

**MITIGATED NEGATIVE DECLARATION**

The City of Sacramento, California, a municipal corporation, does hereby prepare, declare, and publish this Mitigated Negative Declaration for the following described project:

**The Crossings (P15-061)** - The proposed project includes the construction of a 225-unit student housing project on an approximately 8.5-acre site. The proposed is intended to provide opportunities for student housing for specifically students at California State University, Sacramento. The project consists of three five-story residential buildings, one two-story 12,500 square foot clubhouse/leasing office, and single-story 10,000 square foot stand-alone building titled the "Innovation Center." The three 225-unit housing development would include up to 750 individual beds and bedrooms would be oriented around larger common rooms.

The Lead Agency is the City of Sacramento. The City of Sacramento, Community Development Department, has reviewed the proposed project and, on the basis of the whole record before it, has determined that there is no substantial evidence that the project, with mitigation measures as identified in the attached Initial Study, will have a significant effect on the environment. This Mitigated Negative Declaration reflects the lead agency's independent judgment and analysis. An Environmental Impact Report is not required.

This Mitigated Negative Declaration has been prepared pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 et seq.), CEQA Guidelines (Title 14, Sections 15000 et seq. of the California Code of Regulations), the Sacramento Local Environmental Regulations (Resolution 91-892), and the Sacramento City Code.

A copy of this document and all supportive documentation may be reviewed or obtained at the City of Sacramento, Community Development Department, 300 Richards Boulevard, 3<sup>rd</sup> Floor, Sacramento, CA 95811 from 9:00 a.m. to 4:00 p.m.

Environmental Services Manager, City of Sacramento,  
California, a municipal corporation

By: \_\_\_\_\_



# The Crossings Initial Study/Mitigated Negative Declaration

## Errata Sheet August 12, 2016

### Introduction

This errata sheet presents, in ~~strike-through~~ and double-underline format, the revisions to the Initial Study/Mitigated Negative Declaration (IS/MND) for The Crossings project (proposed project). The revisions to the IS/MND reflected in this errata sheet do not affect the adequacy of the previous environmental analysis contained in The Crossings IS/MND. Because the changes presented below would not result in any new significant impacts or an increase in impact significance from what was identified in the IS/MND, recirculation of The Crossings IS/MND is not required.

### Changes to the IS/MND

The 'Standards of Significance' section on page 29 of the IS/MND has been hereby revised as follows:

#### Standards of Significance

For purposes of this Initial Study, air quality impacts may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of 2035 General Plan policies:

- Construction emissions of NO<sub>x</sub> above 85 pounds per day;
- Operational emissions of NO<sub>x</sub> or ROG above 65 pounds per day;
- Violation of any air quality standard or contribute substantially to an existing or projected air quality violation;
- Any increase in PM<sub>10</sub> concentrations, unless all feasible Best Available Control Technology (BACT) and Best Management Practices (BMPs) have been applied, then increases above 80 pounds per day or 14.6 tons per year; equal to or greater than five percent of the State ambient air quality standard (i.e., 50 micrograms/cubic meter for 24 hours) in areas where there is evidence of existing or projected violations of this standard. However, if project emissions of NO<sub>x</sub> and ROG are below the emission thresholds given above, then the project would not result in violations of the PM<sub>10</sub> ambient air quality standards;
- CO concentrations that exceed the 1-hour State ambient air quality standard (i.e., 20.0 ppm) or the 8-hour State ambient standard (i.e., 9.0 ppm); or
- Exposure of sensitive receptors to substantial pollutant concentrations.

The above revision is intended to reflect the Sacramento Metropolitan Air Quality Management District's updated thresholds of significance for PM<sub>10</sub> emissions. The change is for clarification purposes only and does not alter the analysis or conclusions of the IS/MND.

Mitigation Measure 3-1 on page 44 of the IS/MND has been re-numbered Mitigation Measure 3-1(a) and 3-1(b) and the mitigation has been hereby revised as follows:

~~3-1 Prior to construction, the project contractor shall initiate preconstruction surveys of the project site to determine if burrowing owls are present during the non-nesting season prior to any construction during the breeding season. The results of the preconstruction surveys shall then be submitted to the City for review. If burrowing owls are not present, further mitigation is not required. If occupied burrows are found during the non-breeding season, the project contractor shall implement standard "passive relocation" measures to exclude burrowing owls from burrows that need to be disturbed, consistent with CDFW guidelines. If breeding owls are found on-site during the nesting season, the project contractor shall establish a no-disturbance buffer around nesting burrows until the nesting is completed. The buffer distance and verification of completion of nesting will be determined by a qualified biologist with experience working with burrowing owls and construction activities. If it is not feasible to avoid removal of nesting burrows, the project contractor shall consult with the CDFW to determine if any options for active nest relocation are feasible.~~

3-1(a) Preconstruction Surveys: The project applicant shall implement the following measure to avoid or minimize impacts to western burrowing owl:

- Within 14 days prior to any ground disturbing activities for each phase of construction, the project applicant shall retain a qualified biologist to conduct a preconstruction survey of the site, any off-site improvement areas, and all publicly accessible potential burrowing owl habitat within 500 feet of the project construction footprint. The survey shall be performed in accordance with the applicable sections of the March 7, 2012 (or subsequent applicable), CDFW Staff Report on Burrowing Owl Mitigation. The qualified biologist shall be familiar with burrowing owl identification, behavior, and biology, and shall meet the minimum qualifications described in the 2012 CDFW Staff Report. If the survey does not identify any nesting burrowing owls on the site, further mitigation is not required for that phase unless activity ceases for a period in excess of 14 days in which case the survey requirements and obligations shall be repeated.
- If active burrowing owl dens are found within the survey area in an area where disturbance would occur, the project applicant shall implement measures at least equal to the 2012 (or subsequent applicable) CDFW Staff Report, as determined by the qualified biologist.
- During the breeding season (February 1 through August 31), the following measures will be implemented:
  - Disturbance-free buffers will be established around the active burrow. During the peak of the breeding season, between April 1 and August 15, a minimum of a 500-foot buffer will be maintained. Between August 16 and March 31, a minimum of a 150-foot buffer will be maintained. The qualified biologist (as defined above) will determine, in consultation with the City of Sacramento Planning Division and CDFW, if the buffer should be increased or decreased based on site conditions, breeding status, and non-project-related disturbance at the time of construction.
  - Monitoring of the active burrow will be conducted by the qualified biologist during construction on a weekly basis to verify that no disturbance is occurring.

- After the qualified biologist determines that the young have fledged and are foraging independently, or that breeding attempts were not successful, the owls may be excluded in accordance with the non-breeding season measures below. Daily monitoring will be conducted for one week prior to exclusion to verify the status of owls at the burrow.
- During the non-breeding season (September 1 to January 31), owls occupying burrows that cannot be avoided will be passively excluded consistent with Appendix E of the 2012 CDFW Staff Report:
  - Within 24 hours prior to installation of one-way doors, a survey will be conducted to verify the status of burrowing owls on the site.
  - Passive exclusion will be conducted using one-way doors on all burrows suitable for burrowing owl occupation.
  - One-way doors shall be left in place a minimum of 48 hours to ensure burrowing owls have left the burrow before excavation.
  - While the one-way doors are in place, the qualified biologist will visit the site twice daily to monitor for evidence that owls are inside and are unable to escape. If owls are trapped, the device shall be reset and another 48-hour period shall begin.
  - After a minimum of 48 hours, the one-way doors will be removed and the burrows will be excavated using hand tools to prevent reoccupation. The use of a pipe is recommended to stabilize the burrow to prevent collapsing until the entire burrow has been excavated and it can be determined that no owls reside inside the burrow.
  - After the owls have been excluded, the excavated burrow locations will be surveyed a minimum of three times over two weeks to detect burrowing owls if they return. The site will be managed to prevent reoccupation of burrowing owls (e.g., disking, grading, manually collapsing burrows) until development is complete.
  - If burrowing owls are found outside the project site during preconstruction surveys, the qualified biologist shall evaluate the potential for disturbance. Passive exclusion of burrowing owls shall be avoided to the maximum extent feasible where no ground disturbance will occur. In cases where ground disturbance occurs within the no-disturbance buffer of an occupied burrow, the qualified biologist shall determine in consultation with the City of Sacramento Planning Division and CDFW whether reduced buffers, additional monitoring, or passive exclusion is appropriate.

3-1(b) Compensatory Mitigation, if Active Owl Dens are Present: If active burrowing owl dens are present and the project would impact active dens, the project applicant shall implement the following:

- If active owl burrows are present and the project would impact active burrows, the project applicant shall provide compensatory mitigation for the permanent loss of burrowing owl habitat at least equal to the 2012 (or subsequent applicable), CDFW Staff Report. Such mitigation shall include the permanent protection of land, which is deemed to be suitable burrowing owl habitat through a conservation easement deeded to a non-profit conservation organization or public agency with a conservation

mission, or the purchase of burrowing owl conservation bank credits from a CDFW-approved burrowing owl conservation bank. In determining the location and amount of acreage required for permanent protection, the project applicant, in conjunction with the City of Sacramento Planning Division, shall seek lands that include the same types of vegetation communities and fossorial mammal populations found in the lost foraging habitat, with a preference given to lands that are adjacent to, or reasonably proximate to, the lost foraging lands. Such lands shall provide for nesting, foraging, and dispersal comparable to, or better than, the lost foraging land. The minimum amount of acreage for preservation shall be 6.5 acres per nesting pair or unpaired resident bird. Additional lands may be required as determined pursuant to the then current standards/best practices for mitigation acreage as determined by the City of Sacramento Planning Division in consultation with CDFW.

The above revision is intended to provide mitigation measures for potential impacts to burrowing owl consistent with the 2012 California Department of Fish and Wildlife (CDFW) staff report that addresses burrowing owl mitigation, especially in regard to non-disturbance buffers and compensatory mitigation. The change is for clarification purposes only and does not alter the analysis or conclusions of the IS/MND.

Mitigation Measure 3-2 on pages 44 and 45 of the IS/MND has been hereby revised as follows:

- 3-2 *If project construction plans require ground disturbance that represents potential nesting habitat for migratory birds or other raptors including Swainson's hawk, the project contractor shall initiate such activity between September 1st and January 31st, outside the bird nesting season, to the extent feasible. If tree removal must occur during the avian breeding season (February 1st to August 31st), a qualified biologist shall conduct a survey for ground-nesting birds. The survey shall be conducted 14 days prior to the commencement of construction and include all potential ground-nesting sites and trees and shrubs within 75 feet of the entire project site. The findings of the survey shall be submitted to the City of Sacramento Community Development Department. If nesting passerines or raptors are identified during the survey within 75 feet of the project site, a 75-foot buffer around the ground nest or nest tree shall be fenced with orange construction fencing. If the ground nest or nest tree is located off the project site, then the buffer shall be demarcated as per above. The size of the buffer may be altered if a qualified biologist conducts behavioral observations and determines the nesting passerines are well acclimated to disturbance. If acclimation has occurred, the biologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to the nesting birds. If construction activities cause the nesting bird(s) to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the exclusionary buffer shall be increased, as determined by the qualified biologist, such that activities are far enough from the nest to stop the agitated behavior. Construction or earth-moving activity shall not occur within the established buffer until a qualified biologist has determined that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones, which typically occurs by July 15th. However, the date may be earlier or later, and would have to be determined by a qualified biologist. If a qualified biologist is not hired to watch the nesting passerines, then the buffers shall be maintained in place through the month of August and work within the buffer may commence September 1<sup>st</sup>.*

The above revision is intended to provide performance-based mitigation measures for potential impacts to nesting raptors and/or migratory birds, consistent with the approach of the CDFW. The change is for clarification purposes only and does not alter the analysis or conclusions of the IS/MND.

Mitigation Measure 3-3 on page 45 of the IS/MND has been hereby revised as follows:

- 3-3 *Prior to the issuance of a grading permit, the dedication of land suitable for replacement Swainson's hawk foraging habitat shall be dedicated by the project applicant at a ratio of 0.54:1 for all existing unpaved areas within the project site. The location of the replacement foraging habitat shall be coordinated with, and approved by, the CDFW, and shall be acquired prior to development of the project site. Proof of CDFW approval shall be submitted to the City of Sacramento Community Development Department.*

The above revision is intended to ensure that the mitigation is consistent with the CDFW approach regarding required mitigation for the loss of Swainson's hawk foraging habitat. The revision does not alter the analysis or conclusions of the IS/MND.

Mitigation Measure 6-1 on page 60 of the IS/MND has been hereby revised as follows:

- 6-1 *Prior to issuance of a grading permit, step-out soil borings shall be completed around RB-7 and a surficial soil sample laboratory analysis shall be conducted in for these areas. Once the soils are collected, the soils are to be tested for arsenic. If arsenic is not found, further action is not required; however, if arsenic is found to be higher than the allowable thresholds determined by a consulting toxicologist, the project shall implement the appropriate mitigation including, but not limited to, soil remediation to an acceptable total threshold limit concentration (TTL) level per applicable State and federal regulations. All recommended mitigation measures shall be implemented by the project applicant, subject to review and approval by the County of Sacramento, Environmental Management Department. If soil remediation is necessary for arsenic levels, when remediation is complete, the project applicant shall obtain ~~submit to the City Community Development Department, either a site certification of completion or a "No Further Action" letter for the project site from the~~ County of Sacramento, Environmental Management Department. Department of Toxic Substances Control.*

The above changes are for clarification purposes only and do not alter the analysis or conclusions of the IS/MND.

# The Crossings

## Initial Study / Mitigated Negative Declaration

PREPARED FOR THE  
CITY OF SACRAMENTO



PREPARED BY RANEY PLANNING & MANAGEMENT, INC.  
SACRAMENTO, CALIFORNIA

JUNE 2016

## **PROPOSED MITIGATED NEGATIVE DECLARATION**

The City of Sacramento, California, a municipal corporation, does hereby prepare, declare, and publish this Mitigated Negative Declaration for the following described project:

**The Crossings (P15-061)** - The proposed project includes the construction of a 225-unit student housing project on an approximately 8.5-acre site. The proposed is intended to provide opportunities for student housing for specifically students at California State University, Sacramento. The project consists of three five-story residential buildings, one two-story 12,500 square foot clubhouse/leasing office, and single-story 10,000 square foot stand-alone building titled the "Innovation Center." The three 225-unit housing development would include up to 750 individual beds and bedrooms would be oriented around larger common rooms.

The Lead Agency is the City of Sacramento. The City of Sacramento, Community Development Department, has reviewed the proposed project and, on the basis of the whole record before it, has determined that there is no substantial evidence that the project, with mitigation measures as identified in the attached Initial Study, will have a significant effect on the environment. This Mitigated Negative Declaration reflects the lead agency's independent judgment and analysis. An Environmental Impact Report is not required.

This Mitigated Negative Declaration has been prepared pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 et seq.), CEQA Guidelines (Title 14, Sections 15000 et seq. of the California Code of Regulations), the Sacramento Local Environmental Regulations (Resolution 91-892), and the Sacramento City Code.

A copy of this document and all supportive documentation may be reviewed or obtained at the City of Sacramento, Community Development Department, 300 Richards Boulevard, 3<sup>rd</sup> Floor, Sacramento, CA 95811 from 9:00 a.m. to 4:00 p.m.

## THE CROSSINGS P15-061

### INITIAL STUDY/MITIGATED NEGATIVE DECLARATION FOR ANTICIPATED SUBSEQUENT PROJECTS UNDER THE 2030 GENERAL PLAN MASTER EIR

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the City of Sacramento, Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811, pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 *et seq.*), CEQA Guidelines (Title 14, Section 15000 *et seq.* of the California Code of Regulations) and the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento.

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#### ORGANIZATION OF THE INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

This IS/MND is organized into the following sections:

**SECTION I - BACKGROUND:** Provides summary background information about the project name, location, sponsor, and the date this IS/MND was completed.

