands) afar using binoculars to the extent practical. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in the area. If nests are found, an avoidance buffer (which is dependent upon the species, the proposed work activity, and existing disturbances associated with land uses outside of the site) shall be determined and demarcated by the biologist with bright orange construction fencing, flagging, construction lathe, or other means to mark the boundary. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No ground disturbing activities shall occur within this buffer until the avian biologist has confirmed that breeding/nesting is completed and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist.

c) ***NO IMPACT***. The National Wetlands Inventory (NWI) was reviewed to determine if any wetland and/or non-wetland waters had been previously documented and mapped on or in the vicinity of the proposed survey area (United States Department of the Interior, Fish and Wildlife Service 2015). There is one potential jurisdictional water or wetland that is within the vicinity of the project. Matadero Creek, a riverine wetland resource, is located approximately 650 feet (approximately one eighth of a mile) south of the 3045 Park Boulevard project site. However, the proposed project would not involve the direct removal, filling, hydrological interruption, or other means to the bed, bank, channel or adjacent upland area of Matadero Creek. No impact would occur and no further analysis of this issue in an EIR is warranted.

e) ***POTENTIALLY SIGNIFICANT UNLESS MITIGATION INCORPORATED***. According to the City's CEQA thresholds, a significant impact would occur if the project would conflict with the City's Tree Preservation Ordinance. The purpose of the City of Palo Alto Tree Preservation and

Management Ordinance (PAMC Chapter 18.10) is to promote the health, safety, welfare, and quality of life of the residents of the city through the protection of specified trees located on private property within the city, and the establishment of standards for removal, maintenance, and planting of trees. In establishing these procedures and standards, it is the City's intent to encourage the preservation of trees.

Under the Tree Preservation and Management Ordinance, discretionary development approvals for property containing protected trees must include appropriate conditions providing for the protection of such trees during construction and for maintenance of the trees thereafter. "Protected tree" is defined as any tree of the species *Quercus agrifolia* (Coast Live Oak) or *Quercus lobata* (Valley Oak).

The 2747 Park Boulevard site contains one *Quercus lobata* (Valley Oak) tree, which is protected under the Palo Alto Tree Preservation Ordinance. The oak tree would not be removed as part of the proposed project. However, in order ensure that the tree is protected during demolition of the existing building, which wraps around the tree, and during construction of the proposed project, Mitigation Measure BIO-2 is required.

Mitigation Measure

The following mitigation measure would be required to reduce impacts to protected trees to a less than significant level. With implementation of Mitigation Measure BIO-2, impacts would be less than significant and no further analysis of this issue in an EIR is warranted. This measure will be carried over into the EIR's Executive Summary and Mitigation Monitoring and Reporting Program.

BIO-2 **Valley Oak (*Quercus lobate)* Tree Protection**. To avoid disturbance of the protected valley oak tree on the 2747 Park Boulevard site, grading, site preparation and construction activities including, but not limited to, vegetation removal, pavement removal, ground disturbance, demolition and construction and shall adhere to the Palo Alto Tree Technical Manual. Any proposed trench or form work within Tree Protection Zone requires approval from Public Works Operations. In addition, an arborist-prepared tree protection plan that includes site-specific procedures for grading, demolition and construction activities, as well as standards for development and landscaping within the root zone, shall be prepared for City review and approval prior to issuance of demolition or building permits.

f) ***NO IMPACT***. The proposed project would not occur within an approved Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No further analysis of this issue in an EIR is warranted.

	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?	☐	☐	■	☐
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 formal cemeteries?	☐	☐	■	☐

a) ***NO IMPACT***. The project site is currently developed with structures and paving. A significant impact would occur if the proposed project would destroy a cultural resource that is recognized by City Council resolution, affect resource listed on the City's Historic Inventory, or eliminate important examples of major periods of California history of prehistory. According to the City of Palo Alto Master List of Structures on the Historic Inventory, City of Palo Alto Historic District Map, and Cultural Resources Chapter in the Comprehensive Plan, the project sites and adjacent properties do not contain historic resources defined under the California Public resources Code § 15064.5. In addition, the project sites do not contain resources recognized by City Council resolution. The existing office building on 2747 Park Boulevard was built in 1960 (Property Shark, 2015). The existing building on 3045 Park Boulevard was built in 1987 (Property Shark, 2015). Though the 2747 Park Boulevard building is over 50 years in age, it is a one-story commercial building in a common style for the period and would not be considered a historic resource. No impact would occur and further analysis of this issue in an EIR is not warranted.

b-d) ***LESS THAN SIGNIFICANT IMPACT***. The project site is within a highly urbanized area. The sites are currently developed with structures and parking areas. However, there is potential for undiscovered archaeological resources. According to the Archaeologically Sensitive Areas Map in the Cultural Resources element, the project site is within a moderate sensitivity area (City of Palo Alto Comprehensive Plan Update, 2014). The proposed project would not involve below-grade structures or deep excavation beyond the minimum needed for foundations and utility trenching. Both sites have been previously graded and disturbed during construction of the existing surface parking lots and structures. New ground disturbance would not be substantially below the level of past disturbance. As a result, the likelihood of encountering undisturbed subsurface resources is relatively low. In the unlikely event that such resources are unearthed during construction, applicable regulatory requirements pertaining to the handling

and treatment of such resources would be followed. If archaeological or paleontological resources are identified, as defined by Section 21083.2 of the Public Resources Code, the site would be required to be treated in accordance with the provisions of Section 21083.2 of the Public Resources Code as appropriate. If human remains are unearthed, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. Impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

	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) ***NO IMPACT***. The project sites are not located within an area that has been identified as having a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map (State of California Department of Conservation, 2015). No known fault lines are located on the site. As a result, the project site would not be subject to ground rupture. No impact would occur and further analysis of this issue in an EIR is not warranted.

a.ii) ***LESS THAN SIGNIFICANT IMPACT***. As with any site in the Bay Area region, the project site is susceptible to strong seismic ground shaking in the event of a major earthquake. Nearby active faults include the San Andreas Fault, the Stanford Fault, the Monte Vista Fault, and the Hayward Fault. These faults are capable of producing strong seismic ground shaking at the project site. With modern construction and adherence to the geology and soil provisions of the California Building Code (CBC), which sets forth seismic design standards (Ch. 16, 18) and geohazard study requirements (Ch. 18), impacts would be less than significant and no further analysis is needed in an EIR.

a.iii) ***LESS THAN SIGNIFICANT IMPACT***. Liquefaction is a condition that occurs when unconsolidated, saturated soils change to a near-liquid state during groundshaking. The project site is within a potential liquefaction zone as identified on the California Emergency Management Agency Earthquake Hazard map (State of California Department of Conservation, 2015). Therefore, the proposed project would be required to comply with applicable provisions for construction in a liquefaction zone of the most recently adopted version of the CBC. Adherence to Chapter 18, which addresses soil hazards including liquefaction, of the CBC requirements would ensure that liquefaction impacts would be less than significant.

a.iv) ***LESS THAN SIGNIFICANT IMPACT***. Earthquakes can trigger landslides that may cause injuries and damage to many types of structures. Landslides are typically a hazard on or near slopes or hillside areas, rather than generally level areas like the project sites and vicinity. According to the California Seismic Hazard Zones map, the project site is not located within an earthquake-induced landslide hazard zone (California Department of Conservation, 2006). Impacts would be less than significant and no further analysis is needed in an EIR.

b) ***LESS THAN SIGNIFICANT IMPACT***. The project site is developed and generally level, which limits the potential for substantial soil erosion. The grading and excavation phase when soils are exposed has the highest potential for erosion. Ground-disturbing activities that would occur with implementation of the proposed project would include site-specific grading for foundations, building pads, access roads, and utility trenches. Temporary erosion could occur during project construction. The project is required to comply with Chapter 16.28.120 of the PAMC, which states that an estimate of the cost of implementing and maintaining all interim erosion and sediment control measures must be submitted in a form acceptable to the city engineer. The applicant may propose the use of any erosion and sediment control techniques in the interim plan provided such techniques are proven to be as or more effective than the equivalent best management practices contained in the Manual of Standards.

In addition, the proposed project would be required to comply with erosion control standards administered by the San Francisco Bay Regional Water Quality Control Board (RWQCB) through the National Pollutant Discharge Elimination System (NPDES) permit process, which requires implementation of nonpoint source control of stormwater runoff. Such controls would

be included as best management practices (BMPs) identified in Stormwater Pollution Prevention Plans (SWPPP) for future development at the project site.

The California Stormwater Quality Association (CASQA) *BMP Handbook for Construction (2009)* is typically used for guidance in drafting project-specific BMPs for erosion control, amongst other stormwater issues. For example, CASQA Measure WE-1 (Wind Erosion Control) identifies a variety of BMPs to stabilize exposed surfaces and minimize activities that suspend to track dust particles (CASQA, 2009). This is commonly achieved by applying soil binders or water to disturbed surfaces.

In addition, the Air Quality Management District (AQMD) with jurisdiction over the project site, the Bay Area AQMD, specifies measures that are aimed at air quality control but also address the minimization or avoidance of erosion and topsoil lost. The Conservation Element (Section 9.6.3) of the BAAQMD CEQA Guidelines includes the following BMPs relevant to the avoidance of erosion and topsoil degradation:

- *Include PM_{10} control measures as conditions of approval for subdivision maps, site plans, and grading permits;*
- *Require subdivision designs and site planning to minimize grading and use landform grading in hillside areas; and*
- *Condition grading permits to require that graded areas be stabilized from the completion of grading to the commencement of construction (BAAQMD, 2012).*

With compliance with above listed requirements, impacts of the proposed development associated with soil erosion and the loss of topsoil would be less than significant. Therefore, further investigation in an EIR is not warranted.

c, d) ***LESS THAN SIGNIFICANT IMPACT***. Per the Geology, Soils, and Seismicity Chapter of the Comprehensive Plan Update, the project site is located in the western part of Palo Alto, where the prevalent soil types include Alo-Altamont, Zepplin-McCoy, and Zamora-Pleasanton complex soils, and Montavista Clay Loam soils. These soils are generally formed on slopes from 10 to 30 percent and most are moderately well- to well-drained. Loam and clay loam soils of the Zamora-Pleasanton association are known to be expansive in places. A number of widely used treatments are available to mitigate expansive soils, including soil grouting, recompaction, and replacement with a non-expansive material. CBC Section 1808.6 requires special foundation design for buildings constructed on expansive soils. If the soil is not removed or stabilized, then foundations must be designed to prevent uplift of the supported structure or to resist forces exerted on the foundation due to soil volume changes or shall be isolated from the expansive soil. Compliance with CBC requirements would ensure protection of structures and occupants from impacts related to expansive soils.

Lateral spreading is the horizontal movement or spreading of soil toward an open face. When soils located on a sloping site liquefy, they tend to flow downhill. The potential for failure from lateral spreading is highest in areas where the groundwater table is high and where relatively soft, where recent alluvial deposits exist, and in areas with liquefaction risks. The proposed project is located in an area where there is liquefaction risk (State of California Department of Conservation, 2015). However, the project site is flat. Therefore, the potential for lateral

spreading is low. In addition, the proposed project would be required to comply with applicable provisions for construction related to potential soils hazards in the most recently adopted version of the CBC and the City's building regulations. The project is not located on a geologic unit or soil that is unstable. With compliance with CBC and PAMC requirements, impacts associated with unstable and expansive soils would be less than significant. The proposed project would not expose people or property to major geologic hazards that cannot be mitigated through the use of standard engineering design and seismic safety techniques.

Under the City's CEQA thresholds, a significant impact would also occur if the project would result in siltation. As discussed in Section IX, *Hydrology and Water Quality,* the proposed project would not result in substantial siltation. Therefore, further investigation in an EIR is not warranted.

e) ***NO IMPACT***. The proposed projects would be connected to the local wastewater treatment system. Septic systems would not be used. No impact would occur and further analysis of this issue in an EIR is not required.

	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?	☐	☐	■	☐

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. Climate change is the result of numerous, cumulative sources of greenhouse gases (GHGs), gases that trap heat in the atmosphere, 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 CH4 results from off-gassing associated with agricultural practices and landfills. Man-made GHGs, many of which have greater heat-absorption potential than CO2, include fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFC), and sulfur hexafluoride (SF_6) (Cal EPA, 2015).

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, 2015). 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 on 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 (State CEQA Guidelines, Section 15355).

The significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional GHG reduction plan (such as a Climate Action Plan). Neither the State nor the City of Palo Alto have adopted GHG emissions thresholds, and no GHG emissions reduction plan with established GHG emissions reduction strategies has yet been adopted. The BAAQMD adopted significance thresholds for GHGs in June 2010. For land use development projects (residential, commercial, industrial), the threshold is compliance with a qualified GHG Reduction Strategy; or annual emissions less than 1,100 metric tons per year (MT/year) of CO_2E; or 4.6 MT CO_2E/SP/year (residents + employees).[4]

a-b) ***LESS THAN SIGNIFICANT IMPACT***. The project's proposed construction activities, energy use, daily operational activities, and mobile sources (traffic) would generate GHG emissions. CalEEMod was used to calculate emissions resulting from project construction and long-term operation. Project-related construction emissions are confined to a relatively short period of time in relation to the overall life of the proposed project. Therefore, construction-related GHG emissions were amortized over a 30-year period to determine the annual construction-related GHG emissions over the life of the project.

GHG emissions associated with construction emissions and operational emissions from the proposed project were estimated using CalEEMod (see Appendix B for model output) and are discussed below:

[4] On March 5, 2012 the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the air quality and greenhouse gas emissions thresholds contained in the BAAQMD's CEQA Guidelines. In light of the court's order, BAAQMD recommends that lead agencies determine appropriate GHG thresholds of significance based on substantial evidence in the record. For the purposes of this analysis, the BAAQMD June 2010 thresholds will be used.

Construction Emissions

As shown in Table 6, emissions of CO_2E units generated by construction of the proposed project are estimated at 506 metric tons. When amortized over a 30-year period (the assumed life of the project), CO_2E construction emissions would be approximately 17 metric tons CO_2E per year.

