HELIX
Environmental Planning

Borrego Springs Library and Park Project

Air Quality Analysis Report

November 2015

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AIR QUALITY ANALYSIS REPORT

BORREGO SPRINGS LIBRARY AND PARK PROJECT

Prepared for:
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GLOSSARY OF TERMS AND ACRONYMS

$\mu g/m^3$	micrograms per cubic meter
ADT	average daily trips
APN	Assessor's Parcel Number
AQIA	Air Quality Impact Assessment
BMPs	best management practices
CAA	Clean Air Act (Federal)
CAAQS	California Ambient Air Quality Standard
CalEEMod	California Emission Estimator Model
CalEPA	California Environmental Protection Agency
CALINE4	California Line Source Dispersion Model (Version 4)
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CO	carbon monoxide
COS	Conservation and Open Space
County	County of San Diego
C36	General Commercial
DPM	diesel particulate matter
ºF	Fahrenheit
g/L	grams per liter
GHG	greenhouse gases
H_2S	hydrogen sulfide
HI	hazard index
IEM	Iowa Environmental Mesonet
lbs	pounds
LLG	Linscott, Law and Greenspan
LOS	level of service
MEI	maximally exposed individual
mph	miles per hour
NAAQS	National Ambient Air Quality Standard
NO	nitrogen oxide

GLOSSARY OF TERMS AND ACRONYMS (cont.)

NO_X	oxides of nitrogen
NO_2	nitrogen dioxide
O_3	Ozone
Pb	lead
$PM_{2.5}$	fine particulate matter (particulate matter with an aerodynamic diameter of 2.5 microns or less
PM_{10}	respirable particulate matter (particulate matter with an aerodynamic diameter of 10 microns or less
ppm	parts per million
Project	Borrego Springs Library/Sheriff Substation and Park
PVC	polyvinyl chloride
RAQS	San Diego County Regional Air Quality Strategy
RC	Residential Commercial
RV	Residential Variable
SANDAG	San Diego Association of Governments
SCAQMD	South Coast Air Quality Management District
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SIP	State Implementation Plan
SO_X	oxides of sulfur
SO_2	sulfur dioxide
TACs	toxic air contaminants
T-BACT	Toxics Best Available Control Technology
TIA	Traffic Impact Analysis
VOCs	volatile organic compounds
WRCC	Western Regional Climate Center
USGS	U.S. Geological Survey
USEPA	United States Environmental Protection Agency

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EXECUTIVE SUMMARY

This report presents an assessment of potential air quality impacts associated with the proposed Borrego Springs Library and Park Project (Proposed Project or Project). The evaluation addresses the potential for air pollutant emissions during construction and after full buildout of the Project.

The Project would result in emissions of air pollutants during both the construction phase and operational phase of the Project. Construction best management practices (BMPs) would be implemented by the Project, including measures to minimize fugitive dust control emissions, such as watering twice per day during grading and stabilization of storage piles. The Project would comply with Rule 55, which requires that no visible dust is emitted beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period, and would incorporate measures to minimize the track-out/carry-out of visible roadway dust. With the inclusion of these BMPs, emissions of all criteria pollutants would be below the daily thresholds during construction, and short-term construction impacts would be less than significant.

Operational emissions associated with the Project would include vehicular traffic and area sources such as energy use, landscaping, and the use of consumer products. The Project would incorporate energy-efficiency features that would meet 2013 California Title 24 Energy Efficiency Standards. Criteria pollutant emissions would not exceed the daily screening level thresholds during Project operation.

Development of the Project would be consistent with the County of San Diego (County) Regional Air Quality Strategy (RAQS) and would not result in any cumulatively considerable emissions of nonattainment air pollutants that would exceed the screening level thresholds.

The Project would not result in the exposure of sensitive receptors to substantial emissions of pollutants, toxic air contaminants (TACs), or odors. The Project would not result in the degradation of roadway intersections such that emissions of carbon monoxide (CO) would exceed state or federal standards that would result in a CO hotspot. An evaluation of potential odors from construction activities and Project operation indicated that the Project would not expose substantial numbers of people to objectionable odors.

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1.0 INTRODUCTION AND PROJECT DESCRIPTION

1.1 PURPOSE OF THE REPORT

This report analyzes potential air quality impacts associated with the proposed Borrego Springs Library and Park Project (Proposed Project or Project), which includes an evaluation of existing conditions in the Project vicinity, an assessment of potential impacts associated with Project construction, and an evaluation of Project operational impacts. The analysis of impacts and report is prepared in accordance with the County of San Diego (County) Guidelines for Determining Significance and Report Content and Format Requirement for Air Quality (County 2007).

1.2 PROJECT LOCATION AND DESCRIPTION

The 20.5-acre Project site is generally located in the northwest and southwest quadrants of the intersection of Country Club Road and Church Lane within the unincorporated community of Borrego Springs in San Diego County, California. Regionally, the Project is located north of Anza-Borrego Desert State Park, east of Warner Springs, south of Santa Rosa and San Jacinto Mountains, and west of the Salton Sea. The site is located in the Borrego Springs Community Sponsor Area, and is identified as being in U.S. Geological Survey (USGS) Borrego Palm Canyon Quad, Section 5, Township 11S, Range 06E. The Thomas Brothers Coordinates are Page 1058, Grid J3 (2006 Riverside and San Diego Counties Edition). Refer to Figure 1, *Regional Location*, and Figure 2, *Project Vicinity Map*.

The Project would consist of two separate elements: a new public library facility with a possible expanded community room and attached sheriff substation; and a new public park. Both would be sited on currently undeveloped land immediately west/southwest of Country Club Road and on either side of Church Lane. Church Lane is the westward extension of Sunset Road, and is also known as Diamond Bar Road.

The proposed library/sheriff substation would occupy the eastern 2.8 acre portion of a 26.2 acre parcel (Assessor's Parcel Number [APN] 198-020-36) in the northwest quadrant of the Country Club Road/Sunset Road/Church Lane intersection. The library/sheriff substation site land would be donated to the county by a private donor. The proposed park would be located across Church Lane from the library/sheriff substation site on two parcels (APNs 198-020-30 and 198-020-34). These two parcels are currently owned by the County Department of Parks and Recreation and, together with adjacent roadway right-of-way that would be incorporated into the proposed park, total 17.7 acres.

As the library/sheriff substation and park are intended to be design/build projects, these elements are currently represented by conceptual plans which are indicated in Figure 3, *Library/Sheriff Substation Site Plan*, and Figure 4, *Conceptual Park Site Pla*n. More detailed plans would be completed as part of the design/build process.

1.2.1 Library/Sheriff Substation

The Project proposes an approximately 15,500-square-foot public library facility on a 2.8-acre site to replace the current, approximately 3,700-square-foot Borrego Springs Public Library (a branch of the San Diego County Library System) located in the shopping mall to the west of the proposed library site across Country Club Road. The new library would include separate areas for children, teens, adults, and staff, as well as a community room (up to 4,000 square feet in size), a great room, study rooms, a computer lab, multiple patios, restrooms, and other facilities, located in two wings on either side of a lobby rotunda, entry courtyard, and entry plaza. The proposed Project would include exterior restrooms attached to the library that would be open during and after library hours and available to members of the public, including those using the proposed park on the south side of Church Lane.

Attached to the southwestern corner of the library would be a 1,600-square-foot sheriff substation, which would replace the current San Diego County Sheriff's Borrego Springs Office, located directly across Country Club Road from the Project site, in The Mall shopping center.

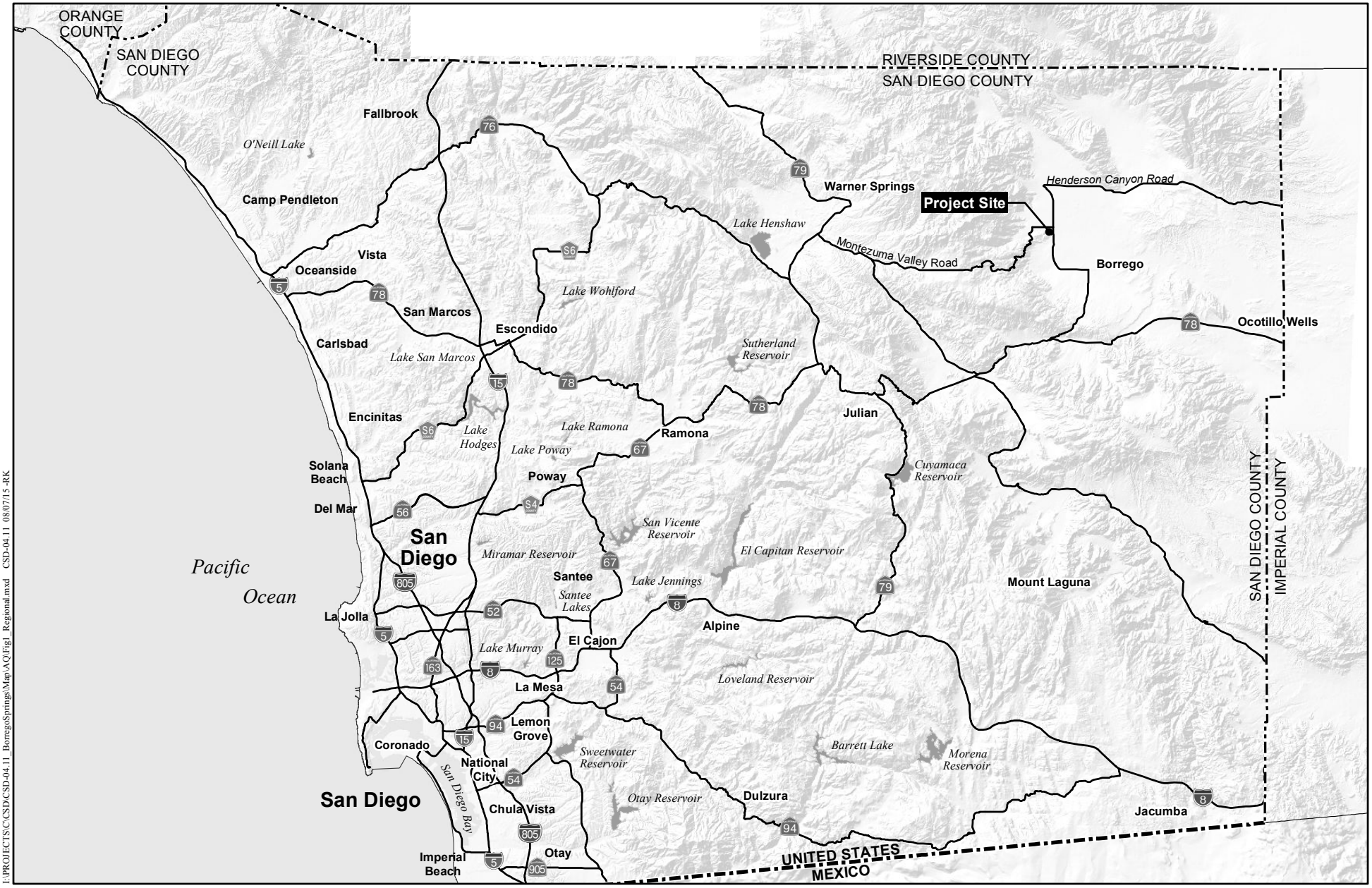
The library/sheriff substation site would also include landscaping with species that are native or indigenous to the area and the desert southwest, and an approximately 92-space asphalt parking lot northwest of the library/sheriff substation building. The building would be constructed as a zero net energy facility, incorporating sustainable design and energy reduction measures (such as photovoltaic panels) to completely offset the facility's annual energy use. Access to the library and sheriff substation would be from Country Club Road, at the northwest corner of the site. Refer to Figure 3 for the Library/Sheriff Substation Site Plan.