**SECTION II - PROJECT DESCRIPTION:** Includes a detailed description of the proposed project.

**SECTION III - ENVIRONMENTAL CHECKLIST AND DISCUSSION:** Reviews the proposed project and states whether the project would have additional significant environmental effects (project-specific effects) that were not evaluated in the Master EIR for the 2030 General Plan.

**SECTION IV - ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:** Identifies which environmental factors were determined to have additional significant environmental effects.

**SECTION V - DETERMINATION:** States whether environmental effects associated with development of the proposed project are significant, and what, if any, added environmental documentation may be required.

**REFERENCES CITED:** Identifies source materials that have been consulted in the preparation of this IS/MND.

**APPENDICES:** Includes appendices identified in the IS/MND and the Response to Comments.

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## SECTION I - BACKGROUND

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Project Name and File Number: The Crossings  
[Application Number P15-061]

Project Location: 2920 Ramona Avenue  
Sacramento, CA 95826  
APNs 079-0241-010 and -011

Project Applicant: AMCAL Equities, LLC  
30141 Agoura Road, Suite 100  
Agoura Hills, CA 91301

Project Planner: Garrett Norman, Assistant Planner

Environmental Planner: Dana Mahaffey, Associate Planner

Date IS/MND Completed: June 28, 2016

This IS/MND was prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Sections 1500 *et seq.*). The Lead Agency is the City of Sacramento.

The City of Sacramento, Community Development Department, has reviewed the proposed project and, on the basis of the whole record before it, has determined that the proposed project is an anticipated subsequent project identified and described in the 2035 General Plan Master EIR and is consistent with the land use designation and the permissible densities and intensities of use for the project site as set forth in the 2035 General Plan. See CEQA Guidelines Section 15176 (b) and (d).

The City has prepared the attached IS/MND to review the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the 2035 General Plan Master EIR to determine their adequacy for the project (see CEQA Guidelines Section 15178 [b],[c]) and identify any potential new or additional project-specific significant environmental effects that were not analyzed in the Master EIR and any mitigation measures or alternatives that may avoid or mitigate the identified effects to a level of insignificance, if any.

As part of the Master EIR process, the City is required to incorporate all feasible mitigation measures or feasible alternatives appropriate to the project as set forth in the Master EIR (CEQA Guidelines Section 15177[d]). Policies included in the 2035 General Plan that reduce significant impacts identified in the Master EIR are identified and discussed. The mitigation monitoring plan for the 2035 General Plan, which provides references to applicable General Plan policies that reduce the environmental effects of development that may occur consistent with the General Plan, is included in the adopting resolution for the Master EIR. See City Council Resolution No. 2015-0060, beginning on page 60. The resolution is available at:

<http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports.aspx>

This analysis incorporates by reference the general discussion portions of the 2035 General Plan Master EIR (CEQA Guidelines Section 15150[a]). The Master EIR is available for public review at the City of Sacramento, Community Development Department, 300 Richards Boulevard, 3<sup>rd</sup> Floor, Sacramento, California, and on the City's website at:

<http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports.aspx>

All technical environmental studies utilized in preparation of this IS/MND are available for review at the City of Sacramento, Community Development Department, 300 Richards Blvd., 3<sup>rd</sup> Floor, Sacramento, California.

The City is soliciting views of interested persons and agencies on the content of the environmental information presented in this document. Written comments should be sent at the earliest possible date, but no later than the 30-day review period ending Thursday, July 28, 2016.

Please send written responses to:

Dana Mahaffey, Associate Planner  
Community Development Department  
City of Sacramento  
300 Richards Blvd, 3<sup>rd</sup> Floor  
Sacramento, CA 95811  
Direct Line: (916) 808-2762  
DMahaffey@cityofsacramento.org

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## SECTION II - PROJECT DESCRIPTION

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### Introduction

The Project Description section of the IS/MND provides a description of The Crossings project's (proposed project) background, location, existing conditions, surrounding land uses, and project components.

### Project Background

The proposed project site was previously used as a lumber yard; however, the site has been vacant for the past ten years.

#### 65<sup>th</sup> Street Station Area Plan

The project site is located within the eastern portion of the 65<sup>th</sup> Street Station Area Plan. The 65<sup>th</sup> Street Station Area Plan is a land use plan for approximately 1,025 acres located in the eastern part of the City and covering an area bounded by Folsom Boulevard and the Union Pacific Railroad (UPRR) tracks to the north, Power Inn Road to the east, 14<sup>th</sup> Avenue to the south, and 59<sup>th</sup> Street to the west.

The 65<sup>th</sup> Street Station Area Plan is intended to comprehensively address how to implement transportation and circulation improvements in the area including new streets, street widenings, street extensions, bicycle and pedestrian facilities, and grade-separated under-crossings. The 65<sup>th</sup> Street Station Area Plan utilizes smart growth principles to support the vision of pedestrian-friendly, transit-oriented development in the 65<sup>th</sup> Street area in concurrence with previously adopted public policy, namely the Sacramento 2035 General Plan.

For the purposes of analysis within this IS/MND, the 65<sup>th</sup> Street Station Area Plan and associated EIR, each of which was certified by the City, are referenced for the environmental assessment and development of mitigation measures for the proposed project.

#### 65<sup>th</sup> Street North Priority Investment Area

It should be noted that the Sacramento 2035 General Plan also designates the project site as being located within the 65<sup>th</sup> Street North Priority Investment Area (PIA), which consists of a mix of developed and vacant parcels, including light industrial land, residential, and park lands. The Sacramento 2035 General Plan defines this PIA as a Center, Transit Center, and Corridor opportunity area. "Center" is defined as a place that includes focused mixed-use activity around which the City's neighborhoods revolve, and is an area where the synergy created by an aggregation of uses produces a recognizable destination that consists of a combination of employment, services, retail and/or entertainment, and mid- to high-density housing. "Transit Center" is an area similar to a Center with a focus on transit, which may include any combination of employment, services, retail and/or entertainment and mid- to high-density housing centered around a transit station. "Corridor" is defined as a greenfield area adjacent to the City where new growth is dependent upon the availability of adequate water supplies, market forces, infrastructure financing and capacity, and timing.

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Folsom Boulevard Widening/Ramona Avenue Extension Project (SCH# 2011072031)

The project site is located within a portion of the area that was analyzed in the Folsom Boulevard Widening/Ramona Avenue Extension EIR. The Folsom Boulevard Widening/Ramona Avenue Extension project is located along Folsom Boulevard and Ramona Avenue in the City and County of Sacramento. The project is located on the south side of the CSUS campus and approximately 4.5 miles east of downtown Sacramento. The improvements associated with the project would conform to the UPRR tracks underpass on Folsom Boulevard and would extend to just before the U.S. Highway 50 undercrossing. A new road alignment would be constructed connecting Ramona Avenue to Folsom Boulevard. The extension requires a new at-grade crossing at a set of railroad tracks called the Placerville Industrial Lead, which is owned by Joint Powers Authority, maintained by Sacramento Regional Transit and operated by UPRR. The new roadway would include two lanes, one in each direction, bike lanes in both directions and a sidewalk on the northeast side only.

Currently, a road does not exist that directly links the CSUS campus to the business and industrial area along Ramona Avenue. In particular, the area bordered by Folsom Boulevard and Ramona Avenue lacks a direct roadway connection. Mobile continuity does not exist because sidewalks and bicycle lanes are absent, and the absence of a direct connection between the northern area where the CSUS campus is located and the southern area where business industry is located on Ramona Avenue. In addition, the industrial areas south of Folsom Boulevard along Power Inn Road and the commercial areas north of Folsom Boulevard are not directly connected. Cohesion will be improved between the business and education communities with a direct route to link the areas.

The Folsom Boulevard Widening/Ramona Avenue Extension project provides minimized delay of emergency access to commercial and residential areas along Ramona and Cucamonga Avenues, as well as improved vehicular, pedestrian, and bicycle circulation, and provides a roadway that accommodates the future-planned construction of an additional 679 dwelling units plus retail, office space, industrial, public areas, and future job opportunities for an estimated 4,500 new employees, consistent with the City of Sacramento's 2035 General Plan. The Ramona Avenue Widening Project is anticipated to be completed in 2017.

For analysis purposes, this IS/MND relies upon the information in the Folsom Boulevard Widening/Ramona Avenue Extension Project EIR, to the extent possible.

### **Project Location**

The proposed project is located at 2920 Ramona Avenue, within the City of Sacramento's 65<sup>th</sup> Street Station Area Plan, near California State University, Sacramento (see Figure 1, Regional Project Location). The project site consists of approximately 8.5 acres, surrounded by U.S. Highway 50 (State Route [SR] 16) to the north, Ramona Avenue to the east, and commercial/industrial uses and Union Pacific Railroad (UPRR) tracks to the north, east, and west (see Figure 2, Project Vicinity Map). The proposed project site is identified by Sacramento County Assessor's Parcel Numbers (APNs) 079-0241-010 and -011.

Figure 1  
Regional Project Location

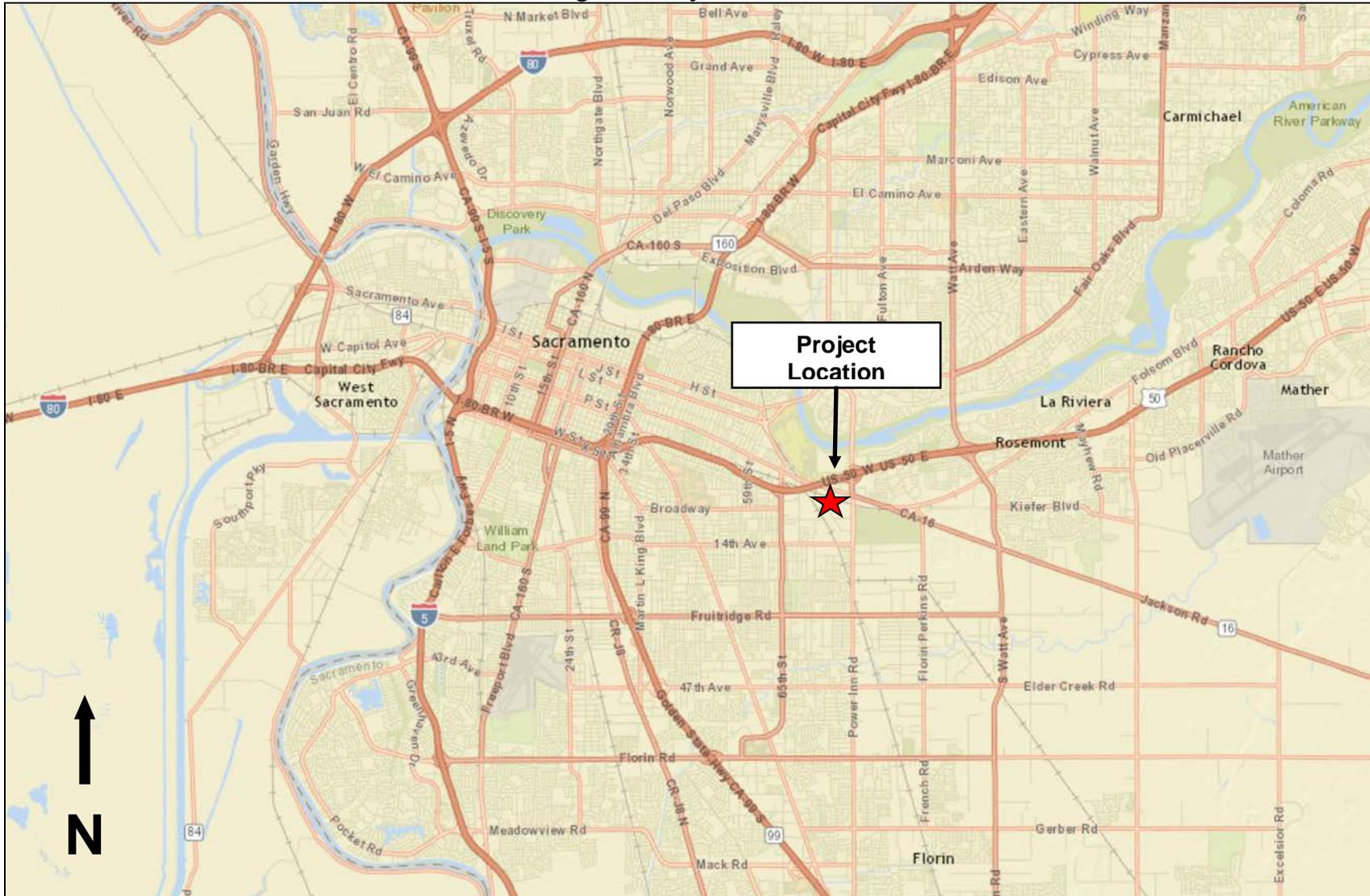


Figure 2  
Project Vicinity Map



## Existing Conditions and Surrounding Land Uses

The proposed project site is currently vacant with deteriorated pavement, ruderal vegetation, and utilities infrastructure. Structures do not exist on the project site and the site does not contain any wetlands or natural drainageways. The site's General Plan land use designation is Employment Center Mid-Rise (ECMR) and the site is zoned as Manufacturing, Research and Development and is within the Solid Waste Restricted overlay (MRD-SWR). The proposed project would be consistent with the existing land use designation for the site.

Existing land uses surrounding the proposed project site include River City Chapel and other commercially-zoned land to the northeast, a commercial self-storage facility to the east, Dorris Lumber & Molding Company to the west, and a commercial printing/mailing business (DFS) to the south. In addition, the Redding Avenue Apartments, which are student-oriented housing that is currently under construction, are located just southwest of the project site.

## Project Components

The proposed project includes construction of a 225-unit student housing project on the 8.5-acre site. The project is intended to provide opportunities for student housing for a number of students in the area, specifically for students at California State University, Sacramento (CSUS).