Table 6
Estimated Construction GHG Emissions

	Annual Emissions (Carbon Dioxide Equivalent (CO_2E))
Total	506 metric tons
Amortized over 30 years	**17 metric tons per year**

See Appendix B for CalEEMod Results.

Operational Indirect and Stationary Direct Emissions

Operational Emissions include area sources (consumer products, landscape maintenance equipment, and painting), energy use (electricity and natural gas), solid waste, electricity to deliver water, and transportation emissions and are shown in Table 7. In accordance with AB 939, it was assumed that the proposed project would achieve at least a 50% waste diversion rate. CalEEMod does not calculate N_2O emissions related to mobile sources. As such, N_2O emissions were calculated based on the proposed project's VMT using calculation methods provided by the California Climate Action Registry General Reporting Protocol (January 2009).

As shown in Table 7, total emissions associated with the new office buildings are estimated at about 863 metric tons per year. Thus, GHG emission associated with the proposed project would not exceed the 1,100 metric tons CO_2E per year threshold of significance and impacts would be less than significant.

Table 7
Combined Annual Emissions of Greenhouse Gases

Emission Source	**Annual Emissions (CO_2e)**
Project Construction	17 metric tons
Project Operational	
Area	<0.01 metric tons
Energy	270 metric tons
Solid Waste	26 metric tons
Water	27 metric tons
Project Mobile	
CO_2 and CH_4	495 metric tons
N_2O	28 metric tons
Project Total	**863 metric tons**

Sources: See Appendix B for calculations and for GHG emission factor assumptions.

Senate Bill 375, signed in August 2008, requires the inclusion of sustainable communities' strategies (SCS) in regional transportation plans (RTPs) for the purpose of reducing GHG emissions. The Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) adopted an SCS that meets greenhouse gas reduction targets. Plan Bay Area 2040 is a state-mandated, integrated long-range transportation, land-use and housing plan that would support a growing economy, provide more housing and transportation choices and reduce transportation-related pollution in the nine-county San Francisco Bay Area (Plan Bay Area, 2015). The SCS builds on earlier efforts to develop an efficient transportation network and grow in a financially and environmentally responsible way. Plan Bay Area 2040 would be updated every four years to reflect new priorities. A goal of the SCS is to "reduce vehicles miles traveled (VMT) per capita by 10%" (Plan Bay Area, 2015). The proposed project would be infill development that is accessible for pedestrians, bicyclists, and public transit users (approximately 0.3 miles to the Caltrain Station at California Avenue and the Santa Clara Valley Transportation Authority Bus Line 89), thereby reducing vehicle trips. Therefore, the project would be consistent with this goal. Another goal of the SCS is to boost the number or trips taken without a car across the Bay Area by 10% and reduce vehicle miles traveled per capita by 10%. The proposed project would include bicycle parking spaces, and Park Boulevard is a bike-friendly roadway with Class II bike lanes (Palo Alto Bicycle Transportation Plan, 2003). With Caltrain and Santa Clara Valley Transportation Authority Bus Lines within ½ -mile of the project site, the proposed project would help reduce trips taken with a car and vehicle miles traveled. With viable alternative transportation options, people would be encouraged to drive less to the project site.

According to *The Impacts of Sea-Level Rise on the California Coast*, prepared by the California Climate Change Center (CCCC) (May 2009), climate change has the potential to induce sea level rise in the coming century. The rising sea level increases the likelihood and risk of flooding. However, the project site is located approximately 3 miles from the San Francisco Bay and approximately 15 miles from the coast of the Pacific Ocean and is not at risk for inundation from sea level rise (California Energy Commission, 2015).

As mentioned above, according to BAAQMD GHG significance thresholds, a proposed project's GHG emissions would be less than significant if it is less than 1,100 metric tons per year (MT/yr) of CO2e; or 4.6 MT CO2e/SP/yr (residents + employees) and the proposed project is consistent with an adopted regional GHG reduction plan such as Plan Bay Area 2040. The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs and would be consistent with the City of Palo Alto and objectives of the RTP/SCS, AB 32, SB 97 and SB 375. Therefore, any impacts would be less than significant.

	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, b) ***POTENTIALLY SIGNIFICANT IMPACT***. The proposed project would involve the construction of two new office buildings. Research and development uses may involve the use, transport, and storage of hazardous materials on-site and may create a risk to the public in upset conditions. Impacts may be potentially significant and will be analyzed further in an EIR.

c) ***NO IMPACT***. El Carmelo Elementary School, located approximately one mile southeast on Loma Verde Avenue, is the closest existing school to the project site. No schools are within ¼ mile of the project site. No impact would occur and further analysis of this issue in an EIR is not required.

d) ***POTENTIALLY SIGNIFICANT IMPACT***. The following databases were checked (July 16, 2015) for known hazardous materials contamination at the project site:

- *GeoTracker (California State Water Resources Control Board): list of leaking underground storage tank sites*
- *EnviroStor (California Department of Toxic Substances Control): list of hazardous waste and substances sites*
- *Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database*

According to the GeoTracker database, the project site does appear on a hazardous material site list compiled pursuant to Government Code Section 65962.5. A leaking underground storage tank (LUST) cleanup site is located at 200 Page Mill Road, approximately1, 000 feet west of the project site. There are five other cleanup sites, one of which is on the project site at 2785 Park Boulevard. The other four are located at 195 Page Mill Road, northeast on Alma Street, 3101 Park Boulevard, and 395 Page Mill Road. In addition, there are a few closed LUST cleanup sites and other cleanup sites. Impacts related to potential soil and/or groundwater contamination at the sites are potentially significant and will be analyzed further in an EIR. According to the City's CEQA thresholds, a significant impact would also occur if the proposed project would construct a school on a property that is subject to hazardous materials contamination, emissions, or accidental release. The proposed project does not involve construction of a school. This impact would be less than significant and further analysis of this issue in an EIR is not warranted.

e, f) ***NO IMPACT***. The Palo Alto Airport of Santa Clara County (PAO) is the closest airport to the project site. PAO is a 103-acre facility with a single run way, parallel taxiway, and a building area located approximately 3 miles east of the project site. The airport primarily serves small general aviation aircraft. The project site is located entirely outside of the airport safety and traffic pattern zones (Palo Alto Airport Master Plan Report, 2006). The project is not located within the vicinity of a private airstrip. Therefore, no impact related to airport safety would occur and further analysis in an EIR is not warranted.

g) ***LESS THAN SIGNIFICANT IMPACT***. The proposed project does not involve the development of structures that could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. No streets would be closed, rerouted or substantially altered. The project involves the construction of new entryways to the project site, which would be required to be reviewed and approved by the

Palo Alto Fire Department to ensure safety emergency access is provided. A less than significant impact would occur and further analysis in an EIR is not warranted.

h) ***NO IMPACT***. The project site is within an urban area in Palo Alto. According to the Comprehensive Plan, the project site is not adjacent to or within the vicinity to wildlands. As a result, there would be no risk of exposing people or structures to a significant risk of loss, injury or death involving wild land fires. Further analysis of this issue in an EIR is not warranted.

	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?	☐	☐	■	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY				
-- Would the project:				
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?	☐	☐	■	☐
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, e, f) ***LESS THAN SIGNIFICANT IMPACT***. The existing site is currently developed and paved. The project is required to comply with Chapter 16.11 of the PAMC, which addresses stormwater pollution prevention. Additionally, as part of Section 402 of the Clean Water Act, the U.S. Environmental Protection Agency has established regulations under the National Pollution Discharge Elimination System (NPDES) program to control both construction and operation (occupancy) storm water discharges. In California, the State Water Quality Control Board administers the NPDES permitting program and is responsible for developing permitting requirements. The project would be required to comply with the NPDES permitting system. Under the conditions of the permit, the project applicant would be required to eliminate or reduce non stormwater discharges to waters of the nation, develop and implement a Storm Water Pollution Prevention Plan (SWPPP) for the project construction activities, and perform inspections of the storm water pollution prevention measures and control practices to ensure conformance with the site SWPPP. The state permit prohibits the discharge of materials other than storm water discharges, and prohibits all discharges that contain a hazardous substance in excess of reportable quantities established at 40 Code of Federal Regulations (CFR) 117.3 or 40 CFR 302.4. The state permit also specifies that construction activities must meet all applicable provisions of Sections 30 and 402 of the Clean Water Act (CWA). Conformance with Section 402 of the CWA would ensure that the proposed project does not violate water quality standards or waste discharge requirements substantially decrease groundwater or interfere with groundwater recharge. Impacts would be less than significant. Further analysis of this issue in an EIR is not warranted.

b) ***LESS THAN SIGNIFICANT IMPACT***. As discussed in Section XVII, *Utilities and Service Systems*, the proposed project would receive its water from the San Francisco Public Utilities Commission (SFPUC). The Regional Water System collects water from the Tuolumne River in

the Sierra Nevada and from protected local watersheds in the East Bay and Peninsula. Development under the proposed project does not include installation of new groundwater wells, or use of groundwater from existing wells. Therefore, development under the proposed project would not result in a net deficit in aquifer volume or a lowering of the groundwater table. The project would not result in an exceedance of safe yield or a significant depletion of groundwater supplies. Impacts related to groundwater would be less than significant. Further analysis of this issue in an EIR is not warranted.

c, d) ***LESS THAN SIGNIFICANT IMPACT***. According to the City's CEQA thresholds, a significant impact would occur if the project would cause bank instability. The proposed project would not alter the course of a stream or river and would not cause stream bank instability. Matadero Creek is less than a mile to the south of the proposed project site and does not flow through or adjacent to the site. The area is currently developed, and construction of the proposed project would not alter the course of this creek or any other stream or river (no other surface water features are identified in the project area). The area is largely paved, and proposed development would not introduce new paved areas to the extent that the rate or amount of surface runoff would substantially increase.

The project site is connected to an existing stormwater drainage system located in the City of Palo Alto Matadero Creek Watershed. Stormwater runoff in the project area is currently flowing directly to Matadero Creek and eventually to the San Francisco Bay. Both project sites are currently fully developed and paved with minimal amounts of landscaping. The proposed projects would not increase the amount of impervious surface area compared to existing conditions. With project development, both project sites would have a landscaping coverage of 24% of the sites. Therefore, the amount of impervious surfaces would be slightly reduced compared to existing conditions, meaning that additional stormwater percolation may occur on site and stormwater runoff volumes would incrementally decrease.

In addition, the City of Palo Alto is a participating agency in the Santa Clara Valley Urban Runoff Pollution Prevention Program ("Program"). The City must meet the provisions of the Municipal Regional Stormwater Permit by ensuring that new development and redevelopment mitigate water quality impacts to stormwater runoff both during the construction and operation of projects. The Program's Permit Provision C.3 contains requirements for controlling the potential impacts of land development on stormwater quality and flow. Projects that create or replace 10,000 square feet or more of impervious surface must include appropriate site design measures, pollutant source controls and treatment control measures. Projects that produce increases in runoff peak flows, volumes and durations that may cause erosion in downstream receiving water must also include hydromodification control measures. The proposed project would involve replacing more than 10,000 square feet of impervious surfaces and would be subject to these requirements. Development that could be facilitated by full buildout would not introduce new surface water discharges, would not substantially increase runoff volumes, and would not result in flooding on- or off-site. Impacts would be less than significant and further investigation in the EIR is not warranted.

g-i) ***LESS THAN SIGNIFICANT IMPACT***. Most of Palo Alto is within Flood Zone "X" according to the Federal Emergency Management Agency (FEMA). Flood Zone X describes as an area either lying outside the 100-year flood limit and inside the 500-year flood limit, or as lying

within the 100-year flood limit but shallow enough to not represent a special hazard. The project sites are located within Flood Zone X and are not within a 100-year flood hazard area (FEMA, 2015). The proposed project would not involve the construction of housing. The project would involve the development of two new office buildings for research and development uses. The project would not expose people or structures to a significant loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam. Impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

j) ***LESS THAN SIGNIFICANT IMPACT***. The project site is located approximately 3 miles from the San Francisco Bay and approximately 15 miles from the coast of the Pacific Ocean. The risk of a tsunami is negligible due to the distance from the Pacific Ocean. According to the City of Palo Alto's Natural and Urban Environment and Safety Element, mudflows and seiches are not identified as issues for the city. In addition, the nearest water of body that could experience a seiche event is the San Francisco Bay, and it is not anticipated that a seiche in the Bay would have potential to affect the project site. The project site is flat and surrounded by commercial development away from crests and very steep ridges. Therefore, the project site is located in a low hazard area for tsunami, seiche, and mudflow. Impacts would be less than significant. Further analysis of this issue in an EIR is not warranted.

	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, c) ***LESS THAN SIGNIFICANT IMPACT***. The proposed project consists of two new office buildings at two separate sites along Park Boulevard in a fully urbanized area of Palo Alto. Implementation of the proposed project would continue the existing commercial development pattern in the Plan Area, and would not cut off connected neighborhoods or land uses from each other. No new roads, linear infrastructure or other development features are proposed that would divide an established community or limit movement, travel or social interaction between established land uses. In addition, the project site is not covered by a habitat conservation plan

or natural community conservation plan. Impacts would be less than significant and no further analysis of these issues in an EIR is warranted.

b) ***LESS THAN SIGNIFICANT IMPACT.*** The project sites have a Comprehensive Plan use designation of Light Industrial. The Comprehensive Plan defines this category as "Wholesale and storage warehouses and the manufacturing, processing, repairing, and packaging of goods…Compatible residential and mixed use projects may also be located in this category." The project sites are zoned General Manufacturing (GM). The Palo Alto Municipal Code defines the GM District as providing "for light manufacturing, research, and commercial service uses. Office uses are very limited in order to maintain the district as a desirable location for manufacturing uses." The 3045 Park Boulevard project site also has an Automobile Dealership (AD) overlay. The GM(AD) combining district is intended "to create and maintain areas accommodating automobile dealerships primarily engaged in new and used automobile sales and service." The proposed project involves R&D/office uses and would be consistent with the land use designation and zoning designations for the sites. The sites are surrounded by office, residential, and mixed-use development, with no manufacturing uses adjacent; therefore, new office development on these sites would be consistent and compatible with the development and use pattern in this area of the Light Industrial District and GM zoning designation.