1.2.2 Park

The Project also proposes development of a new 17.7-acre public park in the southwest quadrant of the Country Club Road/Sunset Road/Church Lane intersection, across Church Lane from the proposed library/sheriff substation.

The park concept plan calls for a network of 8-foot-wide, decomposed granite paths connecting play areas and other facilities; fire access roads would also cross the site. An entry plaza at the northeast corner of the park would include an information kiosk, seating and shade. Two children's play areas (designed for different age groups), shaded picnic areas, and two multi-use courts for tennis and other sports, would also be located in the northeast quadrant of the park (closest to the library/sheriff substation), along with a drinking fountain, three- to five-foot-high contoured berms, and parking areas. Refer to Figure 4 for the Conceptual Park Site Plan.

The northwest quadrant of the park would include a meditation and sculpture garden with views of the nearby mountain range, a small observatory and outdoor amphitheater (with no sound amplification planned), a drinking fountain, a shaded picnic area, additional contoured berms, and a parking area. A fenced dog park with decomposed granite surfaces and contoured berms, a drinking fountain, and adjacent parking is planned for the southern portion of the park. A paved concrete pad adjacent to the southern portion of Church Lane would serve as an RV site for a volunteer park caretaker to live on site. The park concept plan calls for provision of water, a shade structure, and a photovoltaic/battery storage system for electricity use at the volunteer site.



Regional Location

BORREGO SPRINGS LIBRARY AND PARK PROJECT

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N 0 10 Miles

Figure 1

I:\PROJECTS\C\CSD\CSD-04.11_BorregoSprings\Map\AQFig2_Vicinity.mxd CSD-04.11 11/09/15 -RK

Project Vicinity Map

BORREGO SPRINGS LIBRARY AND PARK PROJECT

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N 0 2,000 Feet

Figure 2

I:\PROJECTS\C\CSD\CSD-04.11_BorregoSprings\Map\AQ\Fig2_LibrarySitePlan.mxd CSD-04.11 11/06/15 -RK

Library/Sheriff Substation Site Plan

BORREGO SPRINGS LIBRARY AND PARK PROJECT

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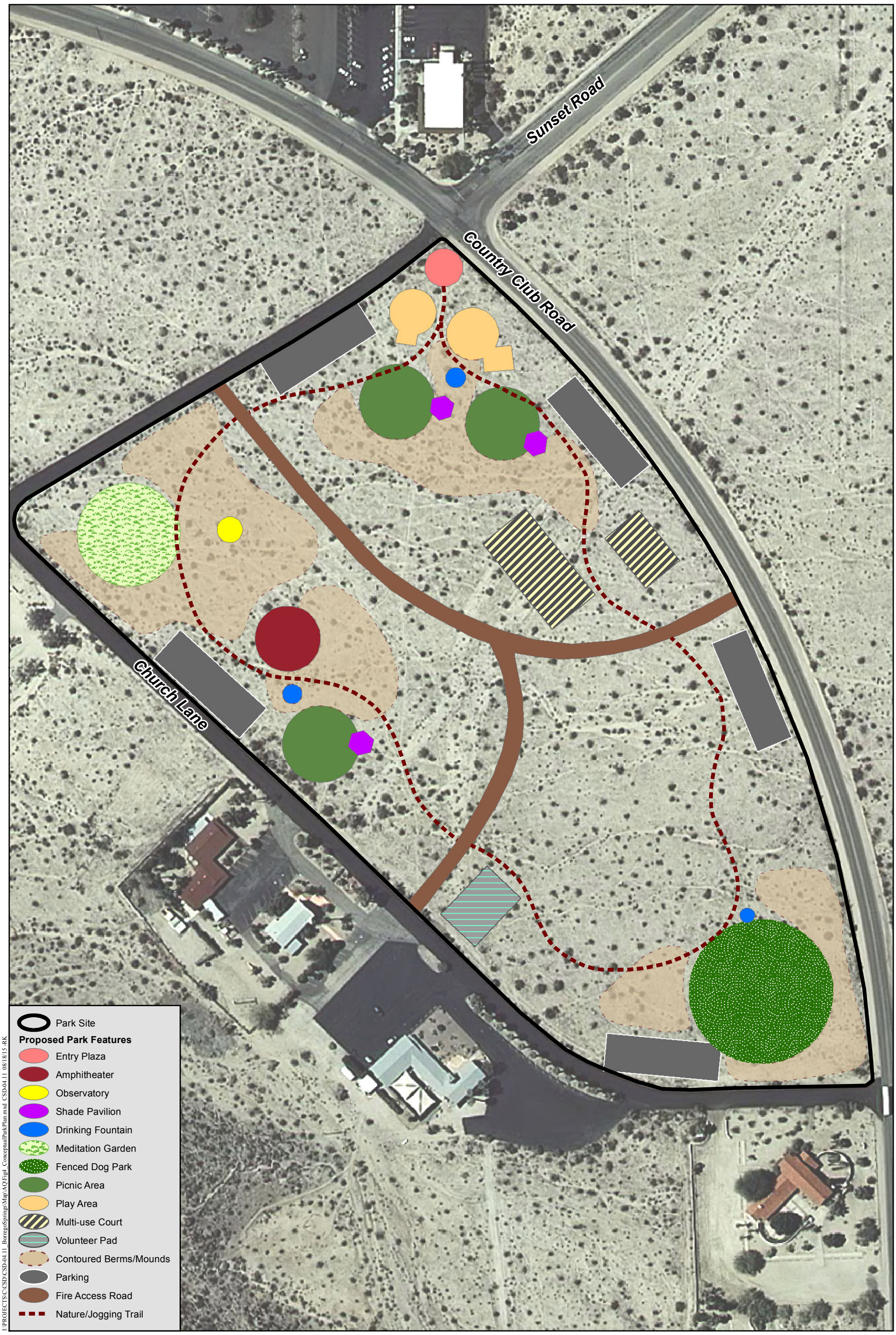
N 0 75 Feet

Figure 3



Conceptual Park Site Plan

BORREGO SPRINGS LIBRARY AND PARK PROJECT

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N 0 125 Feet

Figure 4

Water catchments basins may be provided, if feasible. Lighted bollards would be placed along the internal park pathways, and shielded, low, overhead lighting would be provided near park features, as needed.

Native soils and scattered areas of tree and shrub species that are indigenous to the area and the desert southwest would dominate the remainder of the park. Proposed vegetation would be irrigated with underground drip systems.

As shown in Figure 4, vehicular access to the park would be from two locations along Country Club Road and three locations along Church Lane, with each access point entering into a parking lot. Fire access roads would extend into the park from three entry points: one along Country Club Road, one on the north-south portion of Church Lane, and one on the east-west portion of Church Lane near the library/sheriff substation site. Pedestrian access would be available from additional locations along the park boundary.

1.2.3 Off-site Utility Improvements

Water service would be provided to the Project from water mains located in Country Club Road. The library/sheriff substation site currently has water meters on site, but it would be necessary to extend water infrastructure from Country Club Road and/or Church Lane into the park site at one or more locations.

Sewer service would be provided to the library/sheriff substation site from sewer mains located in the Christmas Circle roundabout approximately 0.2 mile to the northeast. No sewer line would be needed for the park site, since no restrooms are proposed there. It is anticipated that the sewer pipeline serving the library/sheriff substation site would be extended in a trench constructed in the approximately four-foot-wide unpaved shoulder on the south side of the Sunset Road right-of-way, and then under the Country Club Road/Sunset Road/Church Lane intersection to the library/sheriff substation site. The private donor providing the library/sheriff substation site would fund and/or install the sewer extension infrastructure, in accordance with the project Mitigation Monitoring and Reporting Program (MMRP), before completion of the library facility.

1.2.4 Street Vacation Option

The Project also includes an option to better integrate the library/sheriff substation site and the park site by closing Church Lane between the two sites. The closure would facilitate access between the library/sheriff substation and the park, making it easier for park patrons to utilize the library's restrooms and other amenities, and for library patrons to take advantage of the park's facilities. To accomplish this goal, Church Lane would be vacated between Country Club Road and the east end of the Project site. It is anticipated that the remaining portion of Church Lane would terminate in a cul-de-sac near the Project boundary. Under the street vacation option, the above-described design of the park would be modified such that the proposed parking lot fronting this east-west segment of Church Lane would not be included in the Project, and the remaining parking lots for the park along Church Lane and Country Club would be resized accordingly.

1.3 PROJECT DESIGN FEATURES AND BEST MANAGEMENT PRACTICES

1.3.1 Regulatory Requirements

1.3.1.1 *Construction Measures*

The Project would incorporate best management practices (BMPs) during construction to reduce emissions of fugitive dust. San Diego County Air Pollution Control District (SDAPCD) Rule 55 – Fugitive Dust Control states that no dust and/or dirt shall leave the property line. SDAPCD Rule 55 requires the following:

1. **Airborne Dust Beyond the Property Line:** No person shall engage in construction or demolition activity subject to this rule in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period.