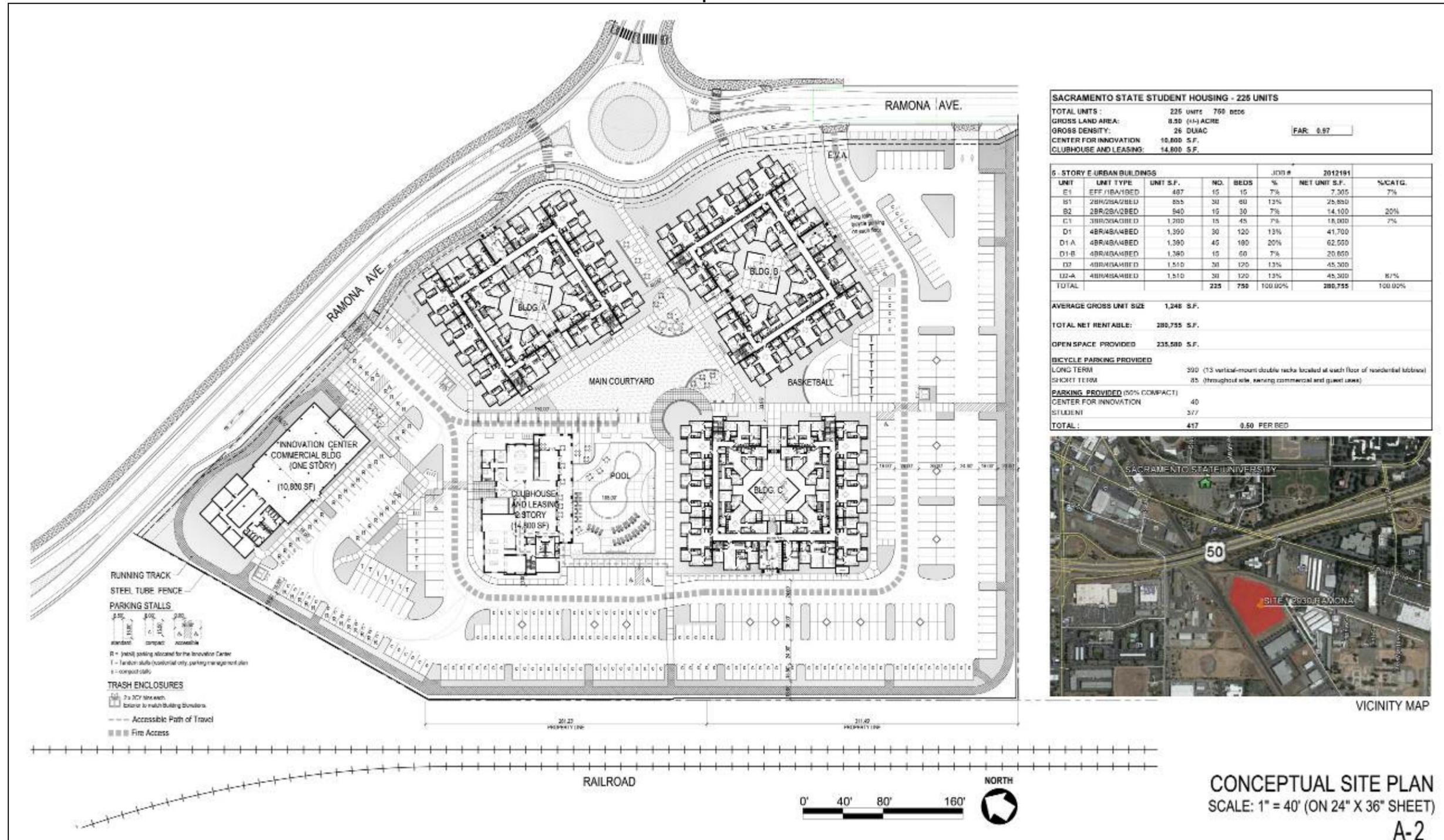
The project would consist of three five-story residential buildings, one two-story 12,500-square-foot (sf) clubhouse/leasing office, and a single-story 10,000-sf stand-alone building titled the "Innovation Center." The Innovation Center would also include a retail element. The three residential buildings and clubhouse would be constructed around a landscaped courtyard. The 225-unit housing development would include up to 750 individual beds and bedrooms would be oriented around larger common rooms.

Implementation of the project would result in purpose-built housing for students, who would be located in close proximity to CSUS and would have easy access to light rail, with two stations located nearly adjacent to the northern portion of the site. The project would include various student amenities, such as a cyber café, a multi-purpose room/theater, a gaming room, a tanning salon, a lighted running track, a basketball court, a fitness center, and a resort-style pool, as well as entrepreneurial services, a copy center, and a coffee shop in the Innovation Center.

### Residential Buildings

The three proposed five-story residential buildings (Buildings A, B, and C [see Figure 3, Conceptual Site Plan]) would include the following types of units: one bedroom/one bathroom (15), two bedroom/two bathroom (45), three bedroom/three bathroom (15), and four bedroom/four bathroom (150). The units would range in size from 487 sf to 1,510 sf, and a total of 280,755 sf would be constructed for the residential buildings. As noted above, 225 units total would be included on 8.5 acres, resulting in a density of 26 dwelling units per acre (du/ac).

Figure 3  
Conceptual Site Plan



### Clubhouse/Leasing Office

The two-story clubhouse/leasing office, which would be located between the Innovation Center and Residential Building C, is proposed to be a 14,800-sf building. The building would contain recreational facilities, such as a game room and fitness area, along with dedicated study spaces. The building would also hold the leasing office for the community. The pool for residents is located next to the clubhouse.

The clubhouse and outdoor recreational facilities would operate at various times throughout the day. Study rooms, the theater, and the computer lab would be open 24 hours per day. The game room and cyber lounge would be open from 8:00 AM to 12:00 AM every day.

### Innovation Center

The single-story 10,000-sf Innovation Center would be a mixed-use area of retail and creative open space. The proposed project site is located in a Manufacturing, Research and Development zone, and the Innovation Center would provide an area where the community and residents can work together on creative developments. The Innovation Center would be located in the northern portion of the project site. The retail portion of the Innovation Center is intended to provide services such as a copy center and a coffee shop for those using the Innovation Center.

### Parking

The project would include a total of 377 parking spaces for student residents, as well as 40 additional parking spaces for visitors to the Innovation Center building. The total parking provided would result in 0.5 parking spaces per bed and one parking space per 2,000 sf of Innovation Center building. Parking spaces would run along the southern and western portions of the project site, as well as being grouped near the Innovation Center. In addition, the project would include 390 long-term (13 vertical mount double racks on each floor of residential lobbies) and 85 short-term (serving commercial and guest uses) bicycle parking spaces on-site.

### Site Access

Access to the project site would be provided by an extended Ramona Avenue. The Folsom Boulevard Widening/Ramona Avenue Extension Project would improve area circulation by extending Ramona Avenue north and creating a connection with Folsom Boulevard. Site access would then be available from two points on Ramona Avenue (see Figure 3).

### Landscaping

Landscaping for the proposed project would include a mixture of trees, shrubs, vines, and groundcover located throughout the project site, as well as along the boundaries of the site. The landscape design concept for the project is intended to provide an aesthetic space for residents that fits within the landscape character of the existing surrounding areas. Selected plant materials would include low- and medium-water-use hardy trees, shrubs, and groundcover that are compliant with the City of Sacramento Water Efficient Landscape Ordinance.

### Energy-Efficient Features

The proposed project would be designed to exceed the current California Building Energy Efficiency Standards Code by 20 percent and the project seeks a Leadership in Energy and Environmental Design (LEED) Silver rating. In addition, the project would be designed sufficient to reduce indoor water consumption by 30 percent.

### **Project Approvals**

The project includes the following entitlement approvals from the City of Sacramento:

- Approval of IS/MND and Mitigation Monitoring Plan;
- Approval of Conditional Use Permit; and
- Approval of Site Plan and Design Review.

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## SECTION III – ENVIRONMENTAL CHECKLIST AND DISCUSSION

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### LAND USE, POPULATION AND HOUSING, AGRICULTURAL RESOURCES AND ENERGY

#### Introduction

The California Environmental Quality Act (CEQA) requires the Lead Agency to examine the effects of a project on the physical conditions that exist within the area that would be affected by the project. CEQA also requires a discussion of any inconsistency between the proposed project and applicable general plans and regional plans.

An inconsistency between the proposed project and an adopted plan for land use development in a community would not constitute a physical change in the environment. When a project diverges from an adopted plan; however, it may affect planning in the community regarding infrastructure and services, and the new demands generated by the project may result in later physical changes in response to the project.

In the same manner, the fact that a project brings new people or demand for housing to a community does not, by itself, change the physical conditions. An increase in population may, however, generate changes in retail demand or demand for governmental services, and the demand for housing may generate new activity in residential development. Physical environmental impacts that could result from implementing the proposed project are discussed in the appropriate technical sections.

This section of the initial study identifies the applicable land use designations, plans and policies, and permissible densities and intensities of use, and discusses any inconsistencies between these plans and the proposed project. This section also discusses agricultural resources and energy, and the effect of the project on these resources.

#### Discussion

##### Land Use

The proposed project consists of constructing a 225-unit student housing complex. The General Plan land use designation for the project site is Employment Center Mid Rise (ECMR). The ECMR designation allows for densities from 18 to 60 units per acre and the proposed project would result in a density of 26 units per acre. Thus, the project is consistent with the City of Sacramento 2035 General Plan and 65<sup>th</sup> Street Station Area Plan and EIR. The project site is zoned Manufacturing, Research and Development with a Solid Waste Restricted overlay (MRD-SRW). According to the City of Sacramento Planning and Development Code, the purpose of the MRD zone is to accommodate innovative technology businesses and related support services, while allowing flexibility for transitional uses in areas where existing uses may be incompatible with planned development. The regulations of this zone are intended to achieve a high-quality, nuisance-free environment for manufacturing, assembly, research and development type land uses in accordance with the policies of the General Plan, community plans, and any applicable development guidelines adopted for the area, and may be applied primarily to areas designated in the General Plan for mixed uses, employment, or industrial uses. The City of Sacramento Planning and Development Code requires approval of a Conditional Use Permit by the Planning and Design Commission for Multi-Unit Dwellings. The

proposed project includes a request for approval of a Conditional Use Permit and Site Plan and Design Review.

The project would not modify the existing land use designation of the site and does not involve any amendments to the existing land use or zoning designations. After construction, the proposed project site would primarily operate as student-focused housing for CSUS students. The project site is an infill development location and is within an existing urban area. The project site is within the Ramona Avenue Extension Project area, which seeks to increase connections between the areas surrounding CSUS and the area south of U.S. Highway 50. The project is consistent with development anticipated for the area by the Ramona Avenue Extension Project and would not interfere with the Ramona Avenue Extension Project's improvements to area circulation. The project site's frontage would be constructed to be consistent with the extension of Ramona Avenue.

The Sacramento 2035 General Plan designates the project site as being located within the 65th Street North Priority Investment Area (PIA), and further, defines this PIA as a Center, Transit Center, and Corridor opportunity area. As such, the project the current project would not physically divide an established community. The project is being designed to be consistent with the Folsom Boulevard/Ramona Avenue Extension Project and would not impede the circulation improvements already adopted. In addition, the proposed project site is not currently included in any habitat conservation plan or natural community conservation plan; however, it should be noted that the Sacramento County's South Sacramento Habitat Conservation Plan is currently being developed.

The proposed project would provide 750 beds among three buildings, and 225 residential units. The project would provide 377 total resident parking spaces, creating a parking space per bed ratio of 0.5. Therefore, the 377 parking spaces for the residential portion of the project meets the City's minimum requirement of 0.5 spaces per dwelling unit for multi-family buildings in an "Urban" Parking District per Chapter 17.608 (Parking Regulations) of the City of Sacramento Zoning Code. The 10,000-sf Innovation Center and 14,800-sf clubhouse and leasing office proposed by the project would require a total of 12 parking spaces per Chapter 17.608's requirement for one parking space per 2,000 square feet of commercial or retail space in an urban area. The proposed project would exceed the Chapter 17.608 requirement by providing 40 parking spaces for the Innovation Center and clubhouse.

### Population and Housing

The proposed project is located within a developed area of the eastern portion of Sacramento less than 0.5-mile south from CSUS. Surrounding land uses include River City Chapel and other commercially-zoned land to the northeast, a commercial self-storage facility to the east, Dorris Lumber & Molding Company to the west, a commercial printing/mailing business (DFS) to the south, and the Redding Avenue Apartments (under construction) to the southwest. The proposed project consists of developing 225 residential units. The new residential complex would be considered a growth-inducing development, and would add to the population in the project area. However, the project is consistent with the type and intensity of use contemplated in the City's General Plan, and was analyzed in the associated General Plan 2035 EIR. The project site is currently vacant, and implementation of the proposed project would not displace any existing housing units or people. Construction or replacement of housing elsewhere would not be required for the project. The proposed project would not result in impacts to population and housing in the City of Sacramento.

### Agriculture Resources

The Master EIR discussed the potential impact of development under the 2035 General Plan on agricultural resources (see Master EIR, Chapter 6.2). In addition to evaluating the effect of the General Plan on sites within the City, the Master EIR noted that to the extent the 2035 General Plan accommodates future growth within the City limits, the conversion of farmland outside the City limits is minimized. (Master EIR, page 6.2-13) The Master EIR concluded that the impact of the 2035 General Plan on agricultural resources within the City was less than significant.

The proposed project site is currently vacant, and is located in an urban area surrounded by industrial development. The site consists predominantly of ruderal vegetation and is not utilized for agricultural or timber-harvest operations. According to the California Department of Conservation's Sacramento County Important Farmland 2014 Map, the project site does not contain soils designated as Important Farmland (i.e., Prime Farmland, Unique Farmland or Farmland of Statewide Importance), and is considered Urban and Built-Up Land. In addition, the site is not designated or zoned for agricultural uses, nor is the land under a Williamson Act contract.

The proposed project would not result in impacts to agriculture resources.

### Energy

The buildings associated with the proposed project would be subject to Titles 20 and 24 of the California Code of Regulations, which reduce demand for electrical energy by implementing energy-efficient standards for residential and non-residential buildings. The 2035 General Plan includes goals (Energy Resources Goal U 6.1.1) and related policies to encourage energy-efficient technology by offering rebates and other incentives to commercial and residential developers, coordination with local utility providers, and recruitment of businesses that research and promote energy conservation and efficiency. The proposed project would exceed Title 24 energy efficiency standards by 20 percent and seeks a LEED Silver rating.

The Master EIR discussed energy conservation and relevant General Plan policies in Section 6.3 (page 6-3). The discussion concluded that with implementation of the General Plan policies and energy regulation (e.g., Title 24), development allowed in the General Plan would not result in the inefficient, wasteful, or unnecessary consumption of energy.

The Master EIR concluded that implementation of State regulations, coordination with energy providers, and implementation of General Plan policies would reduce the potential impacts from construction of new energy production or transmission facilities to a less-than-significant level. The proposed project would be consistent with the type and intensity of development anticipated for the site in the General Plan; and exceed the energy efficiency standards required by Title 24, therefore, the project would not result impacts related to energy.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
1. <u>AESTHETICS</u> Would the proposal:			X
A) Create a source of glare that would cause a public hazard or annoyance?			X
B) Create a new source of light that would be cast onto oncoming traffic or residential uses?			X
C) Substantially degrade the existing visual character of the site or its surroundings?			X

**Environmental Setting**

The proposed project is located at 2920 Ramona Avenue, within the City of Sacramento’s 65<sup>th</sup> Street Station Area Plan, near CSUS. The 8.5-acre project site is surrounded by SR 16 to the north, Ramona Avenue to the east, and commercial/industrial uses and UPRR tracks to the north, east, and west. The proposed project site is currently vacant with deteriorated pavement and ruderal vegetation. Structures do not exist on the project site and the site does not contain any natural drainageways. The site’s land use designation is Employment Center Mid-Rise and the site is zoned as MRD-SRW. Existing land uses surrounding the proposed project site include River City Chapel and other commercially-zoned land to the northeast, a commercial self-storage facility to the east, Dorris Lumber & Molding Company to the west, and a commercial printing/mailing business (DFS) to the south. In addition, the Redding Avenue Apartments, which are student-oriented housing, are located across the UPRR tracks approximately 165 feet southwest of the project site (see Figure 4 through Figure 7).