The Palo Alto zoning map identifies a 150-foot buffer around residential uses that are near commercially zoned sites. This buffer extends partially onto the 3045 Park Boulevard property, although no residential uses are actually located within 150 feet of the site. Sites within the 150-foot buffer are subject to special height and setback requirements, particularly a 35-foor height limit. The proposed building on the 3045 Park Boulevard property would be a maximum of 35 feet in height. The proposed buildings at both project sites would be consistent with PAMC height and setback requirements.

According to the City's CEQA thresholds, a significant impact would also occur if the proposed project would 1) substantially adversely change the type or intensity or existing or planned land use in the area; 2) be incompatible with adjacent land uses or with the general character of the surrounding area, including density and building height; or, 3) conflict with established residential, recreational, educational, religions, or scientific uses of an area. The proposed project involves R&D/office uses and is consistent with City zoning/development standards, including height and density. The project sites are surrounded by multi-family residential, mixed-use, and other commercial uses. The proposed R&D/office uses would not conflict with established uses in the area. All impacts with respect to land use and planning would be less than significant. Further analysis of these issues in an EIR is not warranted.

	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?	☐	☐	☐	■

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XI. MINERAL RESOURCES				
-- Would the project:				
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, b) ***NO IMPACT***. The project site and surrounding properties are part of an urbanized area with no current oil or gas extraction. According to the Natural Environment Element of the Comprehensive Plan, there are no policies relating to mineral resources because Palo Alto does not contain mineral deposits of regional significance (City of Palo Alto Comprehensive Plan, 2007). No mineral resource activities would be altered or displaced by the proposed project. No further analysis of this issue in an EIR is warranted.

	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?	☐	☐	☐	■

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XII. NOISE				
-- Would the project result in:				
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 and Vibration Fundamentals

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). The A-weighting scale is an adjustment to the actual sound power levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz).

Because of the logarithmic scale of the decibel unit, sound levels cannot be added or subtracted arithmetically. If a sound's physical intensity is doubled, the sound level increases by 3 dBA, regardless of the initial sound level. For example, 60 dBA plus 60 dBA equals 63 dBA. Where ambient noise levels are high in comparison to a new noise source, the change in noise level would be less than 3 dBA. For example, 70 dBA ambient noise levels are combined with a 60 dBA noise source the resulting noise level equals 70.4 dBA.

Noise that is experienced at any receptor can be attenuated by distance or the presence of noise barriers or intervening terrain. Sound from a single source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (or drops off) at a rate of 6 dBA for each doubling of distance. For acoustically absorptive, or soft, sites (i.e., sites with an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees), ground attenuation of about 1.5 dBA per doubling of distance normally occurs. A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by this shielding depends on the size of the object, proximity to the noise source and receiver, surface weight, solidity, and the frequency content of the noise source. Natural terrain features (such as hills and dense woods) and human-made features (such as buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dBA of noise reduction.

Vibration is a unique form of noise 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 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. Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel wheeled trains, and traffic on rough roads.

Regulatory Setting

The City's Comprehensive Plan Natural Environment Element includes goals and policies related to noise. This element establishes land use compatibility categories for community noise exposure (see Table 8). For residential land uses, noise levels up to 60 dBA Ldn are identified as generally acceptable and levels up to 75 dBA Ldn as conditionally acceptable noise levels. For office uses, noise levels up to 70 dBA Ldn are identified as normally acceptable and noise levels between 70 and 80 dBA Ldn are identified as conditionally acceptable.

Table 8
Palo Alto Land Use Compatibility for Community Noise Environments

Land Use Category	Exterior Noise Exposure L_{dn} or CNEL or dB		
	Normally Acceptable	Conditionally Acceptable	Unacceptable
Residential, Hotel and Motels	50-60	60-75	75+
Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds	50-65	65-80	80+
Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Churches	50-60	60-75	75+
Office Buildings, Business Commercial, and Professional	50-70	70-80	80+
Auditoriums, Concert Halls, and Amphitheaters	N/A	50-75	75+
Industrial, Manufacturing, Utilities, and Agriculture	50-70	75+	N/A

Source: City of Palo Alto Comprehensive Plan Update Noise Draft Existing Conditions Report, August 29, 2014

The Palo Alto Municipal Code regulates noise primarily through the Noise Ordinance, which comprises Chapter 9.10 of the Code, under Title 9, Public Peace, Morals and Safety. The Municipal Code contains additional specific and general provisions relating to noise. Most notably, the Municipal Code contains performance standards for Multiple Family, Commercial, Manufacturing and Planned Community Districts. For commercial and industrial properties, a violation occurs at an increase of eight or more decibels above the local ambient noise level at any point outside of the property plane.

Project Site Noise Environment

Like many urban areas, Palo Alto's noise environment is dominated by transportation-related noise, including car and truck traffic and trains. Highway 101 is the largest source of traffic noise in Palo Alto, with other highways and major roadways contributing as well. These include El Camino Real, the Oregon Expressway, the Foothill Expressway, Highway 280, Embarcadero Road, San Antonio Road, Middlefield Road, University Avenue, Page Mill Road, and Alma Street, among others. Noise along all of these roadways is generated by private cars, trucks, buses, and other types of vehicles. Caltrain also runs through the center of Palo Alto and makes significant contributions to the noise environment of the city. Air traffic makes only a modest contribution to the noise environment of Palo Alto.

Two noise measurements were taken on Tuesday, August 4, 2015 from 11:10 AM to 11:25 AM and from 11:35 AM to 11:50 AM. The results of these noise measurements are shown in Table 9. The primary noise measured during the study was automobile traffic. Secondary noise included pedestrians, Caltrain trains passing, and construction activity along Park Boulevard.

Table 9
Current Noise Levels

Measurement #	Location	Leq
1	West side of the 2747 Park Blvd site facing Park Blvd	67.9
2	West side of the 3045 Park Blvd site facing Park Blvd	63.5

Generally speaking, residential, education and medical uses are more sensitive to noise than are commercial and industrial activities. Noise sensitive uses ("sensitive receptors") are defined as those facilities including, but not limited to, areas containing residences, schools, hospitals, rest homes, long-term medical or mental care facilities, or any other land use areas deemed noise sensitive by the local jurisdiction. In between the 2747 Park Boulevard site and 3045 Park Boulevard site is the 2865 Park Boulevard and 195 Page Mill Road ("Park Plaza") project, which is under construction. The Park Plaza project will include up to 82 residential rental units on the second and third floors of a new four- to five-story mixed use building. Other sensitive receptors include residences approximately 200 feet to the northwest across Oregon Expressway and 200 feet to the northeast across the rail tracks and Alma Street.

Significance Thresholds

According to the City's CEQA thresholds, a significant impact would occur if the proposed project would:

a) Cause the average 24 hour noise level (Ldn) to increase by 5.0 decibels (dB) or more in an existing residential area, even if the Ldn would remain below 60 dB;
b) Cause the Ldn to increase by 3.0 dB or more in an existing residential area, thereby causing the Ldn in the area to exceed 60 dB;
c) Cause an increase of 3.0 dB or more in an existing residential area where the Ldn currently exceeds 60 dB;
d) Result in indoor noise levels for residential development to exceed an Ldn of 45 dB;
e) Result in instantaneous noise levels of greater than 50 dB in bedrooms or 55 dB in other rooms in areas with an exterior Ldn of 60 dB or greater; or

f) Generate construction noise exceeding the daytime background Leq at sensitive receptors by 10 dBA or more.

Vibration impacts would be significant if they exceed the following Federal Railroad Administration (FRA) thresholds:

- *65 VdB where low ambient vibration is essential for interior operations, such as hospitals and recording studios*
- *72 VdB for residences and buildings where people normally sleep, including hotels*
- *75 VdB for institutional land uses with primary daytime use, such as churches and schools*
- *95 VdB for physical damage to extremely fragile historic buildings*
- *100 VdB for physical damage to buildings*

Construction-related vibration impacts would be less than significant for residential receptors if they are below the threshold of physical damage to buildings and occur during the City's normally permitted hours of construction, as described above, because these construction hours are during the daytime and would therefore not normally interfere with sleep.

a) ***LESS THAN SIGNIFICANT IMPACT***. The main noise source on the project sites is traffic noise from adjacent roadways. The project sites are also adjacent to Caltrain tracks, and associated railway noise is audible from the project site. Table 9 shows the measured noise levels at the project site. The proposed project involves office uses which are not typically considered noise sensitive uses. Therefore, the proposed project would not expose additional on-site noise-sensitive uses to excessive noise. As shown on Table 9, measured noise levels on site were under 70 dBA. As shown in Table 8, this is within the normally acceptable range for commercial uses. Impacts would be less than significant. No further analysis of this issue in an EIR is warranted.

b) ***LESS THAN SIGNIFICANT IMPACT***. The proposed project would involve standard construction activities that are anticipated to result in some vibration that may be felt on properties in the immediate vicinity of the project site, as commonly occurs with construction projects.

As shown in Table 10, vibration levels would reach as high as about 87 VdB at the closest residences. For the adjacent residences within 25 feet, vibration levels could exceed the Federal Railroad Administration threshold of 72 VdB for residences and buildings where people normally sleep. However, in accordance with the PAMC, vibration-generating construction activity is limited to the hours of 8 AM to 6 PM Monday through Friday and 9 AM to 6 PM on Saturday. Construction is prohibited on Sundays and holidays (New year's day, Labor day, Martin Luther King day, Columbus day, Washington's birthday, Veteran's day, Memorial day, Thanksgiving day, Independence day, Christmas day). Therefore, construction would not be expected to occur during normal sleep hours and at nearby residential uses would be less than significant. In addition, vibration levels would not exceed 95 VdB and therefore no damage to adjacent structures would occur. No further analysis of this issue in an EIR is warranted.

Table 10
Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 ft (in/sec)	Approximate Lv† at 25 ft (VdB)	Approximate Lv† at 50 ft (VdB)	Approximate Lv† at 100 ft (VdB)
Large Bulldozer	0.089	87	81	75
Loaded Truck	0.076	86	80	74
Jack Hammer	0.035	79	73	67

Source: Federal Transit Administration, 2006.

c) ***LESS THAN SIGNIFICANT IMPACT***. Noise associated with operation of the proposed project may be periodically audible at adjacent uses. Noise events that are typical of commercial uses such as office buildings include automobile traffic and conversations, as well as noise typical of parking lots such as car alarms and car doors slamming. On-site operations are expected to also involve noise associated with rooftop ventilation, heating systems, heavy-duty truck deliveries, and trash hauling. These noise sources and levels would be similar to surrounding commercial development and would not result in a substantially increase compared to the existing commercial uses on-site.

Permanent project-related changes in noise would be primarily due to increases in traffic volumes on nearby street segments. For traffic-related noise, impacts would be significant if project-generated traffic results in exposure of sensitive receptors to unacceptable noise levels. Table 11 shows the significance thresholds for increases in traffic related noise levels caused by the project.

Table 11
Significance of Changes in Operational Roadway Noise Exposure

Ldn or Leq in dBA	
Existing Noise Exposure	**Allowable Noise Exposure Increase**
45-50	7
50-55	5
55-60	3
60-65	2
65-75	1
75+	0

Source: Federal Transit Administration, 2006.

The Federal Highway Administration's Traffic Noise Model (TNM), Version 2.5, was used to evaluate traffic-related noise conditions along the roadway segments in the vicinity of the project area. Projected future traffic volumes from the project's preliminary draft traffic studies were used to model future traffic noise (TJKM, 2015a; TJKM, 2015b).

Tables 12 provides traffic noise levels for the Existing, Existing plus Project, Cumulative without Project, and Cumulative with Project scenarios consistent with the project traffic study. These noise levels represent worst-case scenarios, which assume that no shielding (e.g., nearby buildings and trees) is provided between the traffic and modeled sensitive receptors and peak hour traffic volumes. Noise receptors were placed along Park Boulevard in the TNM model to simulate noise levels at the project site and nearby residences 50 feet from the road centerline.

As shown in the table, the proposed project would not result in traffic noise levels that would exceed FTA thresholds. In addition, the proposed project would not result in traffic noise levels that would cause an increase of 3 dBA or more at nearby residential areas. Therefore, the proposed project would not exceed the City's CEQA thresholds. Impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

Table 12
Estimated Roadway Noise with the Proposed Project

Receptors	Noise Level (dBA Leq1h)				Change in Noise Level		FTA Threshold	Above Threshold?
	Existing (1)	Existing Plus Project (2)	Cumulative (3)	Cumulative Plus Project (4)	Project Only (2-1)	Cumulative Growth + Projects (4-3)		
2747 Park Blvd (Project 1)	61.2	61.6	63.1	63.2	+0.4	+0.1	2	No
Adjacent Residences	60.0	60.4	62.1	62.2	+0.4	+0.1	2	No
3045 Park Blvd (Project 2)	60.6	60.8	62.6	62.6	+0.2	+0.0	2	No

Sources: Federal Highway Administration, TNM version 2.5; Rincon Consultants, 2015; TJKM 2015a, TJKM 2015b,.See Appendix C for modeling results.

d) ***LESS THAN SIGNIFICANT IMPACT***. The project would generate temporary noise increases during construction. Temporary noise increases would result from construction activities such as demolition, asphalt removal, grading, and excavation activities. Noise impacts are a function of the type of activity being undertaken and the distance to the receptor location. Nearby noise-sensitive land uses include residences located northeast and northwest of the 2747 Park Boulevard site and the residential uses under construction in between the two project sites. There are sensitive receptors approximately 25 to 200 feet from the project fence line. Table 13 identifies various construction equipment noise emission levels for different types of construction equipment at distances of 25, 50, and 200 feet from the source.

Table 13
Construction Equipment Noise Emission Levels

Equipment	Typical Noise Level (dBA 1-hour Leq)		
	25 ft from source	50 ft from source	200 ft from source
Backhoe	87	81	69
Dozer	91	85	73

Table 13
Construction Equipment Noise Emission Levels

Equipment	Typical Noise Level (dBA 1-hour Leq)		
	25 ft from source	50 ft from source	200 ft from source
Truck	94	88	76
Jack Hammer	94	88	76
Paver	95	89	77

Source: Federal Transit Administration, 2006.