2. **Track-Out/Carry-Out:** Visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out shall:

   (i) be minimized by the use of any of the following or equally effective track-out/ carry-out and erosion control measures that apply to the Project or operation:

      (a) track-out grates or gravel beds at each egress point;

      (b) wheel-washing at each egress during muddy conditions, soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; and for outbound transport trucks;

      (c) using secured tarps or cargo covering, watering, or treating of transported material; and

   (ii) be removed at the conclusion of each work day when active operations cease, or every 24 hours for continuous operations. If a street sweeper is used to remove any track-out/carry-out, only particulate matter less than 10 microns wide (PM_{10}) efficient street sweepers certified to meet the most current South Coast Air Quality Management District (SCAQMD) Rule 1186 requirements shall be used. The use of blowers for removal of track-out/ carry-out is prohibited under any circumstances.

1.3.1.2 *Area Source Reductions*

- Use of low- volatile organic compound (VOC) coatings in accordance with, or exceeding, SDAPCD Rule 67.
  - Residential interior VOC coatings are to be less than or equal to 50 grams per liter (g/L).
  - Residential exterior coatings are to be less than or equal to 100 g/L.
  - Non-residential interior/exterior coatings are to be less than or equal to 100 g/L.

1.3.1.3 *Energy Efficiencies*

- The Project will be designed to meet 2013 Title 24 energy efficiency standards.

1.3.1.4 *Solid Waste Reduction*

- A Construction and Demolition Debris Management Plan will be developed to divert debris from construction and demolition away from landfills. In accordance with County Ordinance Sections 68.508 through 68.518, 90 percent of inerts and 70 percent of all other materials from the Project will be recycled.

- In accordance with CALGreen criteria and state and local laws, at least 50 percent of operational waste would be diverted from landfills through reuse and recycling.

- Provide areas for storage and collection of recyclables and yard waste in accordance with 2013 CALGreen.

1.3.2 <u>Construction Best Management Practices</u>

The Project would implement the BMP control measures listed below:

- The Project applicant will require the contractor(s) to implement paving, chip sealing or chemical stabilization of internal roadways after completion of grading.

- Dirt storage piles will be stabilized by chemical binders, tarps, fencing or other erosion control.

- A 15-mile per hour (mph) speed limit will be enforced on unpaved surfaces.

- On dry days, dirt and debris spilled onto paved surfaces shall be swept up immediately to reduce resuspension of particulate matter caused by vehicle movement. Approach routes to construction sites shall be cleaned daily of construction-related dirt in dry weather.

- Haul trucks hauling dirt, sand, soil, or other loose materials will be covered or 2 feet of freeboard will be maintained.

- Disturbed areas shall be hydroseeded, landscaped, or developed as quickly as possible and as directed by the County and/or SDAPCD to reduce dust generation.

- Grading will be terminated if winds exceed 25 mph.

2.0 EXISTING CONDITIONS

2.1 CLIMATE / METEOROLOGY AND TEMPERATURE INVERSIONS

The climate in southern California, including the San Diego Air Basin (SDAB), is controlled largely by the strength and position of the subtropical high-pressure cell over the Pacific Ocean. Areas within 30 miles of the coast experience moderate temperatures and comfortable humidity.

The predominant wind direction in the vicinity of Project site is from the northwest and the average wind speed is approximately six miles per hour (Iowa Environmental Mesonet [IEM] 2015). The annual average maximum temperature in the Project area is approximately 87 degrees Fahrenheit (ºF), and the average minimum temperature is approximately 53ºF. Total precipitation in the Project area averages approximately 3 inches annually. Precipitation occurs mostly during the winter and relatively infrequently during the summer (Western Regional Climate Center [WRCC] 2015).

Due to its climate, the SDAB experiences frequent temperature inversions (temperature increases as altitude increases, which is the opposite of general patterns). Temperature inversions prevent air close to the ground from mixing with the air above it. As a result, air pollutants are trapped near the ground. During the summer, air quality problems are created due to the interaction between the ocean surface and the lower layer of the atmosphere, creating a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward. Additionally, hydrocarbons and nitrogen dioxide (NO_2) react under strong sunlight, creating smog. Light, daytime winds, predominantly from the west, further aggravate the condition by driving the air pollutants inland, toward the foothills. During the fall and winter, air quality problems are created due to carbon monoxide (CO) and NO_2 emissions. High NO_2 levels usually occur during autumn or winter, on days with summer-like conditions.

2.2 AIR POLLUTANTS OF CONCERN

2.2.1 Criteria Air Pollutants

Federal and state laws regulate air pollutants emitted into the ambient air by stationary and mobile sources. These regulated air pollutants are known as "criteria air pollutants" and are categorized as primary and secondary standards. Primary standards are set of limits based on human health. Another set of limits intended to prevent environmental and property damage is called secondary standards. Criteria pollutants are defined by state and federal law as a risk to the health and welfare of the general public.

The following specific descriptions of health effects for each air pollutant associated with Project construction and operation are based on U.S. Environmental Protection Agency ([USEPA] 2007) and California Air Resources Board ([CARB] 2009).

Ozone. O_3 is considered a photochemical oxidant, which is a chemical that is formed when VOCs and oxides of nitrogen (NO_X), both by-products of fuel combustion, react in the presence of ultraviolet light. Ozone is considered a respiratory irritant and prolonged exposure can reduce

lung function, aggravate asthma and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from exposure to ozone.

Carbon Monoxide. CO is a product of fuel combustion, and the main source of CO in the SDAB is from motor vehicle exhaust. CO is an odorless, colorless gas. CO affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body's organs and tissues. CO can cause health effects to those with cardiovascular disease, and can also affect mental alertness and vision.

Nitrogen Dioxide. NO_2 is also a by-product of fuel combustion, and is formed both directly as a product of combustion and in the atmosphere through the reaction of nitric oxide (NO) with oxygen. NO_2 is a respiratory irritant and may affect those with existing respiratory illness, including asthma. NO_2 can also increase the risk of respiratory illness.

Respirable Particulate Matter and Fine Particulate Matter. Respirable particulate matter, or PM_{10}, refers to particulate matter with an aerodynamic diameter of 10 microns or less. Fine particulate matter, or $PM_{2.5}$, refers to particulate matter with an aerodynamic diameter of 2.5 microns or less. Particulate matter in these size ranges has been determined to have the potential to lodge in the lungs and contribute to respiratory problems. PM_{10} and $PM_{2.5}$ arise from a variety of sources, including road dust, diesel exhaust, fuel combustion, tire and brake wear, construction operations and windblown dust. PM_{10} and $PM_{2.5}$ can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases such as asthma and chronic bronchitis. $PM_{2.5}$ is considered to have the potential to lodge deeper in the lungs.

Sulfur dioxide. Sulfur dioxide (SO_2) is a colorless, reactive gas that is produced from the burning of sulfur-containing fuels such as coal and oil, and by other industrial processes. Generally, the highest concentrations of SO_2 are found near large industrial sources. SO_2 is a respiratory irritant that can cause narrowing of the airways leading to wheezing and shortness of breath. Long-term exposure to SO_2 can cause respiratory illness and aggravate existing cardiovascular disease.

Lead. Lead (Pb) in the atmosphere occurs as particulate matter. Pb has historically been emitted from vehicles combusting leaded gasoline, as well as from industrial sources. With the phase-out of leaded gasoline, large manufacturing facilities are the sources of the largest amounts of lead emissions. Pb has the potential to cause gastrointestinal, central nervous system, kidney and blood diseases upon prolonged exposure. Pb is also classified as a probable human carcinogen.

Sulfates. Sulfates are the fully oxidized ionic form of sulfur. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features. The CARB's sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and due to fact that they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide. Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation. Breathing H_2S at levels above the standard would result in exposure to a very disagreeable odor. In 1984, a CARB committee concluded that the ambient standard for H_2S is adequate to protect public health and to significantly reduce odor annoyance.

Vinyl Chloride. Vinyl chloride, a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants and hazardous waste sites, due to microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air causes central nervous system effects, such as dizziness, drowsiness and headaches. Long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage. Cancer is a major concern from exposure to vinyl chloride via inhalation. Vinyl chloride exposure has been shown to increase the risk of angiosarcoma, a rare form of liver cancer, in humans.

Visibility-Reducing Particles. Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt. These particles in the atmosphere would obstruct the range of visibility. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze.

2.2.2. Toxic Air Contaminants

The Health and Safety Code (§ 39655, subd. (a).) defines a toxic air contaminant (TAC) as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the Federal Clean Air Act (CAA) (42 United States Code Sec. 7412[b]) is a TAC. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health.

2.3 REGULATORY SETTING

Air quality is defined by ambient air concentrations of specific pollutants identified by the USEPA to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the Federal CAA of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for several pollutants (called "criteria" pollutants, specifically, ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide, and lead). Primary

standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere. Table 1, *California and National Ambient Air Quality Standards*, shows the federal and state ambient air quality standards.

Table 1
CALIFORNIA AND NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	Federal Standards	
			Primary[a]	Secondary[b]
O_3	1 Hour	0.09 ppm (180 µg/m^3)	–	–
	8 Hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	Same as Primary
PM_{10}	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary
	AAM	20 µg/m^3	–	Same as Primary
$PM_{2.5}$	24 Hour	–	35 µg/m^3	Same as Primary
	AAM	12 µg/m^3	12.0 µg/m^3	Same as Primary
CO	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	–
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	–
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)	–	–
NO_2	AAM	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary
	1 Hour	0.18 ppm (339 µg/m^3)	0.100 ppm (188 µg/m^3)	–
SO_2	24 Hour	0.04 ppm (105 µg/m^3)	–	–
	3 Hour	–	–	0.5 ppm (1,300 µg/m^3)
	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	–
Lead	30-day Avg.	1.5 µg/m^3	–	–
	Calendar Quarter	–	1.5 µg/m^3	Same as Primary
	Rolling 3-month Avg.	–	0.15 µg/m^3	
Visibility Reducing Particles	8 hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥30 miles for Lake Tahoe)	**No Federal Standards**	
Sulfates	24 Hour	25 µg/m^3		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)		

Source: CARB 2015c.
Note: More detailed information in the data presented in this table can be found at the CARB website (www.arb.ca.gov). O_3: ozone; ppm: parts per million; µg/m^3: micrograms per cubic meter; PM_{10}: large particulate matter; AAM: Annual Arithmetic Mean; $PM_{2.5}$: fine particulate matter; CO: carbon monoxide; mg/m^3: milligrams per cubic meter; NO_2 nitrogen dioxide; SO_2: sulfur dioxide; km: kilometer; –: No Standard.