**Standards of Significance**

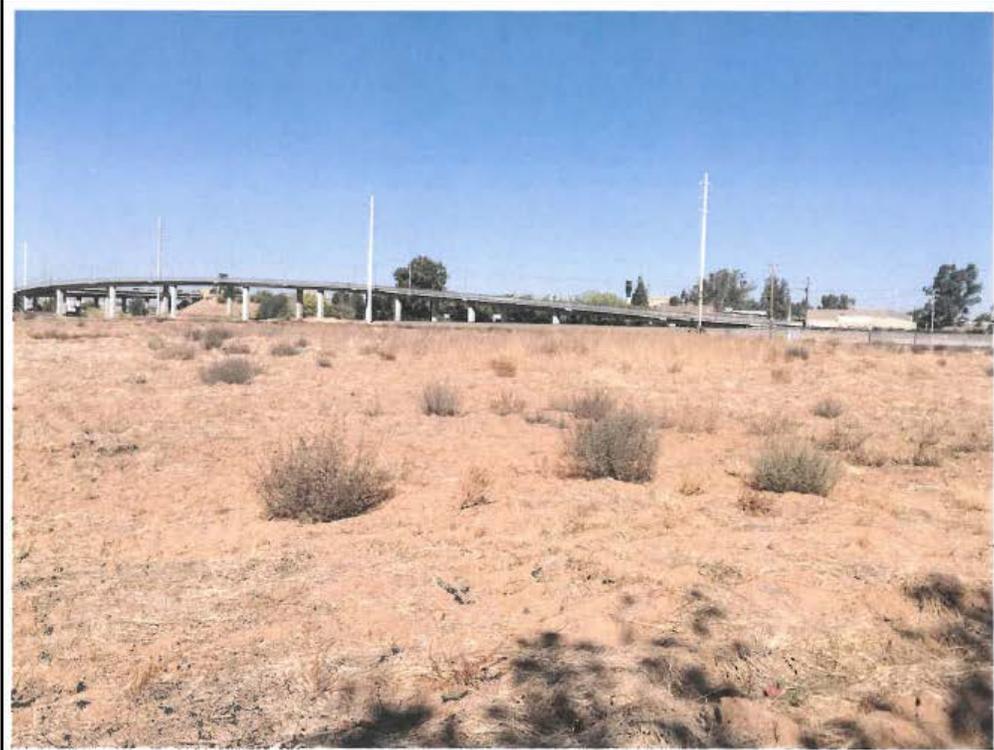
The significance criteria used to evaluate the project impacts to aesthetics are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines, thresholds of significance adopted by the City in applicable general plans and previous environmental documents, and professional judgment. A significant impact related to aesthetics would occur if the project would:

- Create a new source of substantial light or glare that is substantially greater than typical urban sources and could cause sustained annoyance or hazard for nearby sensitive receptors; or
- Substantially interfere with an important scenic resource or substantially degrade the view of an existing scenic resource.

**Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies**

The Master EIR described the existing visual conditions in the General Plan City of Sacramento, and the potential changes to those conditions that could result from development consistent with the 2035 General Plan. See Master EIR, Chapter 4.13, Visual Resources.

**Figure 4**  
**Views of the Project Site**



View of Subject Property from South Property Line



View of Subject Property from East Property Line

**Figure 5**  
**Views of the Project Site**



View of Subject Property from West Property Line



View of Subject Property from North Property Line

Figure 6  
Surrounding Views



View to the East



View to the South

Figure 7  
Surrounding Views



View to the North



View to the West

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The Master EIR identified potential impacts for light and glare (Impact 4.13-1) and concluded that impacts would be less than significant.

## Answers to Checklist Questions

### Questions A and B

According to the Master EIR, the City of Sacramento is mostly built out, and a large amount of widespread, ambient light from urban uses already exists. New development permitted under the proposed 2035 General Plan could add sources of light that are similar to the existing urban light sources from any of the following: exterior building lighting, new street lighting, parking lot lights, and headlights of vehicular traffic. These potential new sources of light would be similar to the current urban setting in amount and intensity of light and the day or nighttime views of adjacent sensitive land uses would not be significantly affected. Sensitive land uses would generally be residential uses, especially single-family residential uses.

The City of Sacramento is mostly built out with a level of ambient light that is typical of and consistent with the urban character of a large city. New development allowed under the 2035 General Plan would be subject to General Plan policies, building codes, and (for larger projects) design review; therefore, the introduction of substantially greater intensity or dispersal of light would not occur. With an emphasis on infill development in the General Plan, additional light sources would be primarily concentrated within existing, well-lit areas of the City and would be similar to the existing character of urban lighting. Therefore, the additional lighting that could be created as a result of the buildout of the 2035 General Plan would continue to be typical of the existing ambient light already present in the City and the project would have a less-than-significant environmental effect.

Existing land uses surrounding the proposed project site include River City Chapel and other commercially-zoned land to the northeast, a commercial self-storage facility to the east, Dorris Lumber & Molding Company to the west, and a commercial printing/mailing business (DFS) to the south. The nearest existing sensitive receptors to the project site that could be affected by light or glare are future residents at the Redding Avenue Apartments, which are currently under construction, located across the UPRR tracks approximately 165 feet southwest of the project site.

The Visual Resources section of the Master EIR addresses lighting and glare standards for development projects. Policy ER 7.1.3: Lighting requires the City to minimize obtrusive light by limiting outdoor lighting that is misdirected, excessive, or unnecessary, and requiring light for development to be directed downward to minimize spill-over onto adjacent properties and reduce vertical glare. In addition, Policy ER 7.1.4: Reflective Glass prohibits new development from resulting in any of the following: (1) using reflective glass that exceeds 50 percent of any building surface and on the bottom three floors; (2) using mirrored glass; (3) using black glass that exceeds 25 percent of any surface of a building; (4) using metal building materials that exceed 50 percent of any street-facing surface of a primarily residential building; and (5) using exposed concrete that exceeds 50 percent of any building. The proposed project would comply with these General Plan policies, which would be ensured through the Site Plan and Design Review process.

The proposed project would comply with all applicable General Plan policies related to minimizing light and glare and the project would result in relatively minimal new lighting intensities surrounding the site. The project would not create a source of glare that would cause

a public hazard or annoyance or create of a new source of light that would be cast onto oncoming traffic or residential uses. Traffic on U.S. Highway 50 would not be affected by glare or light from the site because the highway is elevated and generally blocked by the grade-separated light rail structure near the northern portion of the site. Therefore, the project would result in a *less-than-significant* impact.

### Question C

The City of Sacramento is primarily built out; however, new development associated with the 2035 General Plan could result in changes to important scenic resources as seen from visually sensitive locations. As described above under “Thresholds of Significance” important existing scenic resources include major natural open space features such as the American River and Sacramento River, including associated parkways. Another important scenic resource is the State Capitol (as defined by the Capitol View Protection Ordinance). Other potential important scenic resources include important historic structures listed on the Sacramento Register of Historic and Cultural Resources, California and/or National Registers.

Visually-sensitive public locations include viewpoints where a change to the visibility of an important scenic resource, or a visual change to the resource itself, would affect the general public. Visually-sensitive public locations include public plazas, trails, parks, parkways, or designated, publicly available and important scenic corridors (e.g., Capitol View Protection Corridor).

Policy ER 7.1.1 would guide the City to avoid or reduce substantial adverse effects of new development on views from public places to the Sacramento and American Rivers and adjacent greenways, landmarks, and the State Capitol along Capitol Mall. In addition, Policy ER 7.1.2, states that the City shall require new development be located and designed to visually complement the natural environment/setting when near the Sacramento and American Rivers, and along streams.

With adherence to these policies, buildout of the 2035 General Plan would not substantially alter views of important scenic resources from visually sensitive areas. According to the Master EIR, with buildout of the 2035 General Plan, impacts related to interference with important existing scenic resources or degrading views of important existing scenic resources, as seen from a visually sensitive, public location would be less than significant.

The proposed project includes construction of a 225-unit student housing project consisting of three five-story residential buildings, one two-story 12,500-sf clubhouse/leasing office, and a single-story 10,000-sf Innovation Center. See Figure 8 and Figure 9 for the proposed project’s elevations. The three residential buildings and clubhouse would be constructed around a landscaped courtyard. The proposed project includes 377 parking spaces for student residents, as well as 40 additional parking spaces for visitors.

Landscaping for the proposed project would include a mixture of trees, shrubs, vines, and groundcover located throughout the project site, as well as along the boundaries of the site. The landscape design concept for the project is intended to provide an aesthetic space for residents that fits within the landscape character of the existing surrounding areas.

**Figure 8**  
**Project Elevations**



Figure 9  
Project Elevations

Residential Buildings - Rear Elevation



Innovation Center – Side and Front Elevations



The proposed project would be not be designated or recognized as an important scenic resource and would be consistent with the type and intensity of land use anticipated for the site in the City's General Plan. The proposed project site is currently surrounded by existing development; therefore, implementation of the proposed project is not anticipated to result in any change to the visual character of the project area. In addition, the project site is not located in the vicinity of any views that are identified within the City's General Plan as scenic resources or vistas. Therefore, overall, the proposed project would result in a ***less-than-significant*** impact related to substantially degrading the existing visual character of the site or the site's surroundings.

### **Mitigation Measures**

None required.

### **Findings**

The project would not have any project-specific environmental effects relating to Aesthetics.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>2. AIR QUALITY</b> <i>Would the proposal:</i>			X
A) Result in construction emissions of NO <sub>x</sub> above 85 pounds per day?			X
B) Result in operational emissions of NO <sub>x</sub> or ROG above 65 pounds per day?			X
C) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X
C) Result in PM <sub>10</sub> concentrations equal to or greater than five percent of the State ambient air quality standard (i.e., 50 micrograms/cubic meter for 24 hours) in areas where there is evidence of existing or projected violations of this standard?			X
E) Result in CO concentrations that exceed the 1-hour state ambient air quality standard (i.e., 20.0 ppm) or the 8-hour state ambient standard (i.e., 9.0 ppm)?			X
F) Result in exposure of sensitive receptors to substantial pollutant concentrations?			X
G) Result in TAC exposures create a risk of 10 in 1 million for stationary sources, or substantially increase the risk of exposure to TACs from mobile sources?			X
H) Conflict with the Climate Action Plan?			X

### **Environmental Setting**

The environmental setting for the proposed project, including the existing climate and meteorological conditions, existing air quality conditions, and greenhouse gas (GHG) emissions, is discussed below.

#### Climate and Meteorology

The City of Sacramento is located within the Sacramento Valley Air Basin (SVAB), which is a valley bounded by the North Coast Mountain Ranges to the west and the Northern Sierra Nevada Mountains to the east. The terrain in the valley is flat and approximately 25 feet above sea level.

Hot, dry summers and mild, rainy winters characterize the Mediterranean climate of the Sacramento Valley. Throughout the year, daily temperatures may range by 20 degrees Fahrenheit with summer highs often exceeding 100 degrees and winter lows occasionally below freezing. Average annual rainfall is approximately 20 inches and snowfall is very rare. Summertime temperatures are normally moderated by the presence of the “Delta breeze” that arrives through the Carquinez Strait in the evening hours.

The mountains surrounding the SVAB create a barrier to airflow, which can trap air pollutants in the valley. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells lie over the valley. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with temperature inversions that trap cooler air and pollutants near the ground.

The warmer months in the SVAB (May through October) are characterized by stagnant morning air or light winds, and the Delta breeze that arrives in the evening out of the southwest. Usually, the evening breeze transports a portion of airborne pollutants to the north and out of the Sacramento Valley. During about half of the day from July to September, however, a phenomenon called the "Schultz Eddy" prevents this from occurring. Instead of allowing the prevailing wind patterns to move north carrying the pollutants out of the valley, the Schultz Eddy causes the wind pattern to circle back south. This phenomenon exacerbates the pollution levels in the area and increases the likelihood of violating Federal or State standards. The Schultz Eddy normally dissipates around noon when the Delta breeze begins.

#### Air Quality Conditions

The SVAB is under the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). Federal and State air quality standards have been established for six common air pollutants, known as criteria pollutants. The criteria pollutants include particulate matter, ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead. At the federal level, Sacramento County is designated as severe nonattainment for the 8-hour ozone standard, nonattainment for the 24-hour PM<sub>2.5</sub> standard, and attainment or unclassified for all other criteria pollutants. At the State level, the area is designated as a serious nonattainment area for the 1-hour ozone standard, nonattainment for the 8-hour ozone standard, nonattainment for the particulate matter 10 microns in diameter (PM<sub>10</sub>) and particulate matter 2.5 microns in diameter (PM<sub>2.5</sub>) standards, and attainment or unclassified for all other State standards.

Nearly all development projects in the Sacramento region have the potential to generate air pollutants that may increase the difficulty of attaining federal and State ambient air quality standards (AAQS). Therefore, for most projects, evaluation of air quality impacts is required to comply with CEQA. In order to help public agencies evaluate air quality impacts, SMAQMD has developed the *Guide to Air Quality Assessment in Sacramento County*. The SMAQMD's guide includes recommended thresholds of significance, including mass emission thresholds for construction-related and operational ozone precursors, as the area is under nonattainment for the federal and State ozone AAQS.

In addition to criteria air pollutants, toxic air contaminants (TACs) are a category of environmental concern. TACs are present in many types of emissions with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least 40 different TACs. In terms of health risks, the most volatile contaminants are diesel particulate matter (DPM), benzene, formaldehyde, 1,3-butadiene and acetaldehyde. Gasoline vapors contain several TACs, including benzene, toluene, and xylenes. Public exposure to TACs can result from emissions from normal operations as well as accidental releases. Health risks from TACs are a function of both the concentration of emissions and the duration of exposure, which typically are associated with long-term exposure and the associated risk of contracting cancer. Health effects of exposure to TACs other than cancer include birth

defects, neurological damage, and death. The SMAQMD's guide includes screening criteria for localized carbon monoxide (CO) emissions and thresholds for new stationary sources of TACs.

Naturally-occurring asbestos (NOA) was identified as a TAC in 1986 by CARB. Earth disturbance activity could result in the release of NOA to the air. NOA is located in many parts of California and is commonly associated with ultramafic rocks. According to mapping prepared by the California Geological Survey, the only area within Sacramento County that is likely to contain NOA is eastern Sacramento County. The project site is not located in an area identified as likely to contain NOA.

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics. The proposed project would involve the creation of student housing, which would be considered a sensitive receptor. The nearest sensitive receptors to the site would be the River City Chapel located over approximately 100 feet northeast of the site, across the train tracks, and the Redding Avenue Apartments, which is student-oriented housing located approximately 165 feet southwest of the project site, across the train tracks.

### GHG Emissions

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact.

In September 2006, Assembly Bill (AB) 32 was enacted. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. AB 32 delegated the authority for implementation to the CARB and directs the CARB to enforce the statewide cap. In accordance with AB 32, CARB prepared the *Climate Change Scoping Plan* (Scoping Plan) for California, which was approved in 2008 and revised in 2011.

The City adopted the City of Sacramento Climate Action Plan (CAP) on February 14, 2012 to comply with AB 32. The CAP identified how the City and the broader community could reduce Sacramento's GHG emissions and included reduction targets, strategies, and specific actions. In 2015, the City of Sacramento adopted the 2035 General Plan Update. The update incorporated measures and actions from the CAP into Appendix B, General Plan CAP Policies and Programs, of the General Plan Update. Appendix B includes all City-Wide policies and programs that are supportive of reducing GHG emissions. A CAP Consistency Review Checklist has been prepared by the City in order to provide a streamlined review process for proposed development projects and is attached to this IS/MND as Appendix A.

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## Standards of Significance

For purposes of this Initial Study, air quality impacts may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of 2035 General Plan policies:

- Construction emissions of NO<sub>x</sub> above 85 pounds per day;
- Operational emissions of NO<sub>x</sub> or ROG above 65 pounds per day;
- Violation of any air quality standard or contribute substantially to an existing or projected air quality violation;
- PM<sub>10</sub> concentrations equal to or greater than five percent of the State ambient air quality standard (i.e., 50 micrograms/cubic meter for 24 hours) in areas where there is evidence of existing or projected violations of this standard. However, if project emissions of NO<sub>x</sub> and ROG are below the emission thresholds given above, then the project would not result in violations of the PM<sub>10</sub> ambient air quality standards;
- CO concentrations that exceed the 1-hour State ambient air quality standard (i.e., 20.0 ppm) or the 8-hour State ambient standard (i.e., 9.0 ppm); or
- Exposure of sensitive receptors to substantial pollutant concentrations.

Ambient air quality standards have not been established for toxic air contaminants (TAC). TAC exposure is deemed to be significant if:

- TAC exposures create a risk of 10 in 1 million for stationary sources, or substantially increase the risk of exposure to TACs from mobile sources.

A project is considered to have a significant effect relating to greenhouse gas emissions if it fails to satisfy the requirements of the City's Climate Action Plan.

## Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR addressed the potential effects of the 2035 General Plan on ambient air quality and the potential for exposure of people, especially sensitive receptors such as children or the elderly, to unhealthy pollutant concentrations. See Master EIR, Chapter 4.2.