Pursuant to Section 9.10.060 of the PAMC, noise associated construction activities are restricted to the hours of 8 AM to 6 PM Monday through Friday and 9 AM to 6 PM on Saturday. Construction is prohibited on Sundays and holidays (New year's day, Labor day, Martin Luther King day, Columbus day, Washington's birthday, Veteran's day, Memorial day, Thanksgiving day, Independence day, Christmas day). Construction, demolition or repair activities during those hours must meet the following standards:

- *No individual piece of equipment shall produce a noise level exceeding 110 dBA at a distance of 25 feet. If the device is housed within a structure on the property, the measurement shall be made out-side the structure at a distance as close to 25 feet from the equipment as possible.*
- *The noise level at any point outside of the property plane of the project shall not exceed 110 dBA.*
- *The holder of a valid construction permit for a construction project in a non-residential zone shall post a sign at all entrances to the construction site upon commencement of construction , for the purpose of informing all contractors and subcontractors, their employees, agents, materialmen and all other persons at the construction site, of the basic requirements of this chapter.*

Construction noise impacts would be temporary, and construction contractors would be required to comply with PAMC requirements restricting hours of excessive noise generation. Therefore, the project would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. Impacts would be less than significant. No further analysis of this issue in an EIR is warranted.

e, f) ***NO IMPACT***. The Palo Alto Airport of Santa Clara County (PAO) is the closest airport to the project site. According to the Comprehensive Plan, air traffic makes only a modest contribution to the noise environment of Palo Alto. PAO is a 103-acre facility with a single run way, parallel taxiway, and a building area located approximately 3 miles east of the project site. The airport primarily serves small general aviation aircraft. The project is not located within the vicinity of a private airstrip. At the nearest points within city limits, Palo Alto is located approximately 2.6 miles to the west of Moffet Federal Airfield, 6 miles to the southeast of San Carlos Airport, 10 miles to the northwest of the San Jose International Airport, 15 miles to the southeast of San Francisco International Airport, and 17 miles to the south of Oakland International Airport. Although Palo Alto does receive some noise from aircraft using these facilities, the Palo Alto city limit does not fall within the airport land use planning areas/airport influence areas, runway protection zones, or the identified noise contours of any airport other than Palo Alto Airport. The project site is located entirely outside of the airport safety and traffic

pattern zones (Palo Alto Airport Master Plan Report, 2006). No impact would occur and further analysis of this issue is not warranted in an EIR.

	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) ***LESS THAN SIGNIFICANT IMPACT***. In addition to the threshold under checklist item (a) above, according to the City's CEQA thresholds, the project would result in a significant impact if it would cumulatively exceed regional or local population projections or would create an imbalance between employed residents and jobs. The proposed development would not involve new residential units and, therefore, would not directly generate population growth. Therefore, the proposed project would not exceed regional or local population projections.

The proposed project would involve commercial uses, which would result in the generation of additional employment opportunities. The proposed project would generate an estimated 483 jobs (358 employees at 2747 Park Boulevard and 125 employees at 3045 Park Boulevard).[5]. As discussed in the City's Comprehensive Plan 2015-2023 Housing Element (adopted November 2014), the City has a jobs/housing imbalance skewed to the jobs side of the ratio. The proposed project would contribute to this imbalance. Recent estimates put the current jobs/housing balance at 3.05 jobs per employed resident. This trend requires the City to import most of its workers to meet the needs of business and industry, indicating in a large unmet need for worker housing in the City. The Housing Element as well as amendments to the City's Zoning code have attempted to address the jobs/housing imbalance by allowing greater densities in transit areas, allowing mixed-use residential developments, and providing density bonuses for projects with affordable housing. The projects sites have a Comprehensive Plan land use designation of Light Industrial and are zoned for manufacturing. The proposed project is consistent with the use designations for the sites. Though the proposed project would adversely affect the jobs/housing ratio, the project would not substantially impact the ratio. The project

[5] *An estimated employment density rates of 466 square feet per employee was used for this analysis. Employment density rates from the Southern California Association of Governments (2001) were used as no city or county rates were available.*

involves infill development on sites designated for commercial and industrial uses. Impacts would be adverse, but less than significant. No further analysis of this issue in an EIR is warranted.

b, c) ***NO IMPACT***. There are no housing units on the project site or people residing on the project site in any form of temporary housing. Therefore, the project would not displace any existing housing units or people. No further analysis of this issue in an EIR is warranted.

	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) ***LESS THAN SIGNIFICANT IMPACT***. Fire protection is provided by the City of Palo Alto Fire Department (PAFD). The Fire Department provides fire suppression, paramedic ambulance service, search and rescue, fire prevention inspections/permits, public fire education programs, emergency preparedness planning and other services based on community needs. The proposed project would adhere to the conditions of approval set forth by the PAFD.

The fire station closest to the two project sites is Fire Station 2, located at 2675 Hanover Street, approximately less than a mile west of the two project sites. The sites are within the existing service area of the PAFD and onsite construction would comply with applicable Fire Code requirements. New fire protection facilities would not have to be built to serve the project (personal communication, Gordon Simpkinson, Plan Checker, Palo Alto Fire Department, 07/14/2015). With the continued implementation of existing practices of the City, including

compliance with the California Fire Code and the Uniform Building Code, the proposed project would not significantly affect community fire protection services and would not result in the need for construction of fire protection facilities. No further analysis of this issue in an EIR is warranted.

a (ii) ***LESS THAN SIGNIFICANT IMPACT***. Police protection is provided by the Palo Alto Police Department (PAPD). The closest police station is located at 275 Forest Avenue, which is approximately 2 miles from the project site. The project sites are within the PAPD's service area. The proposed project would not create the need for new or expanded police protection facilities (personal communication, Craig Lee, Sergeant, Palo Alto Police Department, 09/04/2015). Impacts would be less than significant and no further analysis of this issue in an EIR is warranted.

a (iii) ***NO IMPACT***. The proposed project would involve the construction of two new office buildings. The proposed project would not involve any new residential uses; therefore, of the proposed project would not directly increase the number of school-aged children in the area. The proposed project would not result in the need for new or physically altered school facilities. No impacts to public schools would occur and no further analysis of this issue in an EIR is warranted.

a (iv) ***NO IMPACT***. Refer to Section XV, *Recreation.*

a (v) ***LESS THAN SIGNIFICANT IMPACT***. Library services are provided by the Palo Alto City Library (PACL). The closest library branch is College Terrace located at 2300 Wellesley St. Palo Alto, CA 94306, which is less than a mile away from the project site. The proposed project would not directly generate substantial population growth and therefore would not result in the need for new library facilities.

Impacts to other public facilities (e.g., sewer storm drains and roadways) are discussed in Sections XVI (Transportation/Traffic) and Section XVII (Utilities and Public Services) of this Initial Study. Impacts would be less than significant. No further analysis of this issue in an EIR is warranted.

	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?	☐	☐	☐	■

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XV. RECREATION				
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, b) ***NO IMPACT***. The City owns and operates approximately 36 parks and preserves, comprising 157 acres of urban parks and 3,744 acres of open space (City of Palo Alto Urban Water Management Plan). The park closest to 2747 Park Boulevard is Jerry Bowden Park, 0.4 miles northeast of the project site. The park closest to 3045 Park Boulevard is Boulware Park, 0.4 miles southwest of the project site. The City's estimated population is 66,932 residents. Therefore, the ratio of public parks to residents in the City is 58 acres of parkland for every 1,000 residents, which is greater than the standard ratio of 3 acres of parkland for every 1,000 residents used by the Quimby Act.

The proposed project would not directly affect existing or planned parks. Additionally, development of the proposed project would not directly add residents to the total City population (refer to Section XIII, *Population and Housing*). The parkland ratio would remain around 58 acres per 1,000 residents after development of the proposed project. Therefore, the project would not measurably substantially alter citywide demand for parks. No impacts to parks or recreational facilities would occur and no further analysis of this issue in an EIR is warranted.

	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?	■	☐	☐	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC				
-- Would the project:				
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, b, d, e, f) ***POTENTIALLY SIGNIFICANT IMPACT.*** According to the City's CEQA thresholds, in addition to the thresholds in the checklist above, significant impacts would occur if the proposed project would:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);
- Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;
- Result in inadequate parking capacity that impacts traffic circulation and air quality;
- Cause queuing impacts based on a comparative analysis between the design queue length and the available queue storage capacity;
- Impede the development or function of planned pedestrian or bicycle facilities;
- Impede the operation of a transit system as a result of congestion; or,
- Create an operational safety hazard.

The City's thresholds also establish certain performance standards for intersections and freeway segments. The proposed project would increase the amount of commercial development on the project sites and therefore increase traffic compared to existing conditions. Trips generated as a

result of the proposed project have the potential to impact local and regional intersections and roadway segments and contribute to cumulative traffic increases. The proposed project may also conflict with applicable plans and policies. The project sites are adjacent to transit facilities, bicycle facilities, and pedestrian sidewalks. Impacts to these systems, the local circulation system, and parking are potentially significant and will be analyzed further in an EIR. In addition, impacts related to traffic safety hazards are potentially significant and will be analyzed further in an EIR.

c) ***NO IMPACT***. The Palo Alto Airport is located approximately three miles east of the project site. The project consists of the construction of two new office buildings that would be no more than 48 feet or three stories in height and 35 feet or two stories in height. The proposed project would not affect airport operations, alter air traffic patterns conflict with established Federal Aviation Administration (FAA) flight protection zones. No impact would occur and further analysis of this issue in an EIR is not warranted.

	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?	☐	☐	■	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS				
-- Would the project:				
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, b, e) ***LESS THAN SIGNIFICANT IMPACT***. In addition, to the thresholds under items (a), (b), and (e), above, the City's CEQA thresholds state that a significant impact would occur if the project would result in a substantial physical deterioration of a public facility. The City of Palo Alto Utilities Department (CPAU) oversees a wastewater collection system consisting of over 208 miles of sewer lines. The City operates the Regional Water Quality Control Plant (RWQCP), which has primary treatment (bar screening and primary sedimentation), secondary treatment (fixed film reactors, conventional activated sludge, clarification and filtration), and tertiary treatment (filtration through a sand and coal filter and UV disinfection). Wastewater is routed to RWQCP, where it is treated prior to discharge into the San Francisco Bay. While the CPAU is responsible for the wastewater collection system, the Palo Alto Public Works Department is responsible for the collection/conveyance of sewage collected and delivered to the RWQCP.

The RWQCP is designed to have an average dry weather flow (ADWF) capacity of 39 MGD with full tertiary treatment, and a peak wet weather flow capacity of 80 MGD with full secondary treatment. Current average flows are approximately 22 MGD. Therefore, the current available capacity of the RWQCP is 17 MGD. The plant capacity is sufficient for current dry and wet weather loads and for future load projections. There are no plans for expansion or to "build-out" the plant. The RWQCP does not experience major treatment system constraints and has no planned capacity expansions. Approximately 220,000 people live in the RWQCP service area. Of the wastewater flow to the RWQCP, about 60% is estimated to come from residences, 10% from industries, and 30% from commercial businesses and institutions. The RWQCP treats 21 million gallons per day of effluent from all the partner cities. All of the wastewater treated at the RWQCP can be recycled. The plant already has some capability to produce recycled water that meets the Title 22 unrestricted use standard (approximately 4.5 MGD of capacity of which 4.5 MGD is presently available).

The proposed project would involve development of office uses which would generate wastewater. The City of Palo Alto's Urban Water Management Plan (UWMP) does not have a wastewater generation factor for R&D/office uses. As a result, wastewater generation rates from the City of Los Angeles were used to estimate the amount of wastewater that would be generated by the proposed project. As shown in Table 14, the proposed project would generate approximately 9,366 gallons of wastewater per day. This increase would be approximately

0.06% of the existing unused capacity of the RWQCP. Therefore, there would be sufficient wastewater capacity to serve both project sites. The proposed project would not exceed wastewater treatment requirements or require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. The proposed project would not result in a substantial physical deterioration of public wastewater facilities. Impacts would be less than significant, and no further analysis of this issue in an EIR is warranted.

Table 14
Estimated Wastewater Generation

Type of Use	Quantity	Generation Factor (Peer Day)	Amount (gallons per day)
2747 Park Boulevard Office	33,323 sf	150 gallons/1000 sf	4,998
3045 Park Boulevard Office	29,120 sf	150 gallons/1000 sf	4,368
Total Increase in Wastewater Demand			**9,366**

Source: City of Los Angeles CEQA Thresholds Guidelines (2006)
Notes: gdp= gallons per day, sf= square feet

c) ***LESS THAN SIGNIFICANT IMPACT***. In addition, to the thresholds under items (a), (b), and (e), above, the City's CEQA thresholds state that a significant impact would occur if the project would result in a substantial physical deterioration of a public facility. Palo Alto's storm drainage system contains over 550,000 linear feet of pipelines, ranging in size from 8 to 96 inches. The storm drains collect stormwater and convey it primarily to San Francisquito, Matadero, Barron, and Adobe creeks. These creeks ultimately discharge the stormwater to San Francisco Bay. The SCVWD oversees County-wide programs for flood protection and stormwater management. For local lines that connect to the creeks, the City maintains a Storm Drain Master Plan that recommends improvements to be made over a 30-year horizon. Because both project sites are already developed and covered with impermeable surfaces, the proposed project would not require the construction of substantial new storm water drainage facilities or expansion of existing facilities. The proposed project would not result in a substantial physical deterioration of public stormwater facilities. Therefore, impacts would be less than significant. No further analysis of this issue in an EIR is warranted.

d) ***LESS THAN SIGNIFICANT IMPACT***. In addition, to the thresholds under items (a), (b), and (e), above, the City's CEQA thresholds state that a significant impact would occur if the project would result in a substantial physical deterioration of a public facility. Since 1962, the City of Palo Alto's potable water supply has come from the SFPUC. In 1999, the City began to prepare a new Water Integrated Resources Plan (WIRP). In mid-2003, the WIRP concluded, based on available information, that supplies from the SFPUC are adequate in normal years, but additional supplies are needed in drought years to avoid shortages. At this time, no decision has been made regarding whether or not to use groundwater as a supplemental supply in droughts, though the City is proceeding with the Emergency Water Supply and Storage project which would provide the City the flexibility to rely on groundwater during a drought if necessary. The City is also a participating agency on the Bay Area Water Supply and Conservation Agency's (BAWSCA) Long-Term Reliable Water Supply Strategy to meet the projected water needs of its member agencies and their customers through 2035 and to increase their water supply reliability under normal and drought conditions.