[a] National Primary Standards: The levels of air quality necessary, within an adequate margin of safety, to protect the public health.

[b] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The CARB has established the more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California Clean Air Act of 1988 (CCAA), and also has established CAAQS for additional pollutants, including sulfates, H_2S, vinyl chloride and visibility-reducing particles. Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant. On April 30, 2012, the SDAB was classified as a marginal nonattainment area for the 8-hour NAAQS for ozone (CARB 2015b). The SDAB is an attainment area for the NAAQS for all other criteria pollutants. The SDAB currently falls under a national "maintenance plan" for CO, following a 1998 redesignation as a CO attainment area (SDAPCD 2010). The SDAB is currently classified as a nonattainment area under the CAAQS for ozone (serious nonattainment), PM_{10}, and $PM_{2.5}$ (CARB 2014).

The CARB is the state regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. The SDAPCD is the local agency responsible for the administration and enforcement of air quality regulations for San Diego County.

The SDAPCD and San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The San Diego County Regional Air Quality Strategy (RAQS) was initially adopted in 1991, and is updated on a triennial basis. The most recent version of the RAQS was adopted by the SDAPCD in 2009. The local RAQS, in combination with those from all other California nonattainment areas with serious (or worse) air quality problems, is submitted to the CARB, which develops the California State Implementation Plan (SIP).

The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. The CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County as part of the development of the County's General Plan.

The SIP relies on the same information from SANDAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin.

The current federal and state attainment status (Table 2, *Federal and State Air Quality Designation*) for San Diego County is as follows:

Table 2 FEDERAL AND STATE AIR QUALITY DESIGNATION		
Criteria Pollutant	**Federal Designation**	**State Designation**
Ozone (1-hour)	(No federal standard)	Nonattainment
Ozone (8-hour)	Nonattainment	Nonattainment
CO	Maintenance	Attainment
PM_{10}	Unclassifiable	Nonattainment
$PM_{2.5}$	Attainment	Nonattainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen Sulfide	(No federal standard)	Unclassifiable
Visibility	(No federal standard)	Unclassifiable

Source: CARB 2014 and USEPA 2015b

2.4 BACKGROUND AIR QUALITY

CARB operates a network of ambient air monitoring stations throughout the State. The purpose of the monitoring network is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. There are no ambient monitoring stations located within the vicinity of the Project site. The nearest ambient monitoring station to the Project site is located more than 30 miles to the north in Indio. Additional monitoring stations include the Escondido station located approximately 40 miles to the west and the Westmoreland station located approximately 45 miles to the east. Air quality data for the Indio monitoring station are shown on Table 3, *Air Quality Monitoring Data of Nonattainment Pollutants*. The Indio monitoring station was selected because it is the closest to the Project site and experiences similar weather. It should be noted that because Indio is more densely populated than the Borrego Springs community, the pollutant concentrations and exceedances presented in Table 3 are likely greater than what is experienced in the Project's local vicinity.

Monitoring data at the Indio station shows acceptable levels of annual $PM_{2.5}$. There were several violations of the state and federal 8-hour standards for ozone in all three years sampled. Two violations of the state 1-hour ozone standard occurred in each of the three years. The state and federal 24-hours standards for PM_{10} and $PM_{2.5}$ were violated each of the three years. The state annual PM_{10} standard was exceeded in each of the three years.

Table 3 AIR QUALITY MONITORING DATA OF NONATTAINMENT POLLUTANTS			
Air Pollutant	**2012**	**2013**	**2014**
Ozone			
Max 1-hour (ppm)	0.102	0.105	0.095
Days > CAAQS (0.09 ppm)	2	2	2
Max 8-hour (ppm)	0.090	0.087	0.091
Days > NAAQS (0.075 ppm)	24	18	10
Days > CAAQS (0.070 ppm)	45	38	30
Particulate Matter (PM_{10})			
Max Daily ($\mu g/m^3$)	270.6	255.2	322.3
Days > NAAQS (150 $\mu g/m^3$)	2	3	6
Days > CAAQS (50 $\mu g/m^3$)	7	14	15
Annual Average ($\mu g/m^3$)	33.4	38.6	44.8
Exceed CAAQS (20 $\mu g/m^3$)	Yes	Yes	Yes
Particulate Matter ($PM_{2.5}$)			
Max Daily ($\mu g/m^3$)	270.6	255.2	322.3
Days > NAAQS (35 $\mu g/m^3$)	2	3	6
Annual Average ($\mu g/m^3$)	7.6	8.3	8.3
Exceed NAAQS (15 $\mu g/m^3$)	No	No	No
Exceed CAAQS (12 $\mu g/m^3$)	No	No	No

Sources: CARB 2015a (www.arb.ca.gov); USEPA 2015a (http://www.epa.gov/airdata/ad_rep_con.html) (Used for 1-hour CO)

Notes: > = exceeding; ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter; Standard Mean = Annual Arithmetic Mean; No Data = Insufficient data available to determine the value.

3.0 SIGNIFICANCE CRITERIA AND ANALYSIS METHODOLOGIES

3.1 SIGNIFICANCE CRITERIA

The County (2007) has approved guidelines for determining significance based on Appendix G.III of the State California Environmental Quality Act (CEQA) Guidelines, which provide guidance that a project would have a significant environmental impact if it would:

1. Conflict with or obstruct the implementation of the San Diego RAQS or applicable portions of the SIP;

2. Result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation;

3. Result in a cumulatively considerable net increase for which the SDAB is in non-attainment of NAAQS or CAAQS;

4. Expose sensitive receptors (including, but not limited to, residences, schools, hospitals, resident care facilities, or day-care centers) to substantial pollutant concentrations; and/or

5. Create objectionable odors affecting a substantial number of people.

To determine whether a project would (a) result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation, or (b) result in a cumulatively considerable net increase of PM_{10} or exceed quantitative thresholds for ozone precursors, oxides of NO_X and VOCs, Project emissions may be evaluated based on the quantitative emission thresholds established by the SDAPCD. As part of its air quality permitting process, the SDAPCD has established thresholds in Rule 20.2 for the preparation of Air Quality Impact Assessments (AQIAs). The County has also adopted the SCAQMD's screening threshold of 55 pounds (lbs) per day or 10 tons per year as a significance threshold for $PM_{2.5}$.

For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality. The screening thresholds are included in Table 4, *Screening-level Thresholds for Air Quality Impact Analysis*.

Table 4
SCREENING-LEVEL THRESHOLDS FOR AIR QUALITY IMPACT ANALYSIS

Pollutant	Total Emissions		
Construction Emissions (Pounds per Day)			
Respirable Particulate Matter (PM_{10})	100		
Fine Particulate Matter ($PM_{2.5}$)	55		
Oxides of Nitrogen (NO_X)	250		
Oxides of Sulfur (SO_X)	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOCs)	75		
Operational Emissions			
	Pounds Per Hour	**Pounds per Day**	**Tons per Year**
Respirable Particulate Matter (PM_{10})	---	100	15
Fine Particulate Matter ($PM_{2.5}$)	---	55	10
Oxides of Nitrogen (NO_X)	25	250	40
Oxides of Sulfur (SO_X)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6
Volatile Organic Compounds (VOCs)	---	75	13.7
Toxic Air Contaminant Emissions			
Excess Cancer Risk	1 in 1 million 10 in 1 million with T-BACT		
Non-Cancer Hazard	1.0		

Source: SDAPCD Rule 20.2 and Rule 1210.
T-BACT = Toxics Best Available Control Technology

3.2 METHODOLOGY

The air quality impact analysis contained in this report was prepared in accordance with the methodologies provided by the County as included in the *Guidelines for Determining Significance and Report Format and Content Requirements for Air Quality* (County 2007).

Criteria pollutant and ozone precursor emissions from Project construction and operation are assessed using the California Emission Estimator Model (CalEEMod), Version 2013.2.2 (SCAQMD 2013). CalEEMod is a computer model developed by SCAQMD with the input of several air quality management and pollution control districts to estimate criteria air pollutant emissions from various urban land uses (SCAQMD 2013). CalEEMod has the ability to calculate both mobile (i.e., vehicular) and area source or stationary source emissions. CalEEMod allows land use selections that include project land use types, sizes, and metric specifics.

Construction Emissions. CalEEMod incorporates CARB's EMFAC2011 model for on-road vehicle emissions and the OFFROAD2011 model for off-road vehicle emissions (CARB 2012 and 2011). CalEEMod is designed to model construction emissions for land development projects and allows for the input of project-specific information, such as the number of equipment, hours of operations, duration of construction activities, and selection of emission control measures. The analysis assessed maximum daily emissions from individual construction activities, including site preparation, grading, building construction, paving, and architectural coating.

Construction would require heavy equipment during site preparation, mass grading, building construction, and paving. Construction equipment estimates are based on default values in CalEEMod, Version 2013.2.2 model and input from the Project Applicant. Table 5, *Construction Equipment Assumptions*, presents a summary of the assumed equipment that would be involved in each stage of construction.

Table 5
CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Phase	Equipment	Number
Site Preparation	Rubber Tired Dozers	3
	Tractors/Loaders/Backhoes	4
Grading	Excavators	2
	Rubber Tired Dozers	1
	Graders	1
	Tractors/Loaders/Backhoes	2
	Scrapers	2
Underground Utilities	Excavators	1
	Trencher	1
Building Construction	Cranes	1
	Forklifts	3
	Generator Sets	1
	Tractors/Loaders/Backhoes	3
	Welders	1
Paving	Pavers	2
	Paving Equipment	2
	Rollers	2
Architectural Coating	Air Compressors	1

Source: CalEEMod (output data, including equipment horsepower, is provided in Appendix A).