Policies in the 2035 General Plan in Environmental Resources were identified as mitigating potential effects of development that could occur under the 2035 General Plan. For example, Policy ER 6.1.1 calls for the City to work with the California Air Resources Board and the SMAQMD to meet State and federal air quality standards; Policy ER 6.1.2 requires the City to review proposed development projects to ensure that the projects incorporate feasible measures that reduce construction and operational emissions; Policy ER 6.1.4 and ER 6.1.11 calls for coordination of City efforts with SMAQMD; and Policy ER 6.1.15 requires the City to give preference to contractors using reduced-emission equipment.

The Master EIR identified exposure to sources of TACs as a potential effect. Policies in the 2035 General Plan would reduce the effect to a less-than-significant level. The policies include ER 6.1.4, requiring coordination with SMAQMD in evaluating exposure of sensitive receptors to TACs, and impose appropriate conditions on projects to protect public health and safety, as well as Policy LU 2.7.5 requiring extensive landscaping and trees along freeways fronting elevation and design elements that provide proper filtering, ventilation, and exhaust of vehicle air emissions from buildings.

The Master EIR found that greenhouse gas emissions that would be generated by development consistent with the 2035 General Plan would contribute to climate change on a cumulative basis. Policies of the General Plan identified in the Master EIR that would reduce construction related GHG emissions include: ER 6.1.2, ER 6.1.11 requiring coordination with SMAQMD to ensure feasible mitigation measures are incorporated to reduce GHG emissions, and ER 6.1.15. The 2035 General Plan incorporates the GHG reduction strategy of the 2012 Climate Action Plan (CAP), which demonstrates compliance mechanisms for achieving the City's adopted GHG reduction target of 15 percent below 2005 emissions by 2020. Policy ER 6.1.8 commits the City to assess and monitor performance of GHG emission reduction efforts beyond 2020, and progress toward meeting long-term GHG emissions reduction goals, ER 6.1.9 also commits the City to evaluate the feasibility and effectiveness of new GHG emissions reduction measures in view of the City's longer-term GHG emissions reductions goal. The discussion of greenhouse gas emissions and climate change in the 2035 General Plan Master EIR are incorporated by reference in this Initial Study. (CEQA Guidelines Section 15150)

The Master EIR identified numerous policies included in the 2035 General Plan that addressed greenhouse gas emissions and climate change. See Draft Master EIR, Chapter 4.14, and pages 4.14-1 et seq.

### **SMAQMD Rules & Regulations**

All projects are subject to SMAQMD rules in effect at the time of construction. A complete listing of current rules is available at [www.airquality.org](http://www.airquality.org) or by calling 916.874.4800. Specific rules that may relate to construction activities or building design may include, but are not limited to:

**Rule 201: General Permit Requirements.** Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the SMAQMD early to determine if a permit is required, and to begin the permit application process. Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc.) with an internal combustion engine over 50 horsepower are required to have a SMAQMD permit or a California Air Resources Board portable equipment registration. Other general types of uses that require a permit include, but are not limited to dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions.

**Rule 403: Fugitive Dust.** The developer or contractor is required to control dust emissions from earth moving activities, storage or any other construction activity to prevent airborne dust from leaving the project site.

**Rule 414: Water Heaters, Boilers and Process Heaters Rated Less Than 1,000,000 BTU Per Hour.** The developer or contractor is required to install water heaters (including residence water heaters), boilers or process heaters that comply with the emission limits specified in the rule.

**Rule 417: Wood Burning Appliances.** This rule prohibits the installation of any new, permanently installed, indoor or outdoor, uncontrolled fireplaces in new or existing developments.

**Rule 442: Architectural Coatings.** The developer or contractor is required to use coatings that comply with the volatile organic compound content limits specified in the rule.

Rule 460: Adhesives and Sealants. The developer or contractor is required to use adhesives and sealants that comply with the volatile organic compound content limits specified in the rule.

Rule 902: Asbestos. The developer or contractor is required to notify SMAQMD of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of asbestos containing material.

Naturally Occurring Asbestos: The developer or contractor is required to notify SMAQMD of earth moving projects, greater than 1 acre in size in areas “Moderately Likely to Contain Asbestos” within eastern Sacramento County. Asbestos Airborne Toxic Control Measures, Section 93105 & 93106 contain specific requirements for surveying, notification, and handling soil that contains naturally occurring asbestos.

**Answers to Checklist Questions**

Questions A and B

In order to evaluate ozone and other criteria air pollutant emissions and support attainment goals for those pollutants that the area is designated nonattainment, SMAQMD has established recommended thresholds of significance, including mass emission thresholds for construction-related and operational ozone precursors (i.e., reactive organic compounds [ROG]) and oxides of nitrogen [NO<sub>x</sub>], as the area is under nonattainment for ozone. The City’s standards of significance listed above are based on the SMAQMD’s recommended thresholds of significance for ROG and NO<sub>x</sub> that are in units of pounds per day (lbs/day) and are presented in Table 1.

<b>Table 1</b>		
<b>SMAQMD Thresholds of Significance for Ozone Precursors</b>		
<b>Pollutant</b>	<b>Construction Thresholds</b>	<b>Operational Thresholds</b>
NO <sub>x</sub>	85 lbs/day	65 lbs/day
ROG	-	65 lbs/day

*Source: SMAQMD, May 2015.<sup>1</sup>*

In order to determine whether the proposed project would result in ozone emissions in excess of the applicable thresholds of significance presented above, the proposed project’s construction-related NO<sub>x</sub> and operational ROG and NO<sub>x</sub> emissions have been estimated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 software – a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions from land use projects. The model applies inherent default values for various land uses, including trip generation rates based on the Institute of Transportation Engineers (ITE) Manual, vehicle mix, trip length, average speed, etc. However, where project-specific data is available, such data should be input into the model. Accordingly, based on project-specific information provided by the project applicant, the following assumptions were made for the proposed project’s modeling:

- Construction was assumed to commence in January 2017 and the project would be fully operational by May 2018;
- All construction equipment would comply with U.S. Environmental Protection Agency Tier 1 engine standards or better;

<sup>1</sup> Sacramento Metropolitan Air Quality Management District. *SMAQMD Thresholds of Significance Table*. Available at: <http://www.airquality.org/ceqa/CH2ThresholdsTables5-2015.pdf>. May 2015. Accessed May 2016.

- The proposed project’s inherent site and design features, including increase in density compared to surrounding uses, increase in diversity of uses compared to surrounding uses, improvement of destination accessibility (specifically to CSUS), proximity to nearest bus stop, and improvement of pedestrian network;
- The project would not include any fireplaces;
- The default carbon dioxide (CO<sub>2</sub>) intensity factor in the model was adjusted to reflect the Sacramento Municipal Utility District’s (SMUD) progress towards Statewide renewable portfolio standard (RPS) goals;
- The project is anticipated to exceed the current California Building Energy Efficiency Standards Code by 20 percent; and
- The project is anticipated to be designed sufficient to reduce indoor water consumption by 30 percent.

The results of the proposed project’s emissions estimations were compared to the thresholds of significance above in order to determine the associated level of impact. All CalEEMod modeling results are included as Appendix B of this IS/MND.

*Construction Emissions*

During construction of the project, various types of equipment and vehicles would temporarily operate on the project site. Construction exhaust emissions would be generated from construction equipment, vegetation clearing and earth movement activities, construction workers’ commute, and construction material hauling for the entire construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Because construction equipment emits relatively low levels of ROG and because ROG emissions from other construction processes (e.g., asphalt paving, architectural coatings) are typically regulated by SMAQMD, SMAQMD or the City has not adopted a construction emissions threshold for ROG. The SMAQMD has, however, adopted a construction emissions threshold for NO<sub>x</sub>, as shown in Table 1 above.

According to the CalEEMod results, the proposed project is estimated to result in maximum daily construction emissions of NO<sub>x</sub> as shown in Table 2.

<b>Table 2</b>		
<b>Maximum Unmitigated Project Construction NO<sub>x</sub> Emissions</b>		
<b>Pollutant</b>	<b>Project Emissions (lbs/day)</b>	<b>Threshold of Significance (lbs/day)</b>
NO <sub>x</sub>	40.70	85
<i>Source: CalEEMod, June 2016 (see Appendix B).</i>		

As shown in the table, the proposed project’s maximum unmitigated construction-related NO<sub>x</sub> emissions would be below the applicable threshold of significance of 85 lbs/day. In addition, all projects under the jurisdiction of SMAQMD are required to comply with all applicable SMAQMD rules and regulations (a complete list of current rules is available at [www.airquality.org/rules](http://www.airquality.org/rules)). Accordingly, the proposed project is required to comply with all applicable SMAQMD rules and regulations for construction, including, but not limited to, Rule 403 (Fugitive Dust), Rule 404 (Particulate Matter), and Rule 442 (Architectural Coatings). Furthermore, all projects are required to implement the SMAQMD’s Basic Construction Emission Control Practices (BCECP). Compliance with SMAQMD rules and regulations and BCECP would help to ensure that construction emissions are minimized.

Based on the above, impacts related to the proposed project’s construction emissions of NO<sub>x</sub> would be less than significant.

*Operational Emissions*

Day-to-day activities, such as future employee and resident vehicle trips to and from the project site, would make up the majority of the mobile emissions. Emissions would also occur from area sources such as natural gas combustion from heating mechanisms, landscape maintenance equipment exhaust, and consumer products (e.g., deodorants, cleaning products, spray paint, etc.).

The CalEEMod modeling assumptions for the proposed project are presented above. As noted, the modeling included the proposed project’s 20 percent exceedance of the mandatory standards within the 2013 California Building Energy Efficiency Standards Code. The proposed project’s compliance with such would be verified as part of the City’s building approval review process. According to the CalEEMod results, the proposed project’s estimated operational emissions are presented in Table 3. As shown in the table, the proposed project would not result in operational emissions of NO<sub>x</sub> or ROG above the 65 lbs/day threshold of significance. Therefore, impacts related to the proposed project’s operational emissions of NO<sub>x</sub> and ROG would be less than significant.

<b>Table 3</b>		
<b>Maximum Unmitigated Project Operational NO<sub>x</sub> and ROG Emissions</b>		
<b>Pollutant</b>	<b>Project Emissions (lbs/day)</b>	<b>Thresholds of Significance (lbs/day)</b>
NO <sub>x</sub>	11.76	65
ROG	16.43	65

*Source: CalEEMod, June 2016 (see Appendix B).*

*Conclusion*

The proposed project would not result in construction emissions of NO<sub>x</sub> above 85 lbs/day or operational emissions of NO<sub>x</sub> or ROG above 65 lbs/day, as such, impacts would be **less than significant**.

Question C

Adopted SMAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with applicable air quality plans. As future attainment of AAQS is a function of successful implementation of SMAQMD’s planning efforts, according to the SMAQMD Guide, by exceeding the SMAQMD’s project-level thresholds for construction or operational emissions, a project could contribute to the region’s nonattainment status for ozone and PM emissions and could be considered to conflict with or obstruct implementation of the SMAQMD’s air quality planning efforts.

As discussed, the proposed project would result in construction and operational emissions below all applicable SMAQMD thresholds of significance. Therefore, the proposed project would not be considered to contribute to the region’s nonattainment status for ozone or PM emissions and would not conflict with or obstruct implementation of the SMAQMD’s air quality planning efforts. Accordingly, the proposed project would not violate any air quality standard or contribute

substantially to an existing or projected air quality violation, and impacts would be **less than significant**.

Question D

As the region is designated nonattainment for PM<sub>10</sub> and PM<sub>2.5</sub>, the SMAQMD has recently adopted mass emissions thresholds of significance for PM<sub>10</sub> and PM<sub>2.5</sub>, which are presented in Table 4.

<b>Table 4</b>			
<b>SMAQMD Thresholds of Significance for PM<sub>10</sub> and PM<sub>2.5</sub></b>			
<b>Pollutant</b>	<b>Construction Thresholds (lbs/day)</b>	<b>Operational Thresholds (lbs/day)</b>	<b>Operational Thresholds (tons/yr)</b>
PM <sub>10</sub>	80	80	14.6
PM <sub>2.5</sub>	82	82	15

*Source: SMAQMD, June 2015.*

In order to determine whether the proposed project would result in PM emissions in excess of the applicable thresholds of significance presented above, the proposed project's construction and operational PM<sub>10</sub> and PM<sub>2.5</sub> emissions have been estimated using CalEEMod with the same assumptions as listed above applied. According to the CalEEMod results, the proposed project would result in PM<sub>10</sub> and PM<sub>2.5</sub> emissions as shown in Table 5. As presented in the table, the proposed project's estimated emissions of PM<sub>10</sub> and PM<sub>2.5</sub> would be well below the applicable SMAQMD thresholds of significance.

<b>Table 5</b>						
<b>Maximum Unmitigated Project Emissions of PM<sub>10</sub> and PM<sub>2.5</sub></b>						
<b>Pollutant</b>	<b>Project Construction Emissions (lbs/day)</b>	<b>Construction Thresholds (lbs/day)</b>	<b>Project Operational Emissions (lbs/day)</b>	<b>Operational Thresholds (lbs/day)</b>	<b>Project Operational Emissions (tons/yr)</b>	<b>Operational Thresholds (tons/yr)</b>
PM <sub>10</sub>	5.19	80	7.98	80	1.40	14.6
PM <sub>2.5</sub>	3.42	82	2.32	82	0.41	15

*Source: CalEEMod, June 2016 (see Appendix B).*

The proposed project is not expected to result in PM<sub>10</sub> concentrations equal to or greater than five percent of the state AAQS, and impacts would be **less than significant**.

Questions E through G

As stated above, the proposed project would involve the creation of residential housing, which would be considered a sensitive receptor. The nearest sensitive receptors to the site would be the River City Chapel located over approximately 100 feet northeast of the site, across the train tracks, and the Redding Avenue Apartments, which are currently under construction, located approximately 165 feet southwest of the project site, across the train tracks. The major pollutant concentrations of concern are localized CO emissions and TAC emissions, which are addressed in further detail below.

*Localized CO Emissions*

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. Implementation of the proposed project would increase traffic volumes on

streets near the project site; therefore, the project would be expected to increase local CO concentrations. Concentrations of CO approaching the ambient air quality standards are only expected where background levels are high, and traffic volumes and congestion levels are high. The SMAQMD's preliminary screening methodology for localized CO emissions provides a conservative indication of whether project-generated vehicle trips would result in the generation of CO emissions that contribute to an exceedance of the applicable threshold of significance. The first tier of SMAQMD's recommended screening criteria for localized CO states that a project would result in a less-than-significant impact to air quality for local CO if:

- Traffic generated by the project would not result in deterioration of intersection level of service (LOS) to LOS E or F; and
- The project would not contribute additional traffic to an intersection that already operates at LOS of E or F.

Even if a project would result in either of the above, under the SMAQMD's second tier of localized CO screening criteria, if all of the following criteria are met, the project would still result in a less-than-significant impact to air quality for localized CO:

- The project would not result in an affected intersection experiencing more than 31,600 vehicles per hour;
- The project would not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadway; or other locations where horizontal or vertical mixing of air would be substantially limited; and
- The mix of vehicle types at the intersection is not anticipated to be substantially different from the County average (as identified by the EMFAC or CalEEMod models).