The City of Palo Alto attempts to address issues of water supply in its UWMP. According to the UWMP, the City of Palo Alto has analyzed three different hydrological conditions to determine the reliability of water supplies for the City: average/normal water year, single dry water year, and multiple dry water year period. In each of the three hydrological conditions, the projected water demand was calculated taking into account growth in billing data, water conservation efforts, and demographics. The UWMP states that the City of Palo Alto can reliably meet the projected water demand in each of the hydrological conditions through 2030 (City of Palo Alto UWMP, 2011). As stated in Sections V, *Land Use and Planning*, and XIII, *Population and Housing*, the proposed project would be consistent with the City of Palo Alto Comprehensive Plan and the growth forecast.

Table 15 shows the projected City water supply and demand through the year 2030 according to the City's Urban Water Management Plan.

Table 15
City of Palo Alto Supply/Demand Balance (AFY)

	2015	2020	2025	2030
Projected SFPUC demand	14,253	14,157	14,353	14,971
Individual Supply Guarantee	19,118	19,118	19,118	19,118
Difference	**4,866**	**4,962**	**4,766**	**4,148**

Source: City of Palo Alto Urban Water Management Plan, Table 41, June 2011
AFY = acre-feet per year

Development of the two office buildings would increase demand for potable water. Assuming that water use is approximately 120% of wastewater generation, the proposed project would demand approximately 11,239 gallons of water per day, or 12.6 acre-feet per year (AFY). As shown in Table 15, available water supply is projected through 2030. The proposed project would have sufficient water supplies available to serve the project from existing entitlements and resources. No new or expanded entitlements would be needed to serve the proposed project. The proposed project would not result in a substantial physical deterioration of public water facilities. Therefore, impacts would be less than significant and no further analysis of this issue in an EIR is warranted.

f) ***LESS THAN SIGNIFICANT IMPACT***. In addition, to the thresholds under items (a), (b), and (e), above, the City's CEQA thresholds state that a significant impact would occur if the project would result in a substantial physical deterioration of a public facility. Currently, the City is contracted with GreenWaste of Palo Alto, for collection of garbage, recycling, and composting services in the City and with Waste Management Inc. to use the Kirby Canyon Landfill for waste disposal. Annualized solid waste tonnage received by Kirby Canyon Landfill is approximately 475,000 tons. At that rate, the Kirby Canyon Landfill would reach capacity in approximately 45 years. The daily permitted capacity of Kirby Canyon Landfill is up to 2,600 tons per day (CalRecycle, 2015). According to the latest Disposal Facility Inspection Report in 2010, the peak tonnage is 2,094 tons per day. Therefore, the landfill has a remaining daily capacity of 506 tons per day.

According to the latest Disposal Facility Inspection Report in 2010, the peak tonnage is 2,094 tons per day. As shown in Table 16, the proposed project would generate 0.09 tons of solid

waste per. This incremental increase in solid waste would be within the permitted capacities of Kirby Canyon Landfill. Therefore, the project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. The proposed project would not result in a substantial physical deterioration of public solid waste facilities. Impacts would be less than significant. No further analysis of this issue in an EIR is warranted.

Table 16
Estimated Solid Waste Generation

Land Use	Size	Generation Factor	Total (lbs/day)	Total (tons/day)
2747 Park Blvd Office	33,323 sf	6 / lbs 1000 sf / day	200	0.1
3045 Park Blvd Office	29,120 sf	6 / lbs 1000 sf / day	175	0.09
Total Solid Waste Generation			**375**	**0.19**
Total Solid Waste Sent to Landfill (Assuming 50% diversion rate)			**187.5**	**0.09**

Notes: sf = square feeet, lbs = pounds
Source: CalRecycle Waste Generation Rates, http://www.calrecycle.ca.gov/wastechar/WasteGenRates/Commercial.htm

g) ***NO IMPACT***. Palo Alto's Municipal Code Section 5.20.020 follows State regulations for solid waste and recycling. The project would comply with all applicable regulations related to solid waste. No impact would occur. No further analysis of this issue in an EIR is warranted.

	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 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?	☐	■	☐	☐
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) ***POTENTIALLY SIGNIFICANT UNLESS MITIGATION INCORPORATED***. As noted under Section IV, *Biological Resources*, implementation of the proposed project may have potentially significant impacts on biological resources. The removal of approximately 42 trees may affect protected nesting birds. In addition, a valley oak tree is located on the 2747 Park Boulevard site which is protected by the City's Tree Preservation Ordinance. Mitigation measures BIO-1 and BIO-2 would reduce these potential impacts to a less than significant level and further analysis of this issue in an EIR is not warranted. Impacts to cultural resources would be less than significant.

b) ***POTENTIALLY SIGNIFICANT IMPACT***. Cumulative impacts with some of the resource areas have been addressed in the individual resource sections above: Air Quality, Greenhouse Gases, Water Supply, and Solid Waste (see CEQA Guidelines Section 15064(h)(3).). Some of the other resource areas were determined to have no impact in comparison to existing conditions and therefore would not contribute to cumulative impacts and did not warrant further analysis, such as Stormwater, Mineral Resources, and Agricultural Resources. As such, cumulative impacts in these issue areas would also be less than significant (not cumulatively considerable). The proposed project would be expected to increase traffic compared to existing conditions. Cumulative impacts with respect to traffic are potentially significant and will be discussed further in an EIR.

c) ***POTENTIALLY SIGNIFICANT IMPACT***. In general, impacts to human beings are associated with air quality, hazards and hazardous materials, and noise impacts. As detailed in the preceding responses, the proposed project would not result, either directly or indirectly, in adverse impacts related to air quality or noise. However, the proposed project may have potentially significant impacts with respect to hazardous materials. Impacts to human beings will be further analyzed in an EIR.

REFERENCES

Bibliography

Bay Area Air Quality Management District (BAAQMD). California Environmental Quality Act (CEQA) Air Quality Guidelines. May 2010. http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/Draft_BAAQMD_CEQA_Guidelines_May_2010_Final.ashx.

Cal-Adapt. July 2015. http://cal-adapt.org/tools/#sealevel.

California Climate Change Center (CCCC). May 2009. http://www.energy.ca.gov/2009publications/CEC-500-2009-024/CEC-500-2009-024-F.PDF

California Department of Finance. July 2015. http://www.dof.ca.gov/research/demographic/reports/estimates/e-1/documents/E-1_2015PressRelease.pdf.

California Department of Conservation. 2006. California Seismic Hazard Zone. http://gmw.consrv.ca.gov/shmp/download/evalrpt/mview_eval.pdf

California Energy Commission, July 2015. http://www.energy.ca.gov/

California Environmental Protection Agency. July 2015. http://www.calepa.ca.gov/

CalRecycle. Kirby Canyon Recycl.& Disp. Facility. March 2010. file:///C:/Users/ltruong/Downloads/44729.pdf.

CalRecycle. Kirby Canyon Recycl.& Disp. Facility. July 2015. file:///C:/Users/ltruong/Downloads/5604%20(1).pdf.

California Stormwater Quality Association (CASQA). 2009. California Stormwater BMP Handbook for Construction. WE-1 Wind Erosion Control. November. [online]: http://www.cleanwaterprogram.org/uploads/C6%20CASQA%20BMPs%20Wind%20Erosion%20Control.pdf. Accessed April 2, 2015.

City of Palo Alto. 2010 Urban Water Management Plan. July 2015. http://www.cityofpaloalto.org/civicax/filebank/documents/27107.

City of Palo Alto. Approval of Annual Report of Williamson Act Contracts. October 2013. http://www.cityofpaloalto.org/civicax/filebank/documents/37424

City of Palo Alto. Comprehensive Plan 2007. http://www.cityofpaloalto.org/gov/topics/projects/landuse/compplan.asp.

City of Palo Alto. Comprehensive Plan Update 2014. http://www.paloaltocompplan.org/

City of Palo Alto. Municipal Code. July 2015. http://www.amlegal.com/nxt/gateway.dll/California/paloalto_ca/paloaltomunicipalcode?f=templates$fn=default.htm$3.0$vid=amlegal:paloalto_ca.

City of Palo Alto. Our Palo Alto Draft Existing Conditions Report. July 2015. http://www.paloaltocompplan.org/resources/draft-existing-conditions-report/.

Comprehensive Environmental Response, Compensation, and Liability Information System. July 2015. http://iaspub.epa.gov/enviro/efsystemquery.cerclis?fac_search=primary_name&fac_value=&fac_search_type=Beginning+With&postal_code=&location_address=&add_search_type=Beginning+With&city_name=santee&county_name=san+diego&state_code=ca&program_search=1&report=1&page_no=1&output_sql_switch=TRUE&database_type=CERCLIS, June 2015.

EnviroStor (California Department of Toxic Substances Control); list of hazardous waste and substance sites. July 2015. http://www.envirostor.dtsc.ca.gov/public/

Federal Emergency Management Agency. July 2015. http://www.fema.gov/

Federal Transit Administration (FTA). May 2006. Transit Noise Impact and Vibration Assessment. http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf, June 2015.

Geotracker. July 2015. http://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=10635+braverman+drive+ca, June 2015.

National Wetlands Inventory. July 2015. http://www.fws.gov/wetlands/data/mapper.HTML.

Palo Alto Airport Master Plan. December 2006. http://www.countyairports.org/docs/MasterPlan/PAO_Masterplan-complete.pdf

Palo Alto Bicycle Transportation Plan, 2003. http://www.cityofpaloalto.org/civicax/filebank/documents/25489/

Plan Bay Area 2040. July 2015. http://planbayarea.org/

Property Shark. July 2015. http://www.propertyshark.com/mason

State of California Department of Conservation. Alquist-Priolo Earthquake Fault Zone map. July 2015. http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm.

Southern California Association of Governments (SCAG). October 2001. Employment Density Report. http://www.mwcog.org/uploads/committee-documents/YV5WXFhW20110503134223.pdf

TJKM Transportation Consultants. July 31, 2015(a). 3045 Park Boulevard Traffic Impact Study.

TJKM Transportation Consultants. July 31, 2015(b). 2747 Park Boulevard Traffic Impact Study.

U.S. Fish and Wildlife Service. July 2015. http://www.fws.gov/

Persons Contacted

Craig Lee. Sergeant, City of Palo Alto Police Department. Email: Craig.Lee@CityofPaloAlto.org

Gordon Simpkinson. Plan Checker, City of Palo Alto Fire Department. Email: Gordon.Simpkinson@CityofPaloAlto.org.

This page intentionally left blank.

Appendix A

Air Quality Modeling Results

2747 & 3045 Park Boulevard Office Projects

San Francisco Bay Area Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	33.32	1000sqft	0.76	33,323.00	0
Parking Lot	127.00	Space	1.14	50,800.00	0
General Office Building	29.12	1000sqft	0.67	29,120.00	0
Parking Lot	110.00	Space	0.99	44,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2018
Utility Company	City of Palo Alto Public Utilities				
CO2 Intensity (lb/MWhr)	354.26	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Grading -

Table Name	Column Name	Default Value	New Value
tblGrading	MaterialExported	0.00	4,000.00
tblProjectCharacteristics	OperationalYear	2014	2018

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					
2016	5.3485	57.5321	45.9689	0.0783	18.2360	2.9400	21.1760	9.9757	2.7048	12.6805	0.0000	7,948.5720	7,948.5720	1.2352	0.0000	7,974.5101
2017	84.4333	29.0924	25.4968	0.0394	0.7387	1.8194	2.5580	0.1994	1.7081	1.9075	0.0000	3,765.4848	3,765.4848	0.6819	0.0000	3,779.8045
Total	**89.7818**	**86.6246**	**71.4656**	**0.1177**	**18.9747**	**4.7594**	**23.7341**	**10.1751**	**4.4129**	**14.5880**	**0.0000**	**11,714.0568**	**11,714.0568**	**1.9170**	**0.0000**	**11,754.3146**

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					
2016	5.3485	57.5321	45.9689	0.0783	18.2360	2.9400	21.1760	9.9757	2.7048	12.6805	0.0000	7,948.5720	7,948.5720	1.2352	0.0000	7,974.5101
2017	84.4333	29.0924	25.4968	0.0394	0.7387	1.8194	2.5580	0.1994	1.7081	1.9075	0.0000	3,765.4848	3,765.4848	0.6819	0.0000	3,779.8045
Total	**89.7818**	**86.6246**	**71.4656**	**0.1177**	**18.9747**	**4.7594**	**23.7341**	**10.1751**	**4.4129**	**14.5880**	**0.0000**	**11,714.0568**	**11,714.0568**	**1.9170**	**0.0000**	**11,754.3146**

	ROG	NOx	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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.7825	2.9000e-004	0.0310	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0655	0.0655	1.8000e-004		0.0693
Energy	0.0318	0.2888	0.2426	1.7300e-003		0.0220	0.0220		0.0220	0.0220		346.5813	346.5813	6.6400e-003	6.3500e-003	348.6905
Mobile	2.2890	5.2594	23.9344	0.0478	3.4892	0.0683	3.5575	0.9334	0.0629	0.9963		3,934.0496	3,934.0496	0.1570		3,937.3469
Total	**6.1033**	**5.5485**	**24.2080**	**0.0495**	**3.4892**	**0.0904**	**3.5795**	**0.9334**	**0.0850**	**1.0184**		**4,280.6964**	**4,280.6964**	**0.1638**	**6.3500e-003**	**4,286.1068**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.7825	2.9000e-004	0.0310	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0655	0.0655	1.8000e-004		0.0693
Energy	0.0318	0.2888	0.2426	1.7300e-003		0.0220	0.0220		0.0220	0.0220		346.5813	346.5813	6.6400e-003	6.3500e-003	348.6905
Mobile	2.2890	5.2594	23.9344	0.0478	3.4892	0.0683	3.5575	0.9334	0.0629	0.9963		3,934.0496	3,934.0496	0.1570		3,937.3469
Total	**6.1033**	**5.5485**	**24.2080**	**0.0495**	**3.4892**	**0.0904**	**3.5795**	**0.9334**	**0.0850**	**1.0184**		**4,280.6964**	**4,280.6964**	**0.1638**	**6.3500e-003**	**4,286.1068**