The construction schedule was determined by using CalEEMod defaults, input from the Project Applicant, and standard assumptions for similarly sized projects, taking into consideration the size of the Project in order to estimate necessary construction activities and length of days per construction activity. For example, an underground utilities phase was added to the model to account for necessary Project trenching and utility installation. As shown in Table 6, *Anticipated Construction Schedule*, Project development was assumed to start in March 2017 and is projected to end January 2018.

Construction would begin with two weeks for site preparation followed by five weeks of grading activities. Underground utilities installation would follow and last two weeks. Building construction would last approximately five months. Paving and architectural coatings would mark the end of construction activities and would last four weeks each.

The quantity, duration, and the intensity of construction activity have an effect on the amount of construction emissions and their related pollutant concentrations that occur at any one time. As such, the emission forecasts provided herein reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction is occurring in a relatively intensive manner. Because of this conservative assumption, actual emissions could be less than those forecasted. If construction is delayed or occurs over a longer time period, emissions could be reduced because of (1) a more modern and cleaner-burning construction equipment fleet mix than incorporated in the CalEEMod, and/or (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval). A complete listing of the assumptions used in the analysis and model output is provided in Appendix A of this report.

Table 6
ANTICIPATED CONSTRUCTION SCHEDULE

Construction Activity	Construction Period		
	Start	End	Number of Working Days
Site Preparation	03/27/2017	04/07/2017	10
Grading	04/10/2017	05/19/2017	30
Underground Utilities	05/22/2017	06/02/2017	10
Building Construction	06/05/2017	11/06/2017	111
Paving	11/07/2017	12/04/2017	20
Architectural Coating	12/05/2017	01/01/2018	20

Source: CalEEMod (output data, including equipment horsepower, is provided in Appendix A).

Although it was assumed that all of the dust control measures listed in Section 1.3 of this report would be implemented, to model the most conservative construction estimates, only application of water during grading and a 15-mph speed limit on unpaved surfaces was taken into consideration. Based on CalEEMod, Version 2013.2.2, the control efficiency for watering two times per day is 55 percent. The Project proposes balanced grading activity, which means that no soil would be transported off site for disposal nor would soil be transported on site for use in construction activities.

The Project would have to conform to the VOC limits included in SDAPCD Rule 67. According to Rule 67, residential interior coatings must have a VOC content less than or equal to 50 g/L, residential exterior coatings must have a content less than or equal to 100 g/L, and non-residential exterior and interior coatings must have a content less than or equal to 250 g/L. For modeling the Project's emissions in CalEEMod, conformance with these rules was assumed. The quantities of coatings that would be applied to the interior and exterior of the new buildings were estimated according to CalEEMod default assumptions. A complete listing of the assumptions used in the analysis and model output is provided in Appendix A of this report.

Operational Emissions. The model estimates Project-generated, long-term regional area-source and mobile-source emissions of criteria air pollutants and ozone precursors. Operational emissions from area sources include the combustion of natural gas for heating and hot water, engine emissions from landscape maintenance equipment, and VOC emissions from repainting of buildings.

Operational emissions from mobile source emissions are associated with Project-related vehicle trip generation. Based on the Traffic Impact Analysis ([TIA] Linscott, Law and Greenspan Engineers [LLG] 2015), at full buildout the Project would generate 1,560 average daily trips (ADTs).

CalEEMod default motor vehicle emission rates are based on CARB's EMFAC state-wide emission factors for the San Diego County region which are incorporated into CalEEMod. Default vehicle speeds, trip lengths, trip purpose, and trip type percentages were used. Model output data sheets are included in Appendix A.

Surrounding Land Uses and Location of Off-site Sensitive Receptors. The Project site is surrounded by vacant, undeveloped land, a shopping center, and several churches. The eastern edge of the Project site is approximately 0.23 miles southwest of Christmas Circle Community Park, which is considered the hub and gateway to Borrego Springs. A shopping center known as The Mall is located northeast of the library/sheriff substation site. The land to the northwest and west of the library/sheriff substation site is vacant and undeveloped. The land to the west and south, immediately adjacent to the proposed park site is occupied by four churches. The land to the east across Country Club Road is vacant and undeveloped. The closest residential uses are approximately 0.15 miles from the southern boundary of the park site along Anchor Drive.

Carbon Monoxide Impacts at Congested Intersections. Localized CO concentrations at intersections that would result in a level of service (LOS) E or F due to the Project were estimated using the California Department of Transportation (Caltrans) California Line Source Dispersion Model (Version 4) (CALINE4) line source dispersion model. LOS is a measure of traffic delay, rated A-F, with F indicating the worst delay.

4.0 PROJECT IMPACT ANALYSIS

The Project would result in both construction and operational emissions. Construction emissions include short-term emissions associated with mass grading, infrastructure installation, and structure development from the Project. Operational emissions include long-term emissions associated with the Project, including energy usage and traffic at full Project buildout.

4.1 CONFORMANCE TO THE REGIONAL AIR QUALITY STRATEGY

4.1.1 Guidelines for the Determination of Significance

The RAQS outlines SDAPCD's plans and control measures designed to attain the CAAQS for ozone. In addition, the SDAPCD relies on the SIP, which includes the SDAPCD's plans and control measures for attaining the ozone NAAQS. These plans accommodate emissions from all sources, including natural sources, through implementation of control measures, where feasible, on stationary sources to attain the standards. Mobile sources are regulated by the USEPA and CARB, and the emissions and reduction strategies related to mobile sources are considered in the RAQS and SIP.

The RAQS relies on information from CARB and SANDAG, including projected growth in the County, mobile, area and all other source emissions in order to project future emissions and determine from that the strategies necessary for the reduction of stationary source emissions through regulatory controls. The CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County. As such, projects that propose development that is consistent with the growth anticipated by the general plans would be consistent with the RAQS. In the event that a project proposes development which is less dense than anticipated within the General Plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the County General Plan and SANDAG's growth projections upon which the RAQS is based, the project would be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality. This situation would warrant further analysis to determine if the Project and the surrounding projects exceed the growth projections used in the RAQS for the specific subregional area.

4.1.2 Significance of Impacts Prior to Mitigation

The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for ozone. The RAQS relies on SANDAG growth projections based on population, vehicle trends, and land use plans developed by the cities and by the County as part of the development of their general plans and specific plans.

Projects that propose development that is consistent with (or less dense than) the growth anticipated by the general plans would be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the County General Plan and SANDAG's growth projections upon with the RAQS is based, the project would be in conflict with the RAQS and SIP, and may have a potentially significant impact on air quality. This situation

would warrant further analysis to determine if the Project and the surrounding projects exceed the growth projections used in the RAQS for the specific subregional area.

The project park site is zoned as Variable Family Residential (RV) and the library site is zoned Residential Commercial (RC). RC zoning permits Cultural Exhibits and Library Services. RV zoning allows a public passive park/recreational area as an Essential Service. The project, therefore, would be considered consistent with the zoning and land use designations of the General Plan. Furthermore, the project would not introduce new housing or an employment center that might induce people to move to the area. Because the project would not induce growth that could result in exceeding regional forecasts, it would be consistent with the RAQS, which are based on SANDAG's housing, population and employment assumptions. No impacts would occur and no mitigation is required.

4.1.3 Mitigation Measures and Design Considerations

The General Plan Conservation and Open Space (COS) Element includes goals and policies designed to reduce emissions of criteria pollutants while protecting public health (County 2011). Policies with which the Project is consistent include the following:

> COS 14.3 **Sustainable Development.** Require design of residential subdivisions and nonresidential development through "green" and sustainable land development practices to conserve energy, water, open space, and natural resources.
>
> COS-14.7 **Alternative Energy Sources for Development Projects.** Encourage development projects that use energy recovery, photovoltaic, and wind energy.
>
> COS-15.1 **Design and Construction of New Buildings.** Require that new buildings be designed and constructed in accordance with "green building" programs that incorporate techniques and materials that maximize energy efficiency, incorporate the use of sustainable resources and recycled materials, and reduce emissions of greenhouse gases (GHGs) and toxic air contaminants.
>
> COS-15.4 **Title 24 Energy Standards.** Require development to minimize energy impacts from new buildings in accordance with or exceeding Title 24 energy standards.
>
> COS-17.2 **Construction and Demolition Waste.** Require recycling, reduction, and reuse of construction and demolition debris.
>
> COS-17.6 **Recycling Containers.** Require that all new land development projects include space for recycling containers.
>
> COS-19.1 **Sustainable Development Practices.** Require land development, building design, landscaping, and operational practices that minimize water consumption.

The Project addresses several RAQS control measures and the General Plan goals that are relevant to the Project site. The Project would not exceed the significance thresholds established by the County; therefore, impacts would be less than significant and no mitigation is required.

4.1.4 Conclusions

The Proposed Project would conform to the RAQS and SIP and would result in a less than significant impact.

4.2 CONFORMANCE TO FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

4.2.1 Construction Impacts

4.2.1.1 *Guidelines for the Determination of Significance*

Would the project construction result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation?

To determine whether a project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation, project emissions may be evaluated based on the quantitative emission thresholds established by the SDAPCD (as shown in Table 1). These limits are as follows:

Ozone Precursors

> *Would the project result in emissions that exceed 250 lbs per day of NO_X, or 75 lbs per day of VOCs?*

Carbon Monoxide

> *Would the project result in emissions that exceed 550 lbs per day of CO, and when totaled with the ambient concentrations exceed a 1-hour concentration of 20 ppm or an 8-hour average of 9 ppm?*

Particulate Matter

> *Would the project result in emissions of $PM_{2.5}$ that exceed 55 lbs per day?*
>
> *Would the project result in emissions of PM_{10} that exceed 100 lbs per day and increase the ambient PM_{10} concentration by 5.0 $\mu g/m^3$ or greater at any sensitive receptor locations (or maximum exposed individual (MEI), a term commonly used by CARB for sensitive receptors)?*

4.2.1.2 *Significance of Impacts Prior to Mitigation*

The construction activities associated with the Project would generate diesel exhaust emissions from heavy duty construction equipment and fugitive dust from grading activities. In general, emissions from diesel-powered equipment contain more NO_X, SO_X, and particulate matter than gasoline-powered engines. However, diesel-powered engines generally produce less CO and less VOCs than do gasoline-powered engines.