The 65<sup>th</sup> Street Station Area Plan EIR analyzed impacts of buildout of the Plan (including development of the proposed project site) and identified intersections in the project vicinity that currently operate and/or are projected to operate at LOS E or F under cumulative conditions, including, but not limited to, the Folsom Boulevard and Ramona Avenue Extension intersection, the Folsom Boulevard and State University Drive intersection, and the Folsom Boulevard and Elvas Avenue intersection. Although the aforementioned intersections currently and/or are anticipated to operate at LOS E and F under cumulative conditions, the proposed project's incremental contribution of traffic at the surrounding intersections would have been accounted for in the 65<sup>th</sup> Street Station Area Plan EIR. As such, the proposed project would not cause any increases in the severity of any previously identified impacts. In addition, as discussed in further detail in the Transportation and Circulation section of this IS/MND, the 65<sup>th</sup> Street Station Area Plan EIR sets forth the establishment of the 65<sup>th</sup> Street Station Area Finance Plan, which requires future developments within the 65<sup>th</sup> Street Station Area Plan area to pay a fair-share development impact fee towards area-wide circulation improvements. The proposed project would be required to pay the development fees.

Furthermore, none of the intersections identified in the 65<sup>th</sup> Street Station Area Plan EIR for the project vicinity experience traffic volumes nearing 31,600 vehicles per hour, even under cumulative plus project conditions. The proposed project's increase in vehicles would not cause any nearby intersections to experience traffic volumes of more than 31,600 vehicles per hour. The proposed project would not substantially contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadway; or other locations where horizontal or vertical mixing of air would be substantially limited. The proposed project would not involve a mix of vehicle types that would substantially differ from the overall County average. Consequently, the proposed project would not be expected to result in the generation of CO

concentrations that exceed the 1-hour State AAQS (i.e., 20.0 ppm) or the 8-hour State AAQS (i.e., 9.0 ppm). Therefore, impacts related to such would be less than significant.

#### *TAC Emissions*

The CARB Handbook provides recommendations for siting new sensitive land uses near sources typically associated with significant levels of TAC emissions, including, but not limited to, freeways and high traffic roads, distribution centers, rail yards, chrome platers, dry cleaners, and gasoline dispensing facilities. The CARB has identified DPM from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM.

The proposed project would not involve any land uses or operations that would be considered major sources of TACs, including DPM. As such, the proposed project would not generate any substantial pollutant concentrations. Distribution centers, rail yards, chrome platers, dry cleaners, or gasoline dispensing facilities, which are identified in the CARB Handbook as major sources of TACs, are not located in the vicinity of the project site. However, the boundary of the project site is located approximately 240 feet from the center of the nearest travel lane of U.S. Highway 50. The CARB, per its Handbook, recommends the evaluation of emissions when freeways are within 500 feet of sensitive receptors. Any project placing sensitive receptors within 500 feet of a major roadway or freeway may have the potential to expose those receptors to DPM. Due to the proximity of the project site to U.S. Highway 50, the proposed on-site sensitive receptors could become exposed to DPM associated with the nearby freeway traffic. As such, a screening of the potential risks associated with on-site exposure to DPM from U.S. Highway 50 traffic has been conducted in accordance with SMAQMD's *Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways* (Roadway Protocol).<sup>2</sup>

The SMAQMD screening methods included in the Roadway Protocol for DPM cancer risk (potential incremental cancer chances per million people) include an established screening threshold for DPM of an increase in cancer risk of 276 persons per million, which is based on the level of increased individual risk corresponding to a 70 percent reduction from the highest risk. The highest risk represents the worst-case conditions. The screening threshold is not intended to be a safe risk level or regulatory threshold, but a point at which a site-specific health risk assessment (HRA) is recommended. The screening process requires evaluation of the project site's location in comparison to the nearest travel lane of a freeway, the volume of traffic along the portion of the freeway nearest the project site, and whether the project is upwind or downwind from the freeway. The proposed project site is located south (upwind) of U.S. Highway 50; thus, the screening table for incremental DPM cancer risk per million for projects south (upwind) of an east-west roadway from the SMAQMD's Roadway Protocol was used. Although the boundary of the project site is located approximately 240 feet from the center of the nearest travel lane of U.S. Highway 50, the nearest proposed sensitive receptor (i.e., residence) on the project site would be located more than approximately 550 feet from the edge of the nearest travel lane of U.S. Highway 50. According to Caltrans, the traffic volume on the segment of U.S. Highway 50 nearest the proposed project site is 25,000 vehicles per hour

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<sup>2</sup> Sacramento Metropolitan Air Quality Management District. *Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways*. March 2011.

during the peak hour.<sup>3</sup> Extrapolating data from the screening table for 550 feet from the edge of the nearest travel lane and a peak hour traffic volume of 25,000 vehicles per hour, the screening table indicates an incremental DPM cancer risk of 76 persons per million, which is less than that of the 276 persons per million screening threshold set forth by SMAQMD. Therefore, according to SMAQMD's Roadway Protocol, a site-specific HRA is not necessary, and the future on-site sensitive receptors would not be exposed to substantial pollutant concentrations associated with nearby freeway traffic.

SMAQMD recommends that projects located near a major roadway incorporate vegetative barriers between the sources of TACs and sensitive receptors, such as planting of trees to aid in dispersion of, and reduce exposure to, TACs. While SMAQMD does not require specific tree species for vegetative barriers, SMAQMD worked with the Sacramento Tree Foundation (STF) in production of its *Greenprint Tree Selection Guide*,<sup>4</sup> which provides a rating for each tree species by tree size for air quality, water needs, etc. The proposed project includes planting of tree species along the boundaries of the project site. Tree species proposed in the Preliminary Landscape Plan include some of the species listed in the *Greenprint Tree Selection Guide*.

It should be noted that the project site is located adjacent to UPRR tracks; however, CARB does not consider train tracks to be a significant source of TAC emissions and is only concerned with rail yards due to the substantial amount of trains and idling. The project site is not located near an existing rail yard, thus, the project would not be affected by DPM emissions associated with a rail yard. Any contribution of DPM emissions associated with rail traffic along the nearby UPRR tracks would be transient in nature and would not be expected to increase the potential cancer risk identified above for freeway traffic such that the DPM cancer risk would exceed the 276 persons per million screening threshold set forth by SMAQMD. Accordingly, the future on-site sensitive receptors would not be exposed to substantial pollutant concentrations associated with any existing nearby uses.

Construction-related activities could result in the generation of TACs, specifically DPM, from on-road haul trucks and off-road equipment exhaust emissions. However, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. All construction equipment and operation thereof would be regulated per the State's In-Use Off-Road Diesel Vehicle Regulation. Project construction would also be required to comply with all applicable SMAQMD rules and regulations, particularly associated with permitting of air pollutant sources, and would be required to implement the SMAQMD's Basic Construction Emissions Control Practices (BCECP). In addition, construction equipment would operate intermittently throughout the course of a day, would be restricted to daytime hours per the City's Noise Ordinance, and would likely only occur over portions of the project site at a time. Furthermore, according to research conducted by CARB, DPM dissipates relatively quickly in the atmosphere and is substantially reduced with distance from the source. The nearest existing sensitive receptors to the site are located over 100 feet from the project site and are separated by railroad tracks and their associated topography. Accordingly, concentrations of DPM resultant of project construction activities would not be expected to be substantial at the nearest sensitive receptor. Health risks associated with TACs are a function of both the concentration of emissions and the duration of exposure, where the higher the concentration and/or the longer the period of time that a sensitive receptor is exposed to would correlate to a higher health risk. Considering the short-term nature of construction activities, the regulated and intermittent nature

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<sup>3</sup> California Department of Transportation. *Traffic Data Branch 2014 All Traffic Volumes on CSHS*. Available at: <http://www.dot.ca.gov/trafficops/census/2014all/Route44-50.html>. Accessed May 2016.

<sup>4</sup> Sacramento Tree Foundation. *Greenprint Tree Guide for the Greater Sacramento Region*. December 2011.

of the operation of construction equipment, the highly dispersive nature of DPM, and the proximity to the nearest sensitive receptors, the likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended period of time during project construction would be low. For the aforementioned reasons, project construction would not be expected to expose sensitive receptors to substantial pollutant concentrations.

The project site is not located in an area identified as likely to contain NOA. Thus, sensitive receptors would not be exposed to NOA as a result of the proposed project. Additionally, the proposed project would not result in TAC exposures that would create a risk of 10 in 1 million for stationary sources or substantially increase the risk of exposure to TACs from mobile sources.

### *Conclusion*

As discussed above, the proposed project would not cause or be exposed to substantial pollutant concentrations, including localized CO or TAC emissions, including DPM and NOA. It should be noted that SMAQMD requests that best practices be implemented for projects located near major roadways and/or rail lines, including the use of vegetative barriers near sensitive receptors to reduce dispersion of, and exposure to, TACs. As demonstrated on the Preliminary Landscape Plan for the project, the project would include planting of some tree species that are recommended within the STF *Greenprint Tree Selection Guide* to improve air quality along the boundaries of the project site to act as vegetative barriers. Overall, the project would result in a ***less-than-significant*** impact.

### Question H

The City has developed a CAP Consistency Review Checklist to provide a streamlined review process for proposed development projects. Projects that demonstrate consistency with the CAP would be expected to result in a less-than-significant impact related to GHG emissions and global climate change. The project's CAP Consistency Review Checklist is included as Appendix A.

As determined by the project's CAP Consistency Review Checklist, the project would be consistent with the City's CAP. For example, the proposed project seeks a LEED Silver rating, would exceed the current California Building Energy Efficiency Standards Code by 20 percent, would be designed sufficient to reduce indoor water consumption by 30 percent, and is consistent with the City of Sacramento 2035 General Plan and 65<sup>th</sup> Street Station Area Plan and associated EIR. Therefore, because the proposed project would not conflict with the City's CAP, impacts would be considered ***less than significant***.

### **Mitigation Measures**

None required.

### **Findings**

The project would not have any project-specific environmental effects relating to Air Quality.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>3. <u>BIOLOGICAL RESOURCES</u></b> Would the proposal:			
A) Create a potential health hazard, or use, production or disposal of materials that would pose a hazard to plant or animal populations in the area affected?			X
B) Result in substantial degradation of the quality of the environment, reduction of the habitat, reduction of population below self-sustaining levels of threatened or endangered species of plant or animal species?		X	
C) Affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands)?			X

### **Environmental Setting**

A search of the CDFW Natural Diversity Database (CNDDDB) was performed for the proposed project location to determine the records of sensitive plant and wildlife species within the general vicinity of the area. A total of 62 federally listed, State listed, or special-status plant and wildlife species were identified for the proposed project's quadrangle and the site's surrounding quadrangles (i.e., Sacramento West, Carmichael, Citrus Heights, Clarksburg, Elk Grove, Florin, Rio Linda, Sacramento East, and Taylor Monument).

#### Vegetation

The proposed project site is currently vacant. Existing vegetation on the project site consists of ruderal vegetation, predominated by annual grasses with few scattered bushes near the UPRR.

#### Wildlife

Due to the disturbed nature of the grassland on the project site, the potential for a diversified amount of wildlife is anticipated to be low. However, the disturbed grasslands on the project site provide habitat for common wildlife species, such as squirrels and raccoons, among others. The absence of trees on the project site reduces the potential for the site to be used by many species of birds and other raptors for nesting.

#### Jurisdictional Waters

The U.S. Army Corps of Engineers (USACE) has regulatory authority of "waters of the United States," which include wetlands, pursuant to Section 404 of the Clean Water Act (CWA). Waters of the U.S. includes navigable waters, interstate waters, and all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries.

The existence of a seasonal wetland area was identified adjacent to the northeastern portion of the proposed project site. This seasonal wetland was identified during preparation of the Folsom Boulevard Widening/Ramona Avenue Extension EIR, which evaluated the project area for the existence of jurisdictional wetlands in 2005 and 2009. The EIR concluded that the Folsom Boulevard Widening/Ramona Avenue Extension project would result in a direct impact to a total 1.18 acres of seasonal wetlands and an indirect impact to a total of 0.01-acre of seasonal wetlands. These totals included the seasonal wetland area adjacent to the proposed project site.<sup>5</sup> The mitigation for the wetland areas that will be implemented for the Folsom Boulevard Widening/Ramona Avenue Extension project requires the purchase of wetland credits at a USFWS-approved mitigation site with preserved vernal pools in Sacramento County at a ratio of 3:1 for direct impacts and 2:1 for indirect impacts.

### Sensitive Biological Resources

Sensitive biological resources include those that are afforded special protection through the following: California Environmental Quality Act (CEQA), California Fish and Game Code, the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), or the CWA. Sensitive biological resources in the project area also include those afforded protection under the City of Sacramento General Plan.

- Special-status species include plants and animals in the following categories:
- Species listed or proposed for listing as threatened or endangered under ESA or CESA;
- Species considered as candidates for listing as threatened or endangered under ESA or CESA;
- Wildlife species identified by the California Department of Fish and Wildlife (CDFW) as California Species of Special Concern and by USFWS as Federal Species of Concern;
- Animals fully protected in California under the California Fish and Game Code; and
- Plants on California Native Plant Society (CNPS) List 1B (plants rare, threatened, or endangered in California and elsewhere) or List 2 (plants rare, threatened, or endangered in California but more common elsewhere).

### *Special-Status Plants*

The CNDDDB search found 23 special-status plant species within the region encompassed by the USGS quadrant containing the project site and the eight surrounding quadrants. Due to the lack of woodland, riparian, scrub, aquatic, riverine, estuary, and sand shore habitat types, habitat requirements for six of the CNDDDB species are not met by the project site, and only 17 species would have the potential to occur at the project site. Most of the remaining plants are associated with valley grasslands, vernal pools, and other seasonal wetlands. The Folsom Boulevard Widening/Ramona Avenue Extension EIR identified slender orcutt grass (*Orcuttia tenui*), Sacramento orcutt grass (*Orcuttia viscida*), legenere (*Legener limosa*), Bogg's Lake hedge hyssop (*Gratiola heterosepela*), dwarf downingia (*Downingia pusilla*), and valley sagittaria (*Sagittaria sanfordii*) as having a potential to occur in the seasonal wetland habitats found in the project area. However, a site inspection performed in spring and early summer of 2005 for the Folsom Boulevard Widening/Ramona Avenue Extension EIR did not find evidence of any of the aforementioned species present in the vicinity of the project site. Additionally, the CNDDDB search identified the bristly sedge (*Carex comosa*), and Heckard's peppergrass (*Lepidium latipes var.*

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<sup>5</sup> City of Sacramento and Caltrans. *Folsom Boulevard Widening/Ramona Avenue Extension Project Draft EIR/Environmental Assessment and Section 4(f) De Minimis Impact Finding* (p. 2-71). July 2011.

*heckardii*) as having the potential to occur in the grassland habitat types. While the portions of the project site covered by annual grassland would be potential habitat for the bristly sedge and Heckard's peppergrass, both species would be unlikely to occur given the history of disturbance. The project site is highly disturbed, as the site is tilled seasonally as a fire control measure. Therefore, the likelihood is low that any special-status plant species occur on the project site.

### *Special-Status Wildlife*

The CNDDDB search found 39 special-status wildlife species within the region encompassed by the USGS quadrant containing the project site and the eight surrounding quadrants. Due to the lack of woodland, riparian, scrub, aquatic, riverine, estuary, and sand shore habitat types, habitat requirements for 14 of the CNDDDB species are not met by the project site, and only 25 species would have the potential to occur at the project site. Of the remaining 25 species, the California Department of Fish and Wildlife BIOS viewer recorded the Modesto population of song sparrow, American badger, conservancy fairy shrimp, longhorn fairy shrimp, vernal pool tadpole shrimp, and vernal pool fairy shrimp, Swainson's hawk, and burrowing owl as occurring within a two-mile radius of the project site. The project site, which is mostly made up of annual grassland, with scattered non-jurisdictional seasonal wetlands, provides potential habitat for the above-mentioned special-status wildlife species.

The Folsom Boulevard Widening/Ramona Avenue Extension EIR determined that while the non-listed California fairy shrimp and California clam shrimp were present in the seasonal wetland habitats in the project area, none of the listed vernal pool species, including the conservancy fairy shrimp, longhorn fairy shrimp, vernal pool tadpole shrimp, and vernal pool fairy shrimp, were present.