	ROG	NOx	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	Demolition	Demolition	1/1/2016	1/28/2016	5	20	
2	Site Preparation	Site Preparation	1/29/2016	2/4/2016	5	5	
3	Grading	Grading	2/5/2016	2/16/2016	5	8	
4	Building Construction	Building Construction	2/17/2016	1/3/2017	5	230	
5	Paving	Paving	1/4/2017	1/27/2017	5	18	
6	Architectural Coating	Architectural Coating	1/28/2017	2/22/2017	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 97,931; Non-Residential Outdoor: 32,644 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	500.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	60.00	26.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

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	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365		4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**		**2.2921**	**2.2921**		**2.1365**	**2.1365**		**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

3.2 Demolition - 2016

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	0.0612	0.0901	0.8320	1.6100e-003	0.1415	1.1400e-003	0.1426	0.0375	1.0400e-003	0.0386		134.9040	134.9040	7.5000e-003		135.0615
Total	**0.0612**	**0.0901**	**0.8320**	**1.6100e-003**	**0.1415**	**1.1400e-003**	**0.1426**	**0.0375**	**1.0400e-003**	**0.0386**		**134.9040**	**134.9040**	**7.5000e-003**		**135.0615**

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	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365	0.0000	4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**		**2.2921**	**2.2921**		**2.1365**	**2.1365**	**0.0000**	**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

3.2 Demolition - 2016

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	0.0612	0.0901	0.8320	1.6100e-003	0.1415	1.1400e-003	0.1426	0.0375	1.0400e-003	0.0386		134.9040	134.9040	7.5000e-003		135.0615
Total	**0.0612**	**0.0901**	**0.8320**	**1.6100e-003**	**0.1415**	**1.1400e-003**	**0.1426**	**0.0375**	**1.0400e-003**	**0.0386**		**134.9040**	**134.9040**	**7.5000e-003**		**135.0615**

3.3 Site Preparation - 2016

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**18.0663**	**2.9387**	**21.0049**	**9.9307**	**2.7036**	**12.6343**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.3 Site Preparation - 2016

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	0.0734	0.1082	0.9984	1.9300e-003	0.1698	1.3600e-003	0.1711	0.0450	1.2500e-003	0.0463		161.8848	161.8848	9.0000e-003		162.0737
Total	**0.0734**	**0.1082**	**0.9984**	**1.9300e-003**	**0.1698**	**1.3600e-003**	**0.1711**	**0.0450**	**1.2500e-003**	**0.0463**		**161.8848**	**161.8848**	**9.0000e-003**		**162.0737**

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036	0.0000	4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**18.0663**	**2.9387**	**21.0049**	**9.9307**	**2.7036**	**12.6343**	**0.0000**	**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.3 Site Preparation - 2016

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	0.0734	0.1082	0.9984	1.9300e-003	0.1698	1.3600e-003	0.1711	0.0450	1.2500e-003	0.0463		161.8848	161.8848	9.0000e-003		162.0737
Total	**0.0734**	**0.1082**	**0.9984**	**1.9300e-003**	**0.1698**	**1.3600e-003**	**0.1711**	**0.0450**	**1.2500e-003**	**0.0463**		**161.8848**	**161.8848**	**9.0000e-003**		**162.0737**

3.4 Grading - 2016

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					6.6089	0.0000	6.6089	3.3760	0.0000	3.3760			0.0000			0.0000
Off-Road	3.6669	38.4466	26.0787	0.0298		2.1984	2.1984		2.0225	2.0225		3,093.7889	3,093.7889	0.9332		3,113.3860
Total	**3.6669**	**38.4466**	**26.0787**	**0.0298**	**6.6089**	**2.1984**	**8.8073**	**3.3760**	**2.0225**	**5.3986**		**3,093.7889**	**3,093.7889**	**0.9332**		**3,113.3860**

3.4 Grading - 2016

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	1.6204	18.9954	19.0581	0.0469	1.0890	0.2439	1.3329	0.2982	0.2243	0.5225		4,719.8791	4,719.8791	0.0354		4,720.6215
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	0.0612	0.0901	0.8320	1.6100e-003	0.1415	1.1400e-003	0.1426	0.0375	1.0400e-003	0.0386		134.9040	134.9040	7.5000e-003		135.0615
Total	**1.6816**	**19.0855**	**19.8901**	**0.0486**	**1.2304**	**0.2450**	**1.4755**	**0.3357**	**0.2253**	**0.5610**		**4,854.7831**	**4,854.7831**	**0.0429**		**4,855.6829**

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					6.6089	0.0000	6.6089	3.3760	0.0000	3.3760			0.0000			0.0000
Off-Road	3.6669	38.4466	26.0787	0.0298		2.1984	2.1984		2.0225	2.0225	0.0000	3,093.7889	3,093.7889	0.9332		3,113.3860
Total	**3.6669**	**38.4466**	**26.0787**	**0.0298**	**6.6089**	**2.1984**	**8.8073**	**3.3760**	**2.0225**	**5.3986**	**0.0000**	**3,093.7889**	**3,093.7889**	**0.9332**		**3,113.3860**

3.4 Grading - 2016

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	1.6204	18.9954	19.0581	0.0469	1.0890	0.2439	1.3329	0.2982	0.2243	0.5225		4,719.8791	4,719.8791	0.0354		4,720.6215
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	0.0612	0.0901	0.8320	1.6100e-003	0.1415	1.1400e-003	0.1426	0.0375	1.0400e-003	0.0386		134.9040	134.9040	7.5000e-003		135.0615
Total	**1.6816**	**19.0855**	**19.8901**	**0.0486**	**1.2304**	**0.2450**	**1.4755**	**0.3357**	**0.2253**	**0.5610**		**4,854.7831**	**4,854.7831**	**0.0429**		**4,855.6829**

3.5 Building Construction - 2016

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	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.5 Building Construction - 2016

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	0.3730	2.6383	4.6666	6.1800e-003	0.1728	0.0391	0.2119	0.0494	0.0359	0.0853		617.0432	617.0432	5.0500e-003		617.1492
Worker	0.2447	0.3605	3.3281	6.4200e-003	0.5658	4.5500e-003	0.5704	0.1501	4.1700e-003	0.1542		539.6159	539.6159	0.0300		540.2458
Total	**0.6177**	**2.9988**	**7.9948**	**0.0126**	**0.7387**	**0.0437**	**0.7823**	**0.1994**	**0.0401**	**0.2395**		**1,156.6591**	**1,156.6591**	**0.0350**		**1,157.3950**

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	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**	**0.0000**	**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.5 Building Construction - 2016

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	0.3730	2.6383	4.6666	6.1800e-003	0.1728	0.0391	0.2119	0.0494	0.0359	0.0853		617.0432	617.0432	5.0500e-003		617.1492
Worker	0.2447	0.3605	3.3281	6.4200e-003	0.5658	4.5500e-003	0.5704	0.1501	4.1700e-003	0.1542		539.6159	539.6159	0.0300		540.2458
Total	**0.6177**	**2.9988**	**7.9948**	**0.0126**	**0.7387**	**0.0437**	**0.7823**	**0.1994**	**0.0401**	**0.2395**		**1,156.6591**	**1,156.6591**	**0.0350**		**1,157.3950**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3366	2.3639	4.4184	6.1700e-003	0.1729	0.0338	0.2067	0.0494	0.0311	0.0804		606.6209	606.6209	4.7900e-003		606.7216
Worker	0.2166	0.3229	2.9493	6.4200e-003	0.5658	4.3300e-003	0.5702	0.1501	3.9900e-003	0.1541		519.0586	519.0586	0.0274		519.6339
Total	**0.5532**	**2.6868**	**7.3676**	**0.0126**	**0.7387**	**0.0382**	**0.7768**	**0.1994**	**0.0351**	**0.2345**		**1,125.6795**	**1,125.6795**	**0.0322**		**1,126.3555**

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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**	**0.0000**	**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3366	2.3639	4.4184	6.1700e-003	0.1729	0.0338	0.2067	0.0494	0.0311	0.0804		606.6209	606.6209	4.7900e-003		606.7216
Worker	0.2166	0.3229	2.9493	6.4200e-003	0.5658	4.3300e-003	0.5702	0.1501	3.9900e-003	0.1541		519.0586	519.0586	0.0274		519.6339
Total	**0.5532**	**2.6868**	**7.3676**	**0.0126**	**0.7387**	**0.0382**	**0.7768**	**0.1994**	**0.0351**	**0.2345**		**1,125.6795**	**1,125.6795**	**0.0322**		**1,126.3555**

3.6 Paving - 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	0.3100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9654**	**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**

3.6 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0722	0.1076	0.9831	2.1400e-003	0.1886	1.4400e-003	0.1901	0.0500	1.3300e-003	0.0514		173.0196	173.0196	9.1300e-003		173.2113
Total	**0.0722**	**0.1076**	**0.9831**	**2.1400e-003**	**0.1886**	**1.4400e-003**	**0.1901**	**0.0500**	**1.3300e-003**	**0.0514**		**173.0196**	**173.0196**	**9.1300e-003**		**173.2113**

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	0.3100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9654**	**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**

3.6 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0722	0.1076	0.9831	2.1400e-003	0.1886	1.4400e-003	0.1901	0.0500	1.3300e-003	0.0514		173.0196	173.0196	9.1300e-003		173.2113
Total	**0.0722**	**0.1076**	**0.9831**	**2.1400e-003**	**0.1886**	**1.4400e-003**	**0.1901**	**0.0500**	**1.3300e-003**	**0.0514**		**173.0196**	**173.0196**	**9.1300e-003**		**173.2113**

3.7 Architectural Coating - 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	84.0577					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	**84.3900**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.7 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0646	0.5899	1.2800e-003	0.1132	8.7000e-004	0.1140	0.0300	8.0000e-004	0.0308		103.8117	103.8117	5.4800e-003		103.9268
Total	**0.0433**	**0.0646**	**0.5899**	**1.2800e-003**	**0.1132**	**8.7000e-004**	**0.1140**	**0.0300**	**8.0000e-004**	**0.0308**		**103.8117**	**103.8117**	**5.4800e-003**		**103.9268**

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	84.0577					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	**84.3900**	**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**

3.7 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0646	0.5899	1.2800e-003	0.1132	8.7000e-004	0.1140	0.0300	8.0000e-004	0.0308		103.8117	103.8117	5.4800e-003		103.9268
Total	**0.0433**	**0.0646**	**0.5899**	**1.2800e-003**	**0.1132**	**8.7000e-004**	**0.1140**	**0.0300**	**8.0000e-004**	**0.0308**		**103.8117**	**103.8117**	**5.4800e-003**		**103.9268**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.2890	5.2594	23.9344	0.0478	3.4892	0.0683	3.5575	0.9334	0.0629	0.9963		3,934.0496	3,934.0496	0.1570		3,937.3469
Unmitigated	2.2890	5.2594	23.9344	0.0478	3.4892	0.0683	3.5575	0.9334	0.0629	0.9963		3,934.0496	3,934.0496	0.1570		3,937.3469

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	366.89	78.98	32.66	664,373	664,373
General Office Building	320.61	69.01	28.54	580,576	580,576
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	687.50	147.99	61.19	1,244,949	1,244,949

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546229	0.063048	0.174586	0.122573	0.033968	0.004845	0.015596	0.024745	0.002089	0.003270	0.006707	0.000678	0.001667

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0318	0.2888	0.2426	1.7300e-003		0.0220	0.0220		0.0220	0.0220		346.5813	346.5813	6.6400e-003	6.3500e-003	348.6905
NaturalGas Unmitigated	0.0318	0.2888	0.2426	1.7300e-003		0.0220	0.0220		0.0220	0.0220		346.5813	346.5813	6.6400e-003	6.3500e-003	348.6905

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	1373.83	0.0148	0.1347	0.1131	8.1000e-004		0.0102	0.0102		0.0102	0.0102		161.6266	161.6266	3.1000e-003	2.9600e-003	162.6102
General Office Building	1572.12	0.0170	0.1541	0.1295	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.9547	184.9547	3.5400e-003	3.3900e-003	186.0803
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0318**	**0.2888**	**0.2426**	**1.7300e-003**		**0.0220**	**0.0220**		**0.0220**	**0.0220**		**346.5813**	**346.5813**	**6.6400e-003**	**6.3500e-003**	**348.6905**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	1.57212	0.0170	0.1541	0.1295	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.9547	184.9547	3.5400e-003	3.3900e-003	186.0803
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	1.37383	0.0148	0.1347	0.1131	8.1000e-004		0.0102	0.0102		0.0102	0.0102		161.6266	161.6266	3.1000e-003	2.9600e-003	162.6102
Total		**0.0318**	**0.2888**	**0.2426**	**1.7300e-003**		**0.0220**	**0.0220**		**0.0220**	**0.0220**		**346.5813**	**346.5813**	**6.6400e-003**	**6.3500e-003**	**348.6905**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.7825	2.9000e-004	0.0310	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0655	0.0655	1.8000e-004		0.0693
Unmitigated	3.7825	2.9000e-004	0.0310	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0655	0.0655	1.8000e-004		0.0693

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4145					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.3650					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9600e-003	2.9000e-004	0.0310	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0655	0.0655	1.8000e-004		0.0693
Total	**3.7825**	**2.9000e-004**	**0.0310**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0655**	**0.0655**	**1.8000e-004**		**0.0693**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4145					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.3650					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9600e-003	2.9000e-004	0.0310	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0655	0.0655	1.8000e-004		0.0693
Total	**3.7825**	**2.9000e-004**	**0.0310**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0655**	**0.0655**	**1.8000e-004**		**0.0693**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Appendix B