Emissions related to the construction of the Project would be temporary. Table 7, *Estimated Construction Emissions,* provides a summary of the daily construction emission estimates by activity by construction activity. As noted above, it was assumed that dust control measures (watering a minimum of two times daily) would be employed to reduce emissions of fugitive dust during site grading. Where construction activities were assumed to occur simultaneously, the resultant emissions from each activity were summed and compared to the daily emission thresholds to determine significance.

Table 7
ESTIMATED CONSTRUCTION EMISSIONS

Construction Activity	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
	lbs/day					
Site Preparation	5	52	40	<0.5	11	7
Grading	6	70	48	<0.5	7	5
Underground Utilities	1	7	5	<0.5	<0.5	<0.5
Building Construction	6	39	50	<0.5	6	3
Paving	2	20	15	<0.5	1	1
Architectural Coatings	16	2	5	<0.5	1	<0.5
Maximum Daily Emissions	**16**	**70**	**50**	**<0.5**	**11**	**7**
Screening-Level Thresholds	75	250	550	250	100	55
Exceedance?	No	No	No	No	No	No

Note: Fugitive dust measures (watering twice daily) were applied to control PM_{10} and $PM_{2.5}$ dust emissions.

As shown in Table 7, with implementation of construction BMPs and Project design features, emissions of all criteria pollutants, including PM_{10} and $PM_{2.5}$, would be below the daily thresholds during construction. Construction of the Project would, therefore, not conflict with the NAAQS or CAAQS, and would have less than significant impacts.

4.2.1.3 *Mitigation Measures and Design Considerations*

As discussed in Section 1.3, the Project would incorporate construction BMPs and Project design features in an effort to reduce Project-related emissions. With implementation of those measures, the Project would not exceed the significance thresholds established by the County; therefore, impacts would be less than significant and no mitigation is required.

4.2.1.4 *Conclusions*

With implementation of the design considerations noted above, the Proposed Project would result in construction-related emissions below the level of significance. Therefore, Project criteria pollutants emissions during construction would constitute a less than significant impact on the ambient air quality.

4.2.2 Operational Impacts

4.2.2.1 *Guidelines for the Determination of Significance*

Based on the County Guidelines (2007), operational impacts would be potentially significant if they exceed the quantitative screening-level thresholds for criteria pollutants as listed under Section 4.2.1.1.

4.2.2.2 *Significance of Impacts Prior to Mitigation*

The main operational emissions sources associated with the Project are associated with traffic; emissions associated with area sources such as landscaping, and the use of natural gas would also be generated.

Project-generated traffic was addressed in the TIA (LLG 2015). Based on the TIA, at full buildout the Project would generate 1,560 ADT. To estimate emissions associated with Project-generated traffic, the CalEEMod model was used. Motor vehicle emission rates are, therefore, based on CARB's EMFAC state-wide emission factors for the San Diego County region. Default vehicle speeds, trip lengths, trip purpose, and trip type percentages were used.

Area source emissions, including emissions from energy use, landscaping, and maintenance use of architectural coatings were calculated using the CalEEMod model. Operational emission calculations and model outputs are provided in Appendix A. Table 8, *Operational Emissions,* presents the summary of operational emissions for the Project.

As shown in Table 8, Project emissions of all criteria pollutants during operation would be below the daily thresholds. Therefore, operation of the Project would not be considered a significant impact on air quality. Impacts would be less than significant.

Table 8
OPERATIONAL EMISSIONS

Category	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
	lbs/day					
Area	22	<0.5	<0.5	<0.5	<0.5	<0.5
Energy	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Mobile	5	9	44	<0.5	7	2
TOTAL	**27**	**9**	**44**	**<0.5**	**7**	**2**
Screening-Level Thresholds	75	250	550	250	100	55
Exceedance?	No	No	No	No	No	No

Traffic Related CO Concentrations (CO Hotspot Analysis)

Vehicle exhaust is the primary source of CO. In an urban setting the highest CO concentrations are generally found within close proximity to congested intersections. Under typical meteorological conditions, CO concentrations tend to decrease as distance from the emissions

source (i.e., congested intersection) increase. Project-generated traffic has the potential of contributing to localized hotspots of CO off site. A CO hotspot is a localized concentration of CO that is above the state or national 1-hour or 8-hour CO ambient air standards.

To verify that the Project would not cause or contribute to a violation of the 1-hour and 8-hour CO standards either on a project or cumulative level, an evaluation of the potential for CO hotspots at nearby intersections was conducted. The TIA (LLG 2015) evaluated whether or not there would be a decrease in the LOS at the intersections affected by the Proposed Project. The County guidelines call for a CO hotspot analysis if the Project would:

- place sensitive receptors within 500 feet of a signalized intersection with a LOS of E or F, with peak-hour trips exceeding 3,000 vehicles; or
- cause intersections to operate at LOS E or F, with peak-hour trips exceeding 3,000 vehicles.

According to the TIA (LLG 2015), all intersections would continue to operate at acceptable Levels of Service with the Project. Therefore, impacts sensitive receptors by CO hotspots would be less than significant.

4.2.2.3 *Mitigation Measures and Design Considerations*

As listed in Section 1.3, a wide range of current regulatory codes, Project design features, and other measures would be incorporated into the Proposed Project. The Project would incorporate energy-efficiency features that would meet the 2013 California Title 24 Energy Efficiency Standards. Given the result of a less than significant impact, no additional mitigation measures would be required.

4.2.2.4 *Conclusions*

Operation emissions of criteria pollutants for the full Project buildout would be below the significance thresholds and, therefore, would be less than significant under CEQA.

4.3 CUMULATIVELY CONSIDERABLE NET INCREASE OF CRITERIA POLLUTANTS

4.3.1 Construction Impacts

Based on the County Guidelines (2007), a project would result in a cumulatively significant impact if the project results in a significant contribution to the cumulative increase in pollutants for which the SDAB is listed as nonattainment for the CAAQS and NAAQS. As discussed in Section 2.0, the SDAB is designated as a nonattainment area for the NAAQS for ozone and the CAAQS for ozone, PM_{10}, and $PM_{2.5}$.

Cumulatively considerable net increases during the construction phase would typically happen if two or more projects near each other are simultaneously constructing projects. A project that has a significant direct impact on air quality with regard to emissions of PM_{10}, $PM_{2.5}$, NO_X, or VOCs during construction would also have a significant cumulatively considerable net increase. In the

event direct impacts from a proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions of concern from the proposed project, in combination with the emissions of concern from other proposed or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the guidelines identified in Section 3.0.

4.3.1.1 *Guidelines for the Determination of Significance*

The following thresholds are used for the assessment of cumulative construction impacts:

> *Would the project result in emissions that exceed 250 lbs per day of NO_X or 75 lbs per day of VOCs?*
>
> *Would the project result in emissions of $PM_{2.5}$ that exceed 55 lbs per day?*
>
> *Would the project result in emissions of PM_{10} that exceed 100 lbs per day and increase the ambient PM_{10} concentration by 5.0 micrograms per cubic meter ($\mu g/m^3$) or greater at the maximum exposed individual?*

4.3.1.2 *Significance of Impacts Prior to Mitigation*

Short-term emissions associated with construction generally result in near-field impacts. As shown in the Project construction emissions evaluation, the emissions of NO_X, VOCs, PM_{10}, and $PM_{2.5}$ would be below significance levels. Short-term cumulative impacts related to air quality could occur if construction of the Project and other projects in the surrounding area were to occur simultaneously. In particular, with respect to local impacts, the consideration of cumulative construction particulate (PM_{10} and $PM_{2.5}$) impacts is limited to cases when projects constructed simultaneously are within a few hundred yards of each other because of (1) the combination of the short range (distance) of particulate dispersion (especially when compared to gaseous pollutants) and (2) the SDAPCD's required dust control measures which further limit particulate dispersion from a project site. There are no known projects in the vicinity of the Proposed Project where major construction would occur concurrently with the Project. Therefore, Project construction is not anticipated to result in a cumulatively significant impact on air quality.

Section 4.2 concludes that the Project would not result in a direct impact to air quality during construction; and as discussed in Section 4.4 below, the Project would not have significant impacts to sensitive receptors during construction. Therefore, construction of the Project would not result in a cumulatively considerable contribution to a significant air quality impact pertaining to NO_X, VOCs, PM_{10}, and $PM_{2.5}$.

4.3.1.3 *Mitigation Measures and Design Considerations*

Control measures for construction are discussed in Section 4.2.1.3. As discussed in that section, implementation of standard construction mitigation measures controlling fugitive dust emissions would minimize the Project's contribution to cumulative air quality impacts from construction activities. Cumulative projects would also need to comply with SDAPCD Rules for dust control and construction equipment. No other mitigation measures would be required.

4.3.1.4 *Conclusions*

Cumulative impacts associated with Project construction would be less than cumulatively considerable and therefore less than significant.

4.3.2 Operational Impacts

As discussed above, based on the County Guidelines (2007), a project would result in a cumulatively significant impact if the project results in a significant contribution to the cumulative increase in NO_X, VOCs, PM_{10}, and $PM_{2.5}$. In accordance with the guidelines, a project that does not conform to the RAQS and/or has a significant direct impact on air quality with regard to operational emissions of nonattainment pollutants would also have a cumulatively considerable net increase. Also, projects that cause road intersections to operate at or below a LOS E and create a CO hotspot create a cumulatively considerable net increase of CO.

4.3.2.1 *Guidelines for the Determination of Significance*

The following thresholds are used for the assessment of cumulatively considerable net increases in air pollutants during the operational phase:

> *Would the project conform to the RAQS and/or have a significant direct impact on air quality with regard to operational emissions of PM_{10}, $PM_{2.5}$, NO_X, and/or VOCs, which would also have a significant cumulatively considerable net increase in these emissions?*
>
> *Would the project cause road intersections or roadway segments to operate at or below LOS E and create a CO hotspot that would result in a cumulatively considerable net increase of CO?*

4.3.2.2 *Significance of Impacts Prior to Mitigation*

As described in Sections 4.1 and 4.2, the Proposed Project would be consistent with the RAQS, and would not exceed the County's screening-level thresholds. As discussed in Section 4.2.2, the Project would not create a CO hotspot that would result in a cumulatively considerable net increase of CO. Therefore, the Project would not create a cumulatively considerable net increase in criteria pollutants associated with operation and impacts would be less than significant.