As discussed above, the Folsom Boulevard Widening/Ramona Avenue Extension EIR concluded that the Folsom Boulevard Widening/Ramona Avenue Extension project would result in a direct impact to a total 1.18 acres of seasonal wetlands and an indirect impact to a total of 0.01-acre of seasonal wetlands. Mitigation that requires the purchase of wetland credits was required to mitigate the impact to potentially-occupied habitat for the California fairy shrimp and the California clam shrimp, and possibly one or more species of federally listed *Branchinecta*. The proposed project site would be included within the area of this mitigation that would be implemented by the Folsom Boulevard Widening/Ramona Avenue Extension project applicant.

Further analysis on the potential of special-status wildlife species to occur on the project site is discussed below.

### **Standards of Significance**

For purposes of this environmental document, an impact would be significant if any of the following conditions or potential thereof, would result with implementation of the proposed project:

- Substantial degradation of the quality of the environment, reduction of the habitat, reduction of population below self-sustaining levels of threatened or endangered species of plant or animal;
- Affect other species or habitats of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands);
- Interfere with native resident or migratory wildlife species or with established migratory wildlife corridors, or impede the use of wildlife nursery sites; or

- Conflict with any local policies or ordinances protecting biological resources or with the provisions of any adopted or approved habitat conservation plan.

For the purposes of this document, “special-status” has been defined to include those species, which are:

- Listed as endangered or threatened under the federal Endangered Species Act (or formally proposed for, or candidates for, listing);
- Listed as endangered or threatened under the California Endangered Species Act (or proposed for listing);
- Designated as endangered or rare, pursuant to California Fish and Game Code (Section 1901);
- Designated as fully protected, pursuant to California Fish and Game Code (Section 3511, 4700, or 5050);
- Designated as species of concern by U.S. Fish and Wildlife Service (USFWS), or as species of special concern to CDFW; or
- Plants or animals that meet the definition of rare or endangered under the California Environmental Quality Act (CEQA).

### **Summary of Analysis under the 2035 General Plan Master EIR, Including Cumulative Impacts, Growth Inducing Impacts, and Irreversible Significant Effects**

Chapter 4.3 of the Master EIR evaluated the effects of the 2035 General Plan on biological resources within the General Plan policy area. The Master EIR identified potential impacts in terms of degradation of the quality of the environment or reduction of habitat or population below self-sustaining levels of special-status birds, through the loss of both nesting and foraging habitat.

Policies in the 2035 General Plan were identified as mitigating the effects of development that could occur under the provisions of the 2035 General Plan. Policy ER 2.1.5 calls for the City to preserve the ecological integrity of creek corridors and other riparian resources; Policy ER 2.1.10 requires the City to consider the potential impact on sensitive plants for each project and to require pre-construction surveys when appropriate; and Policy ER 2.1.11 requires the City to coordinate its actions with those of the California Department Fish and Game, U.S. Fish and Wildlife Service, and other agencies in the protection of resources.

The Master EIR concluded that the cumulative effects of development that could occur under the 2035 General Plan would be significant and unavoidable as they related to effects on special-status plant species (Impact 4.3-1), reduction of habitat for special-status invertebrates (Impact 4.3-2), loss of habitat for special-status birds (Impact 4.3-3), loss of habitat for special-status amphibians and reptiles (Impact 4.3-4), loss of habitat for special-status mammals (Impact 4.3-5), special-status fish (Impact 4.3-6) and, in general, loss of riparian habitat, wetlands and sensitive natural communities such as elderberry savannah (Impacts 4.3-7 through 12).

### **Answers to Checklist Questions**

#### Question A

The use, handling, and storage of hazardous materials is regulated by both the Federal Occupational Safety and Health Administration (Fed/OSHA) and the California Occupational

Safety and Health Administration (Cal/OSHA). Cal/OSHA is responsible for developing and enforcing workplace safety regulations.

The proposed project would not include any manufacturing, use, or handling of hazardous materials. Because routine transport, use, and disposal of hazardous materials are regulated by existing federal, state, and local regulations, and the proposed project would not involve the use, production, disposal, or handling of materials that could pose a hazard to plant or animal populations in the area, the proposed project would be considered to result in a **less-than-significant** impact related to creating a potential health significant hazard associated with such.

#### Questions B and C

The Folsom Boulevard Widening/Ramona Avenue Extension EIR identified seasonal wetlands adjacent to the project site. The potential wetlands are hydrologically isolated, and are not connected to any other waters of the U.S. Therefore, the water features would not be regulated by the United States Army Corps of Engineers (USACE) and would not require Section 404 permitting. While the potential exists for the occurrence of special-status or sensitive vernal pool species including conservancy fairy shrimp, longhorn fairy shrimp, vernal pool tadpole shrimp, and vernal pool fairy shrimp to exist in the on-site wetlands, the Folsom Boulevard Widening/Ramona Avenue Extension EIR concluded that only non-listed California fairy shrimp and California clam shrimp are potentially present. Nevertheless, the Folsom Boulevard Widening/Ramona Avenue Extension EIR concluded that development of the Ramona Avenue extension would impact vernal pool invertebrates.

As discussed above, to mitigate the potential impact to vernal pool invertebrates, the Folsom Boulevard Widening/Ramona Avenue Extension EIR included mitigation that requires the Folsom Boulevard Widening/Ramona Avenue Extension project applicant to purchase wetland credits from a USFWS-approved mitigation site with preserved vernal pools in Sacramento County. The wetland credits will be required to be purchased at a USFWS-approved mitigation site with preserved vernal pools in Sacramento County at a ratio of 3:1 for direct impacts and 2:1 for indirect impacts.

The wetland credits purchased in compliance with the Folsom Boulevard Widening/Ramona Avenue Extension EIR included credits for the wetlands on the currently proposed project site. Therefore, impacts from development of the proposed project have already been evaluated and mitigated, and the currently proposed project would not result in an increased impact to wetlands or vernal pools.

Both a query of the CDFW California Natural Diversity Database (CNDDDB) and the previous analysis conducted for the Folsom Boulevard Widening/Ramona Avenue Extension EIR were used to determine the special-status or sensitive plant and wildlife species to potentially occur in the project area. Of the 62 total special-status or sensitive plant and wildlife species identified, only two species of plants and four species of wildlife were deemed to possibly occur on the project site. However, because the project site is surrounded by urban development and the project site has been disturbed the habitat value of the project site is considered to be low.

The project site does not provide suitable habitat for many of the special-status species and provides low quality foraging or nesting habitat for those species that do have the potential to occur on-site. In addition, the project site is surrounded by development to the north, south and east, and the UPRR tracks are located to the west, causing a lack of habitat connectivity, which decreases the feasibility of the project site as habitat for special-status species. However, the Folsom Boulevard Widening/Ramona Avenue Extension EIR identified marginally-suitable

burrowing owl habitat and Swainson's hawk foraging habitat present along the UPRR tracks. Additionally, the possibility exists that certain bird species protected by the Migratory Bird Treaty Act could occur in the grassland area of the project site. Because special-status species could be present at the site prior to the initiation of construction of the proposed project, the possibility exists for burrowing owls, Swainson's hawk, special-status raptors, and other special-status bird species to be foraging or nesting on the project site; therefore, a **potentially significant** impact could result. Implementation of Mitigation Measures 3-1 through 3-2 would reduce this impact to a *less-than-significant* level.

### Mitigation Measures

Implementation of the following mitigation measures would reduce impacts to Biological Resources to a *less-than-significant* level.

- 3-1 *Prior to construction, the project contractor shall initiate preconstruction surveys of the project site to determine if burrowing owls are present during the non-nesting season prior to any construction during the breeding season. The results of the preconstruction surveys shall then be submitted to the City for review. If burrowing owls are not present, further mitigation is not required. If occupied burrows are found during the non-breeding season, the project contractor shall implement standard "passive relocation" measures to exclude burrowing owls from burrows that need to be disturbed, consistent with CDFW guidelines. If breeding owls are found on-site during the nesting season, the project contractor shall establish a no-disturbance buffer around nesting burrows until the nesting is completed. The buffer distance and verification of completion of nesting will be determined by a qualified biologist with experience working with burrowing owls and construction activities. If it is not feasible to avoid removal of nesting burrows, the project contractor shall consult with the CDFW to determine if any options for active nest relocation are feasible.*
- 3-2 *If project construction plans require ground disturbance that represents potential nesting habitat for migratory birds or other raptors including Swainson's hawk, the project contractor shall initiate such activity between September 1<sup>st</sup> and January 31<sup>st</sup>, outside the bird nesting season, to the extent feasible. If tree removal must occur during the avian breeding season (February 1<sup>st</sup> to August 31<sup>st</sup>), a qualified biologist shall conduct a survey for ground-nesting birds. The survey shall be conducted 14 days prior to the commencement of construction and include all potential ground-nesting sites and trees and shrubs within 75 feet of the entire project site. The findings of the survey shall be submitted to the City of Sacramento Community Development Department. If nesting passerines or raptors are identified during the survey within 75 feet of the project site, a 75-foot buffer around the ground nest or nest tree shall be fenced with orange construction fencing. If the ground nest or nest tree is located off the project site, then the buffer shall be demarcated as per above. The size of the buffer may be altered if a qualified biologist conducts behavioral observations and determines the nesting passerines are well acclimated to disturbance. If acclimation has occurred, the biologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to the nesting birds. Construction or earth-moving activity shall not occur within the established buffer until a qualified biologist has determined that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones, which typically occurs by July 15<sup>th</sup>. However, the date may be earlier or later, and*

would have to be determined by a qualified biologist. If a qualified biologist is not hired to watch the nesting passerines, then the buffers shall be maintained in place through the month of August and work within the buffer may commence September 1<sup>st</sup>.

- 3-3 *Prior to the issuance of a grading permit, the dedication of land suitable for replacement Swainson's hawk foraging habitat shall be dedicated by the project applicant at a ratio of 1:1 for all existing unpaved areas within the project site. The location of the replacement foraging habitat shall be coordinated with, and approved by, the CDFW, and shall be acquired prior to development of the project site. Proof of CDFW approval shall be submitted to the City of Sacramento Community Development Department.*

### **Findings**

All additional significant environmental effects of the project relating to Biological Resources can be mitigated to a less-than-significant level.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>4. CULTURAL RESOURCES</b> Would the project:			
A) Cause a substantial adverse change in the significance of a historical or archaeological resource as defined in § 15064.5?		X	
B) Directly or indirectly destroy a unique paleontological resource?			X
C) Adversely affect tribal cultural resources?			X

### Environmental Setting

The City of Sacramento and the surrounding area are known to have been occupied by Native American groups for thousands of years prior to settlement by non-Native peoples. Archaeological materials, including human burials, have been found throughout the City. Human burials outside of formal cemeteries often occur in prehistoric contexts. Areas of high sensitivity for archaeological resources, as identified in the 2035 Background Report, are located within close proximity to the Sacramento and American rivers and other watercourses.

The 2035 land use diagram designates a wide swath of land along the American River as Parks, which limits development and impacts on sensitive prehistoric resources. High sensitivity areas may be found in other areas related to the ancient flows of the rivers, with differing meanders than found today. Recent discoveries during infill construction in downtown Sacramento have shown that the downtown area is highly sensitive for both historic- and prehistoric-period archaeological resources. Native American burials and artifacts were found in 2005 during construction of the New City Hall and historic period archaeological resources are abundant downtown due to the evolving development of the area and, in part, to the raising of the surface street level in the 1860s and 1870s, which created basements out of the first floors of many buildings.

### Standards of Significance

For purposes of this Initial Study, cultural resource impacts may be considered significant if construction and/or implementation of the proposed project would result in one or more of the following:

- Cause a substantial change in the significance of a historical or archaeological resource as defined in CEQA Guidelines Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource; or
- A substantial adverse change in the significance of such resources.

### Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated the potential effects of development under the 2035 General Plan on prehistoric and historic resources. See Chapter 4.4.

General Plan policies identified as reducing such effects call for identification of resources on project sites (Policy HCR 2.1.1), implementation of applicable laws and regulations (Policy HCR 2.1.2), early consultation with owners and land developers to minimize effects (Policy HCR 2.1.10) and encouragement of adaptive reuse of historic resources (Policy HCR 2.1.14). Demolition of historic resources is deemed a last resort. (Policy HCR 2.1.15)

The Master EIR concluded that implementation of the 2035 General Plan would have a significant and unavoidable effect on historic resources and archaeological resources. (Impacts 4.4-1, 2)

## **Answers to Checklist Questions**

### Questions A and B

The Folsom Boulevard Widening/Ramona Avenue Extension EIR states that cultural resource studies were conducted between June and December 2008 in the vicinity of the project site and included record searches, archival research, consultation with Native American tribes, agencies and interested parties, and architectural and archaeological surveys within the Area of Potential Effects (APE) established for the Ramona Avenue Widening project. The APE encompassed an area large enough to include maximum right-of-way take for all alternatives, construction easements and potential staging areas.

Archival research was conducted at the County, City and State libraries and repositories, City and County offices, State railroad archives and online sources. This research focused on establishing an historic context, and identifying dates of construction and ownership of properties within the APE. A record search was completed at the North Central Information Center, CSUS, to gather information on past architectural and archaeological investigations, federal and state listings of historical resources, and relevant historical maps and records. Significant concerns, sacred sites or properties were not identified during consultation.

### *Historical Resources*

Identification efforts revealed the presence of four built environment cultural resources. The Sacramento Valley Railroad (SVRR) was previously determined eligible for listing in NRHP and CRHR and the Brighton Underpass and Flood Gate was determined eligible for listing in the NRHP and CRHR as a result of this effort. Additionally, Caltrans determined that two resources in the APE, the Central Pacific/Union Pacific Railroad and a residence at 6948 Folsom Boulevard, are not eligible for the NRHP or CRHR under any criteria. The SHPO concurred with the determinations of eligibility made as a result of the Folsom Boulevard Widening/Ramona Avenue Extension project in a letter dated May 20, 2010.

However, the SVRR and the Brighton Underpass and Flood Gate are not located within the proposed project site or in the immediate vicinity of the site. In addition, according to Figure 6.4-2 of the Master EIR, historic structures are not located on or near the project site. Therefore, historical resources as defined in Section 15064.5 of the State CEQA Guidelines would not be affected by implementation of the proposed project.

### *Archaeological and Paleontological Resources*

The Folsom Boulevard Widening/Ramona Avenue Extension EIR did not reveal any evidence of archaeological or paleontological resources or human remains in the vicinity of the project site. The EIR determined that the lack of surface evidence of archaeological resources or human

remains does not exclude the existence of materials. In addition, Figure 6.4-1 of the Master EIR shows that the project area is considered to be an area of low sensitivity for historic and pre-historic resources.

Paleontological, prehistoric, historic, or archaeological resources are not known or suspected on-site, and unique geologic features do not exist on the project site or in the immediate vicinity. Due to the disturbed nature of the project site, the potential for encountering any significant cultural resources during the on-site improvements associated with the project is relatively low.

Although low, the potential does exist for previously unknown or unidentified cultural resources to be encountered below the surface that could be inadvertently damaged or lost during grading and construction of the proposed improvements. Because the possibility exists for previously unknown or unidentified cultural resources to be encountered during implementation of the proposed project, including the future realignment of the project access roadway, the project could result in a **potentially significant** impact related to unknown archaeological and paleontological resources, as well as to the disruption of human remains during grading and excavation activities.

### Question C

Tribal cultural resources are generally defined by Public Resources Code 21074 as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe. The Native American Heritage Commission (NAHC) was contacted on May 20, 2016, requesting a search of their Sacred Lands File for traditional cultural resources within or near the project area. The Sacred Lands File search failed to indicate the presence of Native American cultural resources in the immediate project area. In addition, the City of Sacramento distributed a project notification letter per AB 52. The mandatory 30 day response period closed on April 29, 2016 and the City did not receive a request for consultation. As such, given the results of the NAHC sacred lands file search, and the existing disturbed environment of the project site, the project would result in a **less-than-significant** impact to tribal cultural resources.

### **Mitigation Measures**

Implementation of the following mitigation measures would reduce impacts related to Cultural Resources to a *less-than-significant* level.

- 4-1 *If archaeological artifacts or unusual amounts of stone, bone, or shell are uncovered during construction activities, work within 50 feet of the specific construction site at which the suspected resources have been uncovered shall be suspended. At that time, the property owner shall retain a qualified professional archaeologist. The archaeologist shall conduct a field investigation of the specific site and recommend mitigation deemed necessary for the protection or recovery of any archaeological resources concluded by the archaeologist to represent significant or potentially significant resources as defined by CEQA. The mitigation shall be implemented by the property owner to the satisfaction of the Planning Division prior to resumption of construction activity.*
- 4-2 *In accordance with Section 7050.5 of the Health and Safety Code and Sections 5097.94 and 5097.98 of the Public Resources Code, if human remains are uncovered during project construction activities, work within 50 feet of the remains shall be suspended immediately, and the City of Sacramento Planning*

*Division and the County Coroner shall be immediately notified. If the remains are determined by the Coroner to be Native American in origin, the Native American Heritage Commission (NAHC) shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The property owner shall also retain a professional archaeological consultant with Native American burial experience. The archaeologist shall conduct a field investigation of the specific site and consult with the Most Likely Descendant identified by the NAHC. As necessary, the archaeological consultant may provide professional assistance to the Most Likely Descendant including the excavation and removal of the human remains. The property owner shall implement any mitigation before the resumption of activities at the site where the remains were discovered.*

## **Findings**

All additional significant environmental effects of the project relating to Cultural Resources can be mitigated to a less-than-significant level.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<p><b>5. <u>GEOLOGY AND SOILS</u></b></p> <p>A) Would the project allow a project to be built that will either introduce geologic or seismic hazards by allowing the construction of the project on such a site without protection against those hazards?</p>		X	

### **Environmental Setting**

Geocon prepared a Geotechnical Report<sup>6</sup> for the proposed project site in February 2016. Information in the Geology and Soils section is primarily drawn from the Geotechnical Report.

#### Regional Geology

The proposed project site is located within the Sacramento Valley, and lies centrally in the Great Valley geomorphic province of California. The Sacramento Valley forms the northern third of the Great Valley, which fills a northwest-trending structural depression bounded on the west by the Great Valley Fault Zone and the northern Coast Range, and to the east by the northern Sierra Nevada and the Foothills Fault Zone. Most of the surface of the Great Valley is covered with Holocene and Pleistocene-age alluvium, primarily composed of sediments from the Sierra Nevada and the Coast Ranges, which were carried by water and deposited on the valley floor. Siltstone, claystone, and sandstone are the primary types of sedimentary deposits. Older Tertiary Cenozoic deposits underlie the Quaternary alluvium.

The project site is underlain by sediments of the Riverbank Formation, which forms dissected alluvial fans containing material derived from the western slope of the Sierra Nevada. Erosional forces carried the sediments downstream, where they were eventually deposited to form high alluvial fans and terraces of the Sacramento and American rivers.

#### Topography

Topography of the site is generally flat. Due to the relatively flat topography of the area, the potential for slope instability within the City of Sacramento and at the project site is minor.

#### Project Area Geology

According to the U.S. Department of Agriculture (USDA)'s Natural Resources Conservation Service (NRCS) Web Soil Survey for the proposed project, the entire project site is made up of San Joaquin-Urban land complex soil series, 0 to 2 percent slopes. San Joaquin-Urban land complex characteristics include being moderately well drained, more than 80 inches to water table, zero frequency of flooding or ponding, and low water capacity. Silt loam occurs from zero to 23 inches, clay from 23 to 28 inches, indurated from 28 to 54 inches, and stratified sandy loam to loam from 54 to 60 inches.

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<sup>6</sup> Geocon. *Geotechnical Investigation, Sacramento State Student Housing. February 2016.*

Faulting and Seismicity

The site is not located within an Alquist-Priolo Earthquake Fault Zone, as established by the State of California around known active faults. A review of the referenced geologic materials indicates that the site is not underlain by active faults. To determine the distance to known active faults within 100 miles of the site, the computer program *EQFAULT* was used. Active faults within 50 miles of the site are summarized in Table 6.

<b>Table 6</b>		
<b>Regional Fault Summary</b>		
<b>Fault Name</b>	<b>Distance to Site (Miles)</b>	<b>Maximum Earthquake Magnitude</b>
Foothills Fault System	18.7	6.5
Great Valley 4	30.3	6.6
Great Valley 5	31.3	6.5
Great Valley 3	33.0	6.8
Hunting Creek – Berryessa	42.6	6.9
Concord – Green Valley	42.6	6.9
Greenville	48.6	6.9

*Source: Geocon, Geotechnical Investigation, Sacramento State Student Housing, February 2016.*

*Surface Fault Rupture*

The site is not within a currently established State of California Earthquake Fault Zone for surface fault rupture hazards. Active or potentially-active faults are not known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low. An active fault is defined as a fault that shows evidence for activity within the last 11,000 years and a potentially-active fault is generally defined as a fault that has shown evidence of displacement between 11,000 and 1.6 million years ago. Faults that have not demonstrated evidence of movement with the past 1.6 million years are generally considered inactive.

*Ground Shaking*

The USGS web-based application *2008 Interactive Deaggregations* was used to estimate the peak ground acceleration (PGA) and modal (most probable) magnitude associated with a 2,475-year return period. For the project site, the return period corresponds to an event with a two percent chance of exceedance in a 50-year period.

Landslides

Known landslides are not located near the project site, nor is the site in the path of any known or potential landslides. In addition, topography in the immediate vicinity of the site is generally flat. Therefore, the potential for a landslide is not considered to be a significant hazard to this project.

Tsunamis and Seiches

The site is not located within a coastal area. Therefore, tsunamis (seismic sea waves) are not considered a significant hazard at the site. Seiches are large waves generated in enclosed bodies of water in response to ground shaking. Major water-retaining structures are not located immediately upgradient from the project site.

## Soil-Related Risks and Hazards

Soil-related risks and hazards typically include soil erosion by water/wind, shrink/swell potential (expansive soils), subsidence, and corrosion. The following provides a brief description of each and the existing potential for each type of soil hazard to occur on the proposed project site.

### *Soil Erosion*

Soil erosion is the removal of material from the surface soil, which is the portion of the soil having an abundance of nutrients and organic matter required for plant growth to occur. The most common forces causing soil erosion include water and wind. Water and wind erosion can be very slow and hard to detect or it can be rapid and quite apparent. If soil is left without protection, the surface soil is exposed to the full force of wind and water and can be eroded in a short time (USDA, 2004). According to the NRCS, the soils on the proposed project site have a slight susceptibility to wind and water erosion.

### *Expansive Soils*

Expansive soil, also called shrink-swell soil, is a very common cause of foundation problems. Depending upon the supply of moisture in the ground, shrink-swell soils will experience changes in volume of up to thirty percent or more. Foundation soils which are expansive will “heave” and can cause lifting of a building or other structure during periods of high moisture. Conversely, during periods of falling soil moisture, expansive soil will “collapse” and can result in building settlement. Either way, damage can be extensive. According to the Geotechnical Investigation, the soils encountered at the project site are not considered to be “expansive,” as defined by the California Building Code (CBC).

### *Liquefaction*

Liquefaction is a phenomenon in which saturated cohesionless soils are subject to a temporary loss of shear strength due to pore pressure buildup under the cyclic shear stresses associated with intense earthquakes. Primary factors that trigger liquefaction are: moderate to strong ground shaking (seismic source), relatively clean, loose granular soils (primarily poorly graded sands and silty sands), and saturated soil conditions (shallow groundwater). Due to the increasing overburden pressure with depth, liquefaction of granular soils is generally limited to the upper 50 feet of a soil profile. The site is not located within a State of California Seismic Hazard Zone for liquefaction. Based on the depth to groundwater at the project site, the generally very stiff to hard and/or dense nature of the Riverbank Formation, and the relatively low seismicity of the area, the potential for liquefaction occurring on the site is considered to be low.

### *Subsidence*

Subsidence is defined as a lowering of the ground surface that can result from changes in soil or geologic conditions. Subsidence can occur due to natural processes or by human activities and in the City of Sacramento the three most common causes of subsidence include: groundwater withdrawal, oil and natural gas withdrawal, and the oxidation of peat in the Delta. Subsidence can cause damage to structures and infrastructures and has the potential to fracture/rupture pipelines, water drains, and dislocate wells. The proposed project site is not located in an area prone to subsidence.

### *Soil Corrosion*

Soil samples obtained during the field exploration were subjected to laboratory testing for minimum resistivity, pH, and chloride and water-soluble sulfate. The laboratory test results and published screening levels are presented in Appendix B of the Geotechnical Investigation. Water-soluble sulfate test results on a sample of near-surface soils indicate a “negligible” potential for sulfate attack on normal portland cement concrete, as defined by Section 1904.1 of the 2013 CBC and Chapter 318, Section 4.3 of the ACI Manual of Concrete Practice. ACI does not set forth any particular recommendations for “negligible” exposure.

The corrosive nature of the soils should be considered in the design of buried metal pipes and underground structures, and further evaluation by a corrosion engineer may be needed to incorporate the necessary precautions to avoid premature corrosion of underground pipes and/or buried metal in direct contact with soil.

### Groundwater

Groundwater was encountered in Boring B1 at the site at a depth of approximately 47 feet. Information from the California State Groundwater Elevation Monitoring System (CASGEM) indicates that historical groundwater elevations in a monitoring well approximately 0.5-mile west of the site were generally between 40 and 50 feet below grade from the late 1960s to the late 1980s. Groundwater levels are expected to vary seasonally and also fluctuate with variations in rainfall, temperature and other factors, and could be higher or lower than observed during the field exploration.

### **Standards of Significance**

For the purposes of this Initial Study, an impact is considered significant if it allows a project to be built that will either introduce geologic or seismic hazards by allowing the construction of the project on such a site without protection against those hazards.

### **Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies**

Chapter 4.5 of the Master EIR evaluated the potential effects related to seismic hazards, underlying soil characteristics, slope stability, erosion, existing mineral resources and paleontological resources in the City. Implementation of identified policies in the 2035 General Plan reduced all effects to a less-than-significant level. Policy EC 1.1.1 requires regular review of the City’s seismic and geologic safety standards, and Policy EC 1.1.2 requires geotechnical investigations for project sites to identify and respond to geologic hazards, when present.

### **Answers to Checklist Questions**

#### Question A

The Geotechnical Investigation that was prepared for the proposed project site documents existing geologic and soil conditions near and on the proposed project site.

### *Geologic Hazards*

The Geotechnical Investigation conducted field investigations on the project site, during which 12 test borings were drilled in various locations on the project site. The test borings on the project site were conducted to determine the types of soil underlain the project site and to determine the depth of the groundwater table. The Geotechnical Investigation identifies site-specific recommendations for the following: general construction procedures, seismic design, soil excavation, fill materials, grading, foundations, underground utilities, slabs-on-grade, moisture protection, pavement and retaining wall design, and surface drainage. In addition, the Geotechnical Investigation recommends that a review of final project plans and specifications be conducted to ensure that the recommendations have been implemented as part of the proposed project.

The proposed project site is not located on an AP Fault Zone; therefore, the potential for fault rupture on the proposed project site is considered to be low. The Foothills Fault System is the closest active fault to the site, approximately 18.7 miles away.

Soil liquefaction is a phenomenon primarily associated with the saturated soil layers located close to the ground surface. These soils lose strength during ground shaking generated by seismic events. Due to the loss of strength, the soil acquires “mobility” sufficient to permit both horizontal and vertical movements. Soils that are most susceptible to liquefaction are clean, loose, uniformly graded, saturated, fine-grained sands that lie relatively close to the ground surface. However, loose sands that contain a significant amount of fines (minute silt and clay fraction) may also liquefy. According to the NRCS, the entire project site is made up of San Joaquin-Urban land complex soil series, 0 to 2 percent slopes. The project site is not located within a State-Designated Seismic Hazard Zone for liquefaction. Based on the medium dense to dense nature of the underlying soil, the absence of groundwater within the 12 test borings that were conducted on-site, and the historic seismicity in the area, the potential for liquefaction at the proposed project site during a seismic event is low.

The proposed project site is located in an area of the City of Sacramento that is topographically flat. Elevations on the proposed project site range from 40 to 48 feet above mean sea level (amsl). Seismically-induced landslides or landslides induced by soil failure typically occur on slopes with gradients of 30 percent or higher. Considering the proposed project site is topographically flat, the potential for seismically-induced or soil failure landslides does not exist.

### *Soil Hazards*

According to the Geotechnical Investigation, the 12 test borings that were conducted on-site indicate that a key geotechnical consideration for the site is the soft consistency and/or organic-laden nature of the near-surface soils. These materials will require removal, moisture conditioning and recompaction in areas to receive structures or settlement-sensitive improvements. Soils with excessive amounts of organics should be exported from the site or stockpiled for use in landscaping areas.

Based on the subsurface conditions at the site and the anticipated structural loading, post-tensioned slab-on-grade foundations can be used to support the proposed buildings. Conventional shallow foundations can be used to support the Innovation Center building and ancillary structures such as screen walls and trash enclosures. Provided the site is graded in accordance with the recommendations of Geotechnical Investigation and foundation systems are constructed as described therein, post-construction settlement due to foundation loads is

estimated to be less than approximately 0.75-inch, and corresponding differential settlement is expected to be less than 0.5-inch across a horizontal distance of 50 feet.

On-site soil investigations indicated that the surface and near-surface soils possess a low expansion potential; therefore, existing and new buildings would not be impacted by expansive soils on the project site.

The proposed project would be required to be consistent with the City of Sacramento Building Code; and, therefore would comply with the 2010 California Building Code (CBC) as the City implements the CBC through the building permit process. The CBC provides minimum standards for building design in the State of California. Chapter 16 of the CBC (Structural Design Requirements) includes regulations and building standards governing seismically-resistant construction and construction techniques to protect people and property from hazards associated with excavation cave-ins and falling debris/construction materials. Chapter 18 of the CBC provides regulations regarding site demolition, excavations, foundations, retaining walls, and grading, including (but not limited to) requirements for seismically-resistant design, foundation investigation, stable cut and fill slopes, and excavation, shoring, and trenching. The CBC also defines different building regions in California and ranks them according to their seismic hazard potential. Seismic Zone 1 has the least seismic potential and Zone 4 has the highest seismic potential. The City of Sacramento is in Seismic Zone 3; accordingly, the proposed Project would be required to comply with all design standards applicable to Seismic Zone 3.

The proposed project would also require grading and excavation during the construction period and would, therefore, require a Grading and Erosion and Sediment Control Plan to be submitted and approved per Chapter 15.88 of the City's Municipal Code. Chapter 15.88 of the Municipal Code (Grading and Erosion and Sediment Control) is used to regulate grading on property within the City of Sacramento to safeguard life, limb, health, property and the public welfare; to avoid pollution of watercourses with nutrients, sediments, or other materials generated by surface runoff from construction activities; to comply with the City's National Pollution Discharge Elimination System Permit; and, to ensure graded sites within the City comply with all applicable City standards and ordinances.

The proposed project would not include the use of septic tanks or alternative wastewater disposal systems; therefore, impacts would not occur due to inadequate soils being able to support such wastewater storage/disposal systems.

### *Conclusion*

As discussed above, due to the soft consistency and/or organic-laden nature of the near-surface soils on-site, the soils will require removal, moisture conditioning, and recompaction in areas to receive structures or settlement-sensitive improvements