Greenhouse Gas Emissions Modeling Results

2747 & 3045 Park Boulevard Office Projects

San Francisco Bay Area Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	33.32	1000sqft	0.76	33,323.00	0
Parking Lot	127.00	Space	1.14	50,800.00	0
General Office Building	29.12	1000sqft	0.67	29,120.00	0
Parking Lot	110.00	Space	0.99	44,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2018
Utility Company	City of Palo Alto Public Utilities				
CO2 Intensity (lb/MWhr)	354.26	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Grading -

Table Name	Column Name	Default Value	New Value
tblGrading	MaterialExported	0.00	4,000.00
tblProjectCharacteristics	OperationalYear	2014	2018

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					
2016	0.5291	4.4075	3.5479	5.3300e-003	0.1593	0.2693	0.4285	0.0621	0.2524	0.3145	0.0000	473.2535	473.2535	0.0886	0.0000	475.1137
2017	0.7818	0.2014	0.1674	2.7000e-004	3.3200e-003	0.0125	0.0158	8.9000e-004	0.0116	0.0125	0.0000	23.3003	23.3003	5.5400e-003	0.0000	23.4167
Total	**1.3109**	**4.6089**	**3.7152**	**5.6000e-003**	**0.1626**	**0.2817**	**0.4443**	**0.0630**	**0.2640**	**0.3270**	**0.0000**	**496.5538**	**496.5538**	**0.0941**	**0.0000**	**498.5304**

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					
2016	0.5291	4.4075	3.5479	5.3300e-003	0.1593	0.2693	0.4285	0.0621	0.2524	0.3145	0.0000	473.2531	473.2531	0.0886	0.0000	475.1133
2017	0.7818	0.2014	0.1674	2.7000e-004	3.3200e-003	0.0125	0.0158	8.9000e-004	0.0116	0.0125	0.0000	23.3003	23.3003	5.5400e-003	0.0000	23.4167
Total	**1.3109**	**4.6089**	**3.7152**	**5.6000e-003**	**0.1626**	**0.2817**	**0.4443**	**0.0630**	**0.2640**	**0.3270**	**0.0000**	**496.5534**	**496.5534**	**0.0941**	**0.0000**	**498.5300**

	ROG	NOx	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**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6900	3.0000e-005	2.7900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3500e-003	5.3500e-003	1.0000e-005	0.0000	5.6600e-003
Energy	5.8000e-003	0.0527	0.0443	3.2000e-004		4.0100e-003	4.0100e-003		4.0100e-003	4.0100e-003	0.0000	268.5548	268.5548	0.0184	4.6300e-003	270.3758
Mobile	0.2932	0.6964	3.0052	6.6300e-003	0.4632	9.3800e-003	0.4725	0.1243	8.6400e-003	0.1329	0.0000	495.2539	495.2539	0.0196	0.0000	495.6657
Waste						0.0000	0.0000		0.0000	0.0000	11.7877	0.0000	11.7877	0.6966	0.0000	26.4170
Water						0.0000	0.0000		0.0000	0.0000	3.5208	13.4748	16.9956	0.3627	8.7700e-003	27.3304
Total	**0.9890**	**0.7491**	**3.0523**	**6.9500e-003**	**0.4632**	**0.0134**	**0.4766**	**0.1243**	**0.0127**	**0.1370**	**15.3085**	**777.2889**	**792.5974**	**1.0974**	**0.0134**	**819.7946**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6900	3.0000e-005	2.7900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3500e-003	5.3500e-003	1.0000e-005	0.0000	5.6600e-003
Energy	5.8000e-003	0.0527	0.0443	3.2000e-004		4.0100e-003	4.0100e-003		4.0100e-003	4.0100e-003	0.0000	268.5548	268.5548	0.0184	4.6300e-003	270.3758
Mobile	0.2932	0.6964	3.0052	6.6300e-003	0.4632	9.3800e-003	0.4725	0.1243	8.6400e-003	0.1329	0.0000	495.2539	495.2539	0.0196	0.0000	495.6657
Waste						0.0000	0.0000		0.0000	0.0000	11.7877	0.0000	11.7877	0.6966	0.0000	26.4170
Water						0.0000	0.0000		0.0000	0.0000	3.5208	13.4748	16.9956	0.3627	8.7500e-003	27.3248
Total	**0.9890**	**0.7491**	**3.0523**	**6.9500e-003**	**0.4632**	**0.0134**	**0.4766**	**0.1243**	**0.0127**	**0.1370**	**15.3085**	**777.2889**	**792.5974**	**1.0973**	**0.0134**	**819.7890**

	ROG	NOx	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**	**0.01**	**0.15**	**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	Demolition	Demolition	1/1/2016	1/28/2016	5	20	
2	Site Preparation	Site Preparation	1/29/2016	2/4/2016	5	5	
3	Grading	Grading	2/5/2016	2/16/2016	5	8	
4	Building Construction	Building Construction	2/17/2016	1/3/2017	5	230	
5	Paving	Paving	1/4/2017	1/27/2017	5	18	
6	Architectural Coating	Architectural Coating	1/28/2017	2/22/2017	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 97,931; Non-Residential Outdoor: 32,644 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	500.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	60.00	26.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0429	0.4566	0.3503	4.0000e-004		0.0229	0.0229		0.0214	0.0214	0.0000	37.0974	37.0974	0.0101	0.0000	37.3092
Total	**0.0429**	**0.4566**	**0.3503**	**4.0000e-004**		**0.0229**	**0.0229**		**0.0214**	**0.0214**	**0.0000**	**37.0974**	**37.0974**	**0.0101**	**0.0000**	**37.3092**

3.2 Demolition - 2016

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	5.7000e-004	8.2000e-004	7.9800e-003	2.0000e-005	1.3600e-003	1.0000e-005	1.3700e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.2348	1.2348	7.0000e-005	0.0000	1.2362
Total	**5.7000e-004**	**8.2000e-004**	**7.9800e-003**	**2.0000e-005**	**1.3600e-003**	**1.0000e-005**	**1.3700e-003**	**3.6000e-004**	**1.0000e-005**	**3.7000e-004**	**0.0000**	**1.2348**	**1.2348**	**7.0000e-005**	**0.0000**	**1.2362**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0429	0.4566	0.3503	4.0000e-004		0.0229	0.0229		0.0214	0.0214	0.0000	37.0973	37.0973	0.0101	0.0000	37.3092
Total	**0.0429**	**0.4566**	**0.3503**	**4.0000e-004**		**0.0229**	**0.0229**		**0.0214**	**0.0214**	**0.0000**	**37.0973**	**37.0973**	**0.0101**	**0.0000**	**37.3092**

3.2 Demolition - 2016

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	5.7000e-004	8.2000e-004	7.9800e-003	2.0000e-005	1.3600e-003	1.0000e-005	1.3700e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.2348	1.2348	7.0000e-005	0.0000	1.2362
Total	**5.7000e-004**	**8.2000e-004**	**7.9800e-003**	**2.0000e-005**	**1.3600e-003**	**1.0000e-005**	**1.3700e-003**	**3.6000e-004**	**1.0000e-005**	**3.7000e-004**	**0.0000**	**1.2348**	**1.2348**	**7.0000e-005**	**0.0000**	**1.2362**

3.3 Site Preparation - 2016

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					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1366	0.1028	1.0000e-004		7.3500e-003	7.3500e-003		6.7600e-003	6.7600e-003	0.0000	9.2193	9.2193	2.7800e-003	0.0000	9.2777
Total	**0.0127**	**0.1366**	**0.1028**	**1.0000e-004**	**0.0452**	**7.3500e-003**	**0.0525**	**0.0248**	**6.7600e-003**	**0.0316**	**0.0000**	**9.2193**	**9.2193**	**2.7800e-003**	**0.0000**	**9.2777**

3.3 Site Preparation - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.5000e-004	2.4000e-003	0.0000	4.1000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3704	0.3704	2.0000e-005	0.0000	0.3709
Total	**1.7000e-004**	**2.5000e-004**	**2.4000e-003**	**0.0000**	**4.1000e-004**	**0.0000**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3704**	**0.3704**	**2.0000e-005**	**0.0000**	**0.3709**

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					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1366	0.1028	1.0000e-004		7.3500e-003	7.3500e-003		6.7600e-003	6.7600e-003	0.0000	9.2193	9.2193	2.7800e-003	0.0000	9.2777
Total	**0.0127**	**0.1366**	**0.1028**	**1.0000e-004**	**0.0452**	**7.3500e-003**	**0.0525**	**0.0248**	**6.7600e-003**	**0.0316**	**0.0000**	**9.2193**	**9.2193**	**2.7800e-003**	**0.0000**	**9.2777**

3.3 Site Preparation - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.5000e-004	2.4000e-003	0.0000	4.1000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3704	0.3704	2.0000e-005	0.0000	0.3709
Total	**1.7000e-004**	**2.5000e-004**	**2.4000e-003**	**0.0000**	**4.1000e-004**	**0.0000**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3704**	**0.3704**	**2.0000e-005**	**0.0000**	**0.3709**

3.4 Grading - 2016

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					0.0264	0.0000	0.0264	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0147	0.1538	0.1043	1.2000e-004		8.7900e-003	8.7900e-003		8.0900e-003	8.0900e-003	0.0000	11.2266	11.2266	3.3900e-003	0.0000	11.2977
Total	**0.0147**	**0.1538**	**0.1043**	**1.2000e-004**	**0.0264**	**8.7900e-003**	**0.0352**	**0.0135**	**8.0900e-003**	**0.0216**	**0.0000**	**11.2266**	**11.2266**	**3.3900e-003**	**0.0000**	**11.2977**

3.4 Grading - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.9100e-003	0.0748	0.0646	1.9000e-004	4.2100e-003	9.7000e-004	5.1800e-003	1.1600e-003	9.0000e-004	2.0500e-003	0.0000	17.1505	17.1505	1.3000e-004	0.0000	17.1531
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	3.3000e-004	3.1900e-003	1.0000e-005	5.4000e-004	0.0000	5.5000e-004	1.4000e-004	0.0000	1.5000e-004	0.0000	0.4939	0.4939	3.0000e-005	0.0000	0.4945
Total	**6.1400e-003**	**0.0751**	**0.0678**	**2.0000e-004**	**4.7500e-003**	**9.7000e-004**	**5.7300e-003**	**1.3000e-003**	**9.0000e-004**	**2.2000e-003**	**0.0000**	**17.6444**	**17.6444**	**1.6000e-004**	**0.0000**	**17.6476**

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					0.0264	0.0000	0.0264	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0147	0.1538	0.1043	1.2000e-004		8.7900e-003	8.7900e-003		8.0900e-003	8.0900e-003	0.0000	11.2265	11.2265	3.3900e-003	0.0000	11.2977
Total	**0.0147**	**0.1538**	**0.1043**	**1.2000e-004**	**0.0264**	**8.7900e-003**	**0.0352**	**0.0135**	**8.0900e-003**	**0.0216**	**0.0000**	**11.2265**	**11.2265**	**3.3900e-003**	**0.0000**	**11.2977**

3.4 Grading - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.9100e-003	0.0748	0.0646	1.9000e-004	4.2100e-003	9.7000e-004	5.1800e-003	1.1600e-003	9.0000e-004	2.0500e-003	0.0000	17.1505	17.1505	1.3000e-004	0.0000	17.1531
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	3.3000e-004	3.1900e-003	1.0000e-005	5.4000e-004	0.0000	5.5000e-004	1.4000e-004	0.0000	1.5000e-004	0.0000	0.4939	0.4939	3.0000e-005	0.0000	0.4945
Total	**6.1400e-003**	**0.0751**	**0.0678**	**2.0000e-004**	**4.7500e-003**	**9.7000e-004**	**5.7300e-003**	**1.3000e-003**	**9.0000e-004**	**2.2000e-003**	**0.0000**	**17.6444**	**17.6444**	**1.6000e-004**	**0.0000**	**17.6476**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3883	3.2497	2.1098	3.0600e-003		0.2243	0.2243		0.2107	0.2107	0.0000	276.0551	276.0551	0.0685	0.0000	277.4929
Total	**0.3883**	**3.2497**	**2.1098**	**3.0600e-003**		**0.2243**	**0.2243**		**0.2107**	**0.2107**	**0.0000**	**276.0551**	**276.0551**	**0.0685**	**0.0000**	**277.4929**

3.5 Building Construction - 2016

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	0.0377	0.2971	0.4384	7.1000e-004	0.0191	4.4300e-003	0.0235	5.4700e-003	4.0700e-003	9.5400e-003	0.0000	64.0992	64.0992	5.1000e-004	0.0000	64.1101
Worker	0.0259	0.0376	0.3641	7.4000e-004	0.0621	5.2000e-004	0.0626	0.0165	4.8000e-004	0.0170	0.0000	56.3064	56.3064	3.1000e-003	0.0000	56.3715
Total	**0.0637**	**0.3347**	**0.8025**	**1.4500e-003**	**0.0811**	**4.9500e-003**	**0.0861**	**0.0220**	**4.5500e-003**	**0.0265**	**0.0000**	**120.4056**	**120.4056**	**3.6100e-003**	**0.0000**	**120.4816**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3883	3.2497	2.1098	3.0600e-003		0.2243	0.2243		0.2107	0.2107	0.0000	276.0548	276.0548	0.0685	0.0000	277.4926
Total	**0.3883**	**3.2497**	**2.1098**	**3.0600e-003**		**0.2243**	**0.2243**		**0.2107**	**0.2107**	**0.0000**	**276.0548**	**276.0548**	**0.0685**	**0.0000**	**277.4926**