4.3.2.3 *Mitigation Measures and Design Considerations*

As discussed in Section 4.1.3, the Project addresses several RAQS control measures and the General Plan goals that are relevant to the Project site. With implementation of those measures, the Project would not exceed the significance thresholds established by the County; therefore, impacts would be less than significant and no mitigation is required.

4.3.2.4 *Conclusions*

Cumulative impacts associated with Project operation would be less than significant.

4.4 IMPACTS TO SENSITIVE RECEPTORS

4.4.1 Guidelines for the Determination of Significance

Would the project expose sensitive receptors to substantial pollutant concentrations?

The guidelines of significance listed below are used by the County to address the above question:

> *Would the project place sensitive receptors near CO hotspots or creates CO hotspots near sensitive receptors?*
>
> *Would project implementation result in exposure to TACs resulting in a maximum incremental cancer risk greater than 1 in 1 million without application of Toxics-Best Available Control Technology or a health hazard index (HI) greater than 1 and, thus, be deemed as having a potentially significant impact?*

4.4.2 Significance of Impacts Prior to Mitigation

4.4.2.1 *CO Concentrations (CO Hotspot Analysis)*

As discussed in Section 4.2.2, the Project would not create a CO hotspot that would result in a cumulatively considerable net increase of CO; therefore, the Project would not result in a significant impact for CO.

Construction-related Diesel Health Risk

Construction activities would result in short-term, Project-generated emissions of diesel particulate matter (DPM) from the exhaust of off-road, heavy-duty diesel equipment used for site preparation and grading; paving; building construction; and other miscellaneous activities. CARB identified DPM as a TAC in 1998. The dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Thus, the risks estimated for a maximally exposed individual (MEI) are higher if a fixed exposure occurs over a longer time period. Health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, are typically based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the Project.

The nearest sensitive receptors are the single family residential units approximately 0.15 miles from the southern boundary of the park site along Anchor Drive. These residences represent the receptors with the greatest potential to be exposed to the highest levels of DPM. However, as presented earlier in Table 7, maximum daily particulate emissions, which include DPM, would be relatively low when compared to the screening-level threshold. Additionally, the construction period would be relatively short (less than one year), especially when compared to 70 years. Combined with the highly dispersive properties of DPM, construction-related emissions of TACs would not expose sensitive receptors to substantial emissions of TACs. The impact would be less than significant.

Operation-related Health Risk

Health risk assessments are typically conducted for substantial sources of diesel particulate emissions (e.g., truck stops, bus stations, and warehouse distribution facilities). In addition, typical sources of acutely and chronically hazardous toxic air contaminants include industrial manufacturing processes, automotive repair facilities, and dry cleaning facilities. Since the proposed Project would not contain such uses, the proposed Project does not warrant a health risk assessment. As such, in terms of long-term operations, the proposed residential uses would not generate substantial TACs.

4.4.3 Mitigation Measures and Design Considerations

Impacts are less than significant; therefore, no mitigation measures are required.

4.4.4 Conclusions

Impacts to sensitive receptors would be less than significant.

4.5 ODOR IMPACTS

4.5.1 Guidelines for the Determination of Significance

Based on the County Guidelines (2007), a project would have a significant impact if it would generate objectionable odors or place sensitive receptors next to existing objectionable odors that would affect a considerable number of persons or the public.

SDAPCD Rule 51 (Public Nuisance) and California Health & Safety Code, Division 26, Part 4, Chapter 3, Section 541700, prohibit the emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of the public. Projects required to obtain permits from SDAPCD, typically industrial and some commercial projects, are evaluated by SDAPCD staff for potential odor nuisance and conditions may be applied (or control equipment required), where necessary, to prevent occurrence of public nuisance.

4.5.2 Significance of Impacts Prior to Mitigation

Project construction could result in minor amounts of odor compounds associated with diesel heavy equipment exhaust. Diesel exhaust and VOCs would be emitted during construction of the Project. The odor of these emissions is objectionable to some; however, emissions would disperse rapidly from the Project site and therefore should not be at a level that would affect a substantial number of people. Further, construction operations would be temporary. As a result, impacts associated with odors during construction are not considered significant.

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting activities, refineries, landfills, dairies, and fiberglass molding operations. The Project would not place sensitive receptors within a close proximity to the listed odor sources. In addition, the proposed development would not be a source of odor impacts, as

the operation of library, sheriff substation, and park uses are not generally associated with odors. Impacts associated with odor sources are considered less than significant.

4.5.3 Mitigation Measures and Design Considerations

Because the Project would not generate objectionable odors or place sensitive receptors near existing odor sources that would affect a considerable number of persons or the public, no mitigation measures or additional design considerations are required.

4.5.4 Conclusion

Due to the nature of the development, there are no significant odorous air emissions anticipated from construction or operation; therefore, impacts are anticipated to be less than significant.

5.0 STREET VACATION OPTION IMPACT ANALYSIS

The analysis presented above in Section 4.0, *Project Impact Analysis*, for the Proposed Project would also apply under the Street Vacation Option. The only difference between the two options is the closure of Church Lane between the proposed library/sheriff substation and park sites; thereby resulting in changes to traffic circulation. Changes to traffic circulation patterns have the potential to result in local CO hotspots as described in Section 4.2.2.2 for the Proposed Project. As with the Proposed Project, according to the TIA (LLG 2015), all intersections would continue to operate at an acceptable LOS under the Street Vacation Option. Therefore, impacts related to CO hotspots would be less than significant.

6.0 SUMMARY OF RECOMMENDED PROJECT DESIGN FEATURES, IMPACTS, AND MITIGATION

6.1 PROJECT DESIGN FEATURES

As described in Section 1.3, the Project would incorporate measures to minimize fugitive dust control emissions, including watering twice per day during grading and stabilization of storage piles. The Project would comply with Rule 55, which requires that no visible dust is emitted beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period, and would incorporate measures to minimize the track-out/carry-out of visible roadway dust.

A wide range of current regulatory codes, Project design features, and other measures would be incorporated into the Proposed Project. The Project would incorporate energy-efficiency features that would meet 2013 California Title 24 Energy Efficiency Standards. Low VOC coatings will be used during construction and maintenance in accordance with SDAPCD Rule 67 requirements.

6.2 PROJECT IMPACTS

As described in Section 4.1, the Project would be consistent with the RAQS.

The control measures listed above constitute BMPs for dust control. With the implementation of construction BMPs, air pollutant emissions impacts associated with Project construction would be less than significant.

Operational emissions would be associated with vehicle trips generated by the development, along with area sources such as energy use and landscaping. Based on the evaluation of air emissions, the Project emissions would be below the screening-level thresholds for all criteria pollutants and would be less than significant for air quality.

The Project would not result in any cumulatively considerable emissions of nonattainment air pollutants that would exceed the screening level thresholds.

Impacts associated with exposure of sensitive receptors to substantial pollutant concentrations would be less than significant.

An evaluation of odors from general Project construction and operation of the Project area indicated that odor impacts would be less than significant.

6.3 PROJECT MITIGATION

Because the Project would not result in significant impacts, no mitigation is required.

7.0 REFERENCES

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8.0 LIST OF PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED

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Appendix A

CONSTRUCTION AND OPERATION CRITERIA POLLUTANT MODELING

Borrego Springs Library/Sheriff's Station and Park

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government Office Building	1.60	1000sqft	0.04	1,600.00	0
Library	15.50	1000sqft	0.36	15,500.00	0
Parking Lot	66.00	Space	0.59	26,400.00	0
City Park	17.70	Acre	17.70	771,012.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	15			**Operational Year**	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Schedule provided by Marc Cass of SD County Gen Serv

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Typical Trenching Activities

Architectural Coating - Revised based on Section 4.7 of CalEEMod Appendix A

Vehicle Trips - LLG2015

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Construction Off-road Equipment Mitigation -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	394,452.00	6,750.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,183,356.00	20,250.00
tblConstructionPhase	NumDays	300.00	111.00
tblConstructionPhase	PhaseStartDate	6/3/2017	6/5/2017
tblConstructionPhase	PhaseStartDate	4/8/2017	4/10/2017
tblConstructionPhase	PhaseStartDate	5/20/2017	5/22/2017
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Utilities
tblOffRoadEquipment	PhaseName		Utilities
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	1.59	50.00
tblVehicleTrips	ST_TR	46.55	43.55
tblVehicleTrips	SU_TR	1.59	50.00
tblVehicleTrips	SU_TR	25.49	43.55
tblVehicleTrips	WD_TR	1.59	50.00
tblVehicleTrips	WD_TR	68.93	0.00
tblVehicleTrips	WD_TR	56.24	43.55

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	16.2037	69.6757	50.3667	0.0917	18.2141	3.3184	20.9694	9.9699	3.0529	12.5048						
2018	16.1492	2.2653	4.2565	9.6100e-003	0.5586	0.1545	0.7131	0.1482	0.1542	0.3024						
Total	**32.3529**	**71.9410**	**54.6231**	**0.1013**	**18.7727**	**3.4729**	**21.6826**	**10.1181**	**3.2072**	**12.8072**						

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	16.2037	69.6757	50.3667	0.0917	8.2777	3.3184	11.0330	4.5080	3.0529	7.0429						
2018	16.1492	2.2653	4.2565	9.6100e-003	0.5586	0.1545	0.7131	0.1482	0.1542	0.3024						
Total	**32.3529**	**71.9410**	**54.6231**	**0.1013**	**8.8363**	**3.4729**	**11.7461**	**4.6562**	**3.2072**	**7.3453**						

	ROG	**NOx**	**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**	**52.93**	**0.00**	**45.83**	**53.98**	**0.00**	**42.65**	**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	22.4406	1.0000e-004	0.0104	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005						
Energy	0.0154	0.1402	0.1177	8.4000e-004		0.0107	0.0107		0.0107	0.0107						
Mobile	4.9538	9.0148	44.2354	0.0917	6.4184	0.1157	6.5341	1.7134	0.1066	1.8200						
Total	**27.4098**	**9.1550**	**44.3636**	**0.0925**	**6.4184**	**0.1264**	**6.5448**	**1.7134**	**0.1173**	**1.8307**						

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	22.4406	1.0000e-004	0.0104	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005						
Energy	0.0132	0.1195	0.1004	7.2000e-004		9.0800e-003	9.0800e-003		9.0800e-003	9.0800e-003						
Mobile	4.9538	9.0148	44.2354	0.0917	6.4184	0.1157	6.5341	1.7134	0.1066	1.8200						
Total	**27.4075**	**9.1344**	**44.3463**	**0.0924**	**6.4184**	**0.1248**	**6.5432**	**1.7134**	**0.1158**	**1.8291**						

	ROG	NOx	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	**0.01**	**0.23**	**0.04**	**0.13**	**0.00**	**1.24**	**0.02**	**0.00**	**1.34**	**0.09**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/27/2017	4/7/2017	5	10	
2	Grading	Grading	4/10/2017	5/19/2017	5	30	
3	Utilities	Trenching	5/22/2017	6/2/2017	5	10	
4	Building Construction	Building Construction	6/5/2017	11/6/2017	5	111	
5	Paving	Paving	11/7/2017	12/4/2017	5	20	
6	Architectural Coating	Architectural Coating	12/5/2017	1/1/2018	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 20,250; Non-Residential Outdoor: 6,750 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Utilities	Excavators	1	6.00	162	0.38
Utilities	Trenchers	1	6.00	80	0.50
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Utilities	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	342.00	133.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	68.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339						
Total	**4.8382**	**51.7535**	**39.3970**	**0.0391**	**18.0663**	**2.7542**	**20.8205**	**9.9307**	**2.5339**	**12.4646**						

3.2 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0604	0.0753	0.7041	1.7600e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402						
Total	**0.0604**	**0.0753**	**0.7041**	**1.7600e-003**	**0.1479**	**1.0800e-003**	**0.1489**	**0.0392**	**9.9000e-004**	**0.0402**						

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					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688						
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339						
Total	**4.8382**	**51.7535**	**39.3970**	**0.0391**	**8.1298**	**2.7542**	**10.8840**	**4.4688**	**2.5339**	**7.0027**						

3.2 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0604	0.0753	0.7041	1.7600e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402						
Total	**0.0604**	**0.0753**	**0.7041**	**1.7600e-003**	**0.1479**	**1.0800e-003**	**0.1489**	**0.0392**	**9.9000e-004**	**0.0402**						

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965						
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518						
Total	**6.0991**	**69.5920**	**46.8050**	**0.0617**	**8.6733**	**3.3172**	**11.9905**	**3.5965**	**3.0518**	**6.6483**						

3.3 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	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						
Worker	0.0671	0.0837	0.7823	1.9500e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447						
Total	**0.0671**	**0.0837**	**0.7823**	**1.9500e-003**	**0.1643**	**1.1900e-003**	**0.1655**	**0.0436**	**1.1000e-003**	**0.0447**						

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					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184						
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518						
Total	**6.0991**	**69.5920**	**46.8050**	**0.0617**	**3.9030**	**3.3172**	**7.2202**	**1.6184**	**3.0518**	**4.6702**						

3.3 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	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						
Worker	0.0671	0.0837	0.7823	1.9500e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447						
Total	**0.0671**	**0.0837**	**0.7823**	**1.9500e-003**	**0.1643**	**1.1900e-003**	**0.1655**	**0.0436**	**1.1000e-003**	**0.0447**						

3.4 Utilities - 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	0.6746	6.5464	4.6654	6.5600e-003		0.4251	0.4251		0.3910	0.3910						
Total	**0.6746**	**6.5464**	**4.6654**	**6.5600e-003**		**0.4251**	**0.4251**		**0.3910**	**0.3910**						

3.4 Utilities - 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0168	0.0209	0.1956	4.9000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.8000e-004	0.0112						
Total	**0.0168**	**0.0209**	**0.1956**	**4.9000e-004**	**0.0411**	**3.0000e-004**	**0.0414**	**0.0109**	**2.8000e-004**	**0.0112**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6746	6.5464	4.6654	6.5600e-003		0.4251	0.4251		0.3910	0.3910						
Total	**0.6746**	**6.5464**	**4.6654**	**6.5600e-003**		**0.4251**	**0.4251**		**0.3910**	**0.3910**						

3.4 Utilities - 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0168	0.0209	0.1956	4.9000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.8000e-004	0.0112						
Total	**0.0168**	**0.0209**	**0.1956**	**4.9000e-004**	**0.0411**	**3.0000e-004**	**0.0414**	**0.0109**	**2.8000e-004**	**0.0112**						

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						
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**						

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						
Vendor	1.4666	11.5387	18.8595	0.0314	0.8828	0.1671	1.0500	0.2519	0.1537	0.4056						
Worker	1.1481	1.4306	13.3780	0.0334	2.8095	0.0204	2.8299	0.7452	0.0188	0.7640						
Total	**2.6147**	**12.9693**	**32.2375**	**0.0648**	**3.6923**	**0.1876**	**3.8798**	**0.9971**	**0.1726**	**1.1696**						

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						
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**						

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						
Vendor	1.4666	11.5387	18.8595	0.0314	0.8828	0.1671	1.0500	0.2519	0.1537	0.4056						
Worker	1.1481	1.4306	13.3780	0.0334	2.8095	0.0204	2.8299	0.7452	0.0188	0.7640						
Total	**2.6147**	**12.9693**	**32.2375**	**0.0648**	**3.6923**	**0.1876**	**3.8798**	**0.9971**	**0.1726**	**1.1696**						

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	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473						
Paving	0.0773					0.0000	0.0000		0.0000	0.0000						
Total	**1.9847**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0504	0.0628	0.5868	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335						
Total	**0.0504**	**0.0628**	**0.5868**	**1.4700e-003**	**0.1232**	**9.0000e-004**	**0.1241**	**0.0327**	**8.3000e-004**	**0.0335**						

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	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473						
Paving	0.0773					0.0000	0.0000		0.0000	0.0000						
Total	**1.9847**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0504	0.0628	0.5868	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335						
Total	**0.0504**	**0.0628**	**0.5868**	**1.4700e-003**	**0.1232**	**9.0000e-004**	**0.1241**	**0.0327**	**8.3000e-004**	**0.0335**						

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	15.6431					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						
Total	**15.9754**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.2283	0.2845	2.6600	6.6400e-003	0.5586	4.0600e-003	0.5627	0.1482	3.7500e-003	0.1519						
Total	**0.2283**	**0.2845**	**2.6600**	**6.6400e-003**	**0.5586**	**4.0600e-003**	**0.5627**	**0.1482**	**3.7500e-003**	**0.1519**						

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	15.6431					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						
Total	**15.9754**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.2283	0.2845	2.6600	6.6400e-003	0.5586	4.0600e-003	0.5627	0.1482	3.7500e-003	0.1519						
Total	**0.2283**	**0.2845**	**2.6600**	**6.6400e-003**	**0.5586**	**4.0600e-003**	**0.5627**	**0.1482**	**3.7500e-003**	**0.1519**						

3.7 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.6431					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506						
Total	**15.9418**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**						

3.7 Architectural Coating - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.2075	0.2596	2.4023	6.6400e-003	0.5586	3.9800e-003	0.5626	0.1482	3.6900e-003	0.1519						
Total	**0.2075**	**0.2596**	**2.4023**	**6.6400e-003**	**0.5586**	**3.9800e-003**	**0.5626**	**0.1482**	**3.6900e-003**	**0.1519**						

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	15.6431					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506						
Total	**15.9418**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**						

3.7 Architectural Coating - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.2075	0.2596	2.4023	6.6400e-003	0.5586	3.9800e-003	0.5626	0.1482	3.6900e-003	0.1519						
Total	**0.2075**	**0.2596**	**2.4023**	**6.6400e-003**	**0.5586**	**3.9800e-003**	**0.5626**	**0.1482**	**3.6900e-003**	**0.1519**						

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	4.9538	9.0148	44.2354	0.0917	6.4184	0.1157	6.5341	1.7134	0.1066	1.8200						
Unmitigated	4.9538	9.0148	44.2354	0.0917	6.4184	0.1157	6.5341	1.7134	0.1066	1.8200						

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	885.00	885.00	885.00	1,889,345	1,889,345
Government Office Building	0.00	0.00	0.00		
Library	675.03	675.03	675.03	1,144,071	1,144,071
Parking Lot	0.00	0.00	0.00		
Total	1,560.03	1,560.03	1,560.03	3,033,415	3,033,415

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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Government Office Building	9.50	7.30	7.30	33.00	62.00	5.00	50	34	16
Library	9.50	7.30	7.30	52.00	43.00	5.00	44	44	12
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
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive 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	0.0132	0.1195	0.1004	7.2000e-004		9.0800e-003	9.0800e-003		9.0800e-003	9.0800e-003						
NaturalGas Unmitigated	0.0154	0.1402	0.1177	8.4000e-004		0.0107	0.0107		0.0107	0.0107						

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					
Government Office Building	16	1.7000e-004	1.5700e-003	1.3200e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004						
Library	1413.68	0.0153	0.1386	0.1164	8.3000e-004		0.0105	0.0105		0.0105	0.0105						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0154**	**0.1402**	**0.1177**	**8.4000e-004**		**0.0107**	**0.0107**		**0.0107**	**0.0107**						

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					
Library	1.20781	0.0130	0.1184	0.0995	7.1000e-004		9.0000e-003	9.0000e-003		9.0000e-003	9.0000e-003						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Government Office Building	0.0112	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005						
Total		**0.0132**	**0.1195**	**0.1004**	**7.2000e-004**		**9.0800e-003**	**9.0800e-003**		**9.0800e-003**	**9.0800e-003**						

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	22.4406	1.0000e-004	0.0104	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005						
Unmitigated	22.4406	1.0000e-004	0.0104	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005						

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	5.0090					0.0000	0.0000		0.0000	0.0000						
Consumer Products	17.4306					0.0000	0.0000		0.0000	0.0000						
Landscaping	1.0000e-003	1.0000e-004	0.0104	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005						
Total	**22.4406**	**1.0000e-004**	**0.0104**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**						

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	5.0090					0.0000	0.0000		0.0000	0.0000						
Consumer Products	17.4306					0.0000	0.0000		0.0000	0.0000						
Landscaping	1.0000e-003	1.0000e-004	0.0104	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005						
Total	**22.4406**	**1.0000e-004**	**0.0104**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**						

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