3.5 Building Construction - 2016

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	0.0377	0.2971	0.4384	7.1000e-004	0.0191	4.4300e-003	0.0235	5.4700e-003	4.0700e-003	9.5400e-003	0.0000	64.0992	64.0992	5.1000e-004	0.0000	64.1101
Worker	0.0259	0.0376	0.3641	7.4000e-004	0.0621	5.2000e-004	0.0626	0.0165	4.8000e-004	0.0170	0.0000	56.3064	56.3064	3.1000e-003	0.0000	56.3715
Total	**0.0637**	**0.3347**	**0.8025**	**1.4500e-003**	**0.0811**	**4.9500e-003**	**0.0861**	**0.0220**	**4.5500e-003**	**0.0265**	**0.0000**	**120.4056**	**120.4056**	**3.6100e-003**	**0.0000**	**120.4816**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1000e-003	0.0264	0.0181	3.0000e-005		1.7800e-003	1.7800e-003		1.6700e-003	1.6700e-003	0.0000	2.3948	2.3948	5.9000e-004	0.0000	2.4072
Total	**3.1000e-003**	**0.0264**	**0.0181**	**3.0000e-005**		**1.7800e-003**	**1.7800e-003**		**1.6700e-003**	**1.6700e-003**	**0.0000**	**2.3948**	**2.3948**	**5.9000e-004**	**0.0000**	**2.4072**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-004	2.3400e-003	3.6100e-003	1.0000e-005	1.7000e-004	3.0000e-005	2.0000e-004	5.0000e-005	3.0000e-005	8.0000e-005	0.0000	0.5528	0.5528	0.0000	0.0000	0.5529
Worker	2.0000e-004	3.0000e-004	2.8400e-003	1.0000e-005	5.4000e-004	0.0000	5.5000e-004	1.4000e-004	0.0000	1.5000e-004	0.0000	0.4751	0.4751	2.0000e-005	0.0000	0.4756
Total	**5.0000e-004**	**2.6400e-003**	**6.4500e-003**	**2.0000e-005**	**7.1000e-004**	**3.0000e-005**	**7.5000e-004**	**1.9000e-004**	**3.0000e-005**	**2.3000e-004**	**0.0000**	**1.0279**	**1.0279**	**2.0000e-005**	**0.0000**	**1.0285**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1000e-003	0.0264	0.0181	3.0000e-005		1.7800e-003	1.7800e-003		1.6700e-003	1.6700e-003	0.0000	2.3948	2.3948	5.9000e-004	0.0000	2.4072
Total	**3.1000e-003**	**0.0264**	**0.0181**	**3.0000e-005**		**1.7800e-003**	**1.7800e-003**		**1.6700e-003**	**1.6700e-003**	**0.0000**	**2.3948**	**2.3948**	**5.9000e-004**	**0.0000**	**2.4072**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-004	2.3400e-003	3.6100e-003	1.0000e-005	1.7000e-004	3.0000e-005	2.0000e-004	5.0000e-005	3.0000e-005	8.0000e-005	0.0000	0.5528	0.5528	0.0000	0.0000	0.5529
Worker	2.0000e-004	3.0000e-004	2.8400e-003	1.0000e-005	5.4000e-004	0.0000	5.5000e-004	1.4000e-004	0.0000	1.5000e-004	0.0000	0.4751	0.4751	2.0000e-005	0.0000	0.4756
Total	**5.0000e-004**	**2.6400e-003**	**6.4500e-003**	**2.0000e-005**	**7.1000e-004**	**3.0000e-005**	**7.5000e-004**	**1.9000e-004**	**3.0000e-005**	**2.3000e-004**	**0.0000**	**1.0279**	**1.0279**	**2.0000e-005**	**0.0000**	**1.0285**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0149	0.1512	0.1124	1.7000e-004		9.0500e-003	9.0500e-003		8.3400e-003	8.3400e-003	0.0000	15.2992	15.2992	4.5600e-003	0.0000	15.3950
Paving	2.7900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0177**	**0.1512**	**0.1124**	**1.7000e-004**		**9.0500e-003**	**9.0500e-003**		**8.3400e-003**	**8.3400e-003**	**0.0000**	**15.2992**	**15.2992**	**4.5600e-003**	**0.0000**	**15.3950**

3.6 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.1000e-004	8.9000e-004	8.5200e-003	2.0000e-005	1.6300e-003	1.0000e-005	1.6500e-003	4.3000e-004	1.0000e-005	4.5000e-004	0.0000	1.4253	1.4253	7.0000e-005	0.0000	1.4269
Total	**6.1000e-004**	**8.9000e-004**	**8.5200e-003**	**2.0000e-005**	**1.6300e-003**	**1.0000e-005**	**1.6500e-003**	**4.3000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.4253**	**1.4253**	**7.0000e-005**	**0.0000**	**1.4269**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0149	0.1512	0.1124	1.7000e-004		9.0500e-003	9.0500e-003		8.3400e-003	8.3400e-003	0.0000	15.2991	15.2991	4.5600e-003	0.0000	15.3950
Paving	2.7900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0177**	**0.1512**	**0.1124**	**1.7000e-004**		**9.0500e-003**	**9.0500e-003**		**8.3400e-003**	**8.3400e-003**	**0.0000**	**15.2991**	**15.2991**	**4.5600e-003**	**0.0000**	**15.3950**

3.6 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.1000e-004	8.9000e-004	8.5200e-003	2.0000e-005	1.6300e-003	1.0000e-005	1.6500e-003	4.3000e-004	1.0000e-005	4.5000e-004	0.0000	1.4253	1.4253	7.0000e-005	0.0000	1.4269
Total	**6.1000e-004**	**8.9000e-004**	**8.5200e-003**	**2.0000e-005**	**1.6300e-003**	**1.0000e-005**	**1.6500e-003**	**4.3000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.4253**	**1.4253**	**7.0000e-005**	**0.0000**	**1.4269**

3.7 Architectural Coating - 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	0.7565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9900e-003	0.0197	0.0168	3.0000e-005		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	2.2979	2.2979	2.4000e-004	0.0000	2.3030
Total	**0.7595**	**0.0197**	**0.0168**	**3.0000e-005**		**1.5600e-003**	**1.5600e-003**		**1.5600e-003**	**1.5600e-003**	**0.0000**	**2.2979**	**2.2979**	**2.4000e-004**	**0.0000**	**2.3030**

3.7 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	5.3000e-004	5.1100e-003	1.0000e-005	9.8000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8552	0.8552	4.0000e-005	0.0000	0.8561
Total	**3.6000e-004**	**5.3000e-004**	**5.1100e-003**	**1.0000e-005**	**9.8000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8552**	**0.8552**	**4.0000e-005**	**0.0000**	**0.8561**

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	0.7565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9900e-003	0.0197	0.0168	3.0000e-005		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	2.2979	2.2979	2.4000e-004	0.0000	2.3030
Total	**0.7595**	**0.0197**	**0.0168**	**3.0000e-005**		**1.5600e-003**	**1.5600e-003**		**1.5600e-003**	**1.5600e-003**	**0.0000**	**2.2979**	**2.2979**	**2.4000e-004**	**0.0000**	**2.3030**

3.7 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	5.3000e-004	5.1100e-003	1.0000e-005	9.8000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8552	0.8552	4.0000e-005	0.0000	0.8561
Total	**3.6000e-004**	**5.3000e-004**	**5.1100e-003**	**1.0000e-005**	**9.8000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8552**	**0.8552**	**4.0000e-005**	**0.0000**	**0.8561**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2932	0.6964	3.0052	6.6300e-003	0.4632	9.3800e-003	0.4725	0.1243	8.6400e-003	0.1329	0.0000	495.2539	495.2539	0.0196	0.0000	495.6657
Unmitigated	0.2932	0.6964	3.0052	6.6300e-003	0.4632	9.3800e-003	0.4725	0.1243	8.6400e-003	0.1329	0.0000	495.2539	495.2539	0.0196	0.0000	495.6657

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	366.89	78.98	32.66	664,373	664,373
General Office Building	320.61	69.01	28.54	580,576	580,576
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	687.50	147.99	61.19	1,244,949	1,244,949

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546229	0.063048	0.174586	0.122573	0.033968	0.004845	0.015596	0.024745	0.002089	0.003270	0.006707	0.000678	0.001667

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	211.1744	211.1744	0.0173	3.5800e-003	212.6462
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	211.1744	211.1744	0.0173	3.5800e-003	212.6462
NaturalGas Mitigated	5.8000e-003	0.0527	0.0443	3.2000e-004		4.0100e-003	4.0100e-003		4.0100e-003	4.0100e-003	0.0000	57.3804	57.3804	1.1000e-003	1.0500e-003	57.7296
NaturalGas Unmitigated	5.8000e-003	0.0527	0.0443	3.2000e-004		4.0100e-003	4.0100e-003		4.0100e-003	4.0100e-003	0.0000	57.3804	57.3804	1.1000e-003	1.0500e-003	57.7296

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	501446	2.7000e-003	0.0246	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003	0.0000	26.7591	26.7591	5.1000e-004	4.9000e-004	26.9219
General Office Building	573822	3.0900e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003	0.0000	30.6213	30.6213	5.9000e-004	5.6000e-004	30.8077
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**5.7900e-003**	**0.0527**	**0.0443**	**3.2000e-004**		**4.0100e-003**	**4.0100e-003**		**4.0100e-003**	**4.0100e-003**	**0.0000**	**57.3804**	**57.3804**	**1.1000e-003**	**1.0500e-003**	**57.7296**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	501446	2.7000e-003	0.0246	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003	0.0000	26.7591	26.7591	5.1000e-004	4.9000e-004	26.9219
General Office Building	573822	3.0900e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003	0.0000	30.6213	30.6213	5.9000e-004	5.6000e-004	30.8077
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**5.7900e-003**	**0.0527**	**0.0443**	**3.2000e-004**		**4.0100e-003**	**4.0100e-003**		**4.0100e-003**	**4.0100e-003**	**0.0000**	**57.3804**	**57.3804**	**1.1000e-003**	**1.0500e-003**	**57.7296**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	573955	92.2287	7.5500e-003	1.5600e-003	92.8714
General Office Building	656796	105.5404	8.6400e-003	1.7900e-003	106.2759
Parking Lot	38720	6.2219	5.1000e-004	1.1000e-004	6.2653
Parking Lot	44704	7.1835	5.9000e-004	1.2000e-004	7.2335
Total		**211.1744**	**0.0173**	**3.5800e-003**	**212.6462**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	573955	92.2287	7.5500e-003	1.5600e-003	92.8714
General Office Building	656796	105.5404	8.6400e-003	1.7900e-003	106.2759
Parking Lot	38720	6.2219	5.1000e-004	1.1000e-004	6.2653
Parking Lot	44704	7.1835	5.9000e-004	1.2000e-004	7.2335
Total		**211.1744**	**0.0173**	**3.5800e-003**	**212.6462**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6900	3.0000e-005	2.7900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3500e-003	5.3500e-003	1.0000e-005	0.0000	5.6600e-003
Unmitigated	0.6900	3.0000e-005	2.7900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3500e-003	5.3500e-003	1.0000e-005	0.0000	5.6600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0757					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6141					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.7000e-004	3.0000e-005	2.7900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3500e-003	5.3500e-003	1.0000e-005	0.0000	5.6600e-003
Total	**0.6900**	**3.0000e-005**	**2.7900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.3500e-003**	**5.3500e-003**	**1.0000e-005**	**0.0000**	**5.6600e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0757					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6141					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.7000e-004	3.0000e-005	2.7900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3500e-003	5.3500e-003	1.0000e-005	0.0000	5.6600e-003
Total	**0.6900**	**3.0000e-005**	**2.7900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.3500e-003**	**5.3500e-003**	**1.0000e-005**	**0.0000**	**5.6600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	16.9956	0.3627	8.7500e-003	27.3248
Unmitigated	16.9956	0.3627	8.7700e-003	27.3304

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	11.0977 / 6.80181	16.9956	0.3627	8.7700e-003	27.3304
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**16.9956**	**0.3627**	**8.7700e-003**	**27.3304**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	11.0977 / 6.80181	16.9956	0.3627	8.7500e-003	27.3248
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**16.9956**	**0.3627**	**8.7500e-003**	**27.3248**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.7877	0.6966	0.0000	26.4170
Unmitigated	11.7877	0.6966	0.0000	26.4170

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	58.07	11.7877	0.6966	0.0000	26.4170
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**11.7877**	**0.6966**	**0.0000**	**26.4170**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	58.07	11.7877	0.6966	0.0000	26.4170
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**11.7877**	**0.6966**	**0.0000**	**26.4170**

9.0 Operational Offroad

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

10.0 Vegetation

Appendix C

Traffic Noise Modeling Results

Rincon Consultants, Inc.
<Analysis By?>

27 August 2015
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: Palo Alto Park Blvd Offices Project Existin
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

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

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Noise Reduction Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver2	2	1	0.0	61.2	66	61.2	10	----	61.2	0.0	8	-8.0
Receiver4	4	1	0.0	60.0	66	60.0	10	----	60.0	0.0	8	-8.0
Receiver6	6	1	0.0	60.6	66	60.6	10	----	60.6	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	3	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

RESULTS: SOUND LEVELS **<Project Name?>**

Rincon Consultants, Inc. **27 August 2015**
<Analysis By?> **TNM 2.5**
Calculated with TNM 2.5
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: **<Project Name?>**
RUN: **Palo Alto Park Blvd Offices Project Exs+Pj**
BARRIER DESIGN: **INPUT HEIGHTS**
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: **68 deg F, 50% RH**

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	With Barrier Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Noise Reduction Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver2	2	1	0.0	61.6	66	61.6	10	----	61.6	0.0	8	-8.0
Receiver4	4	1	0.0	60.4	66	60.4	10	----	60.4	0.0	8	-8.0
Receiver6	6	1	0.0	60.8	66	60.8	10	----	60.8	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	3	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Rincon Consultants, Inc.
<Analysis By?>

27 August 2015
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: Palo Alto Park Blvd Offices Project CumN
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

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

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Noise Reduction Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver2	2	1	0.0	63.1	66	63.1	10	----	63.1	0.0	8	-8.0
Receiver4	4	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0
Receiver6	6	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	3	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Rincon Consultants, Inc.
<Analysis By?>
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: Palo Alto Park Blvd Office Cumulative Proj
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

27 August 2015
TNM 2.5
Calculated with TNM 2.5

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

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver2	1	1	0.0	63.2	66	63.2	10	----	63.2	0.0	8	-8.0
Receiver4	2	1	0.0	62.2	66	62.2	10	----	62.2	0.0	8	-8.0
Receiver6	3	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	3	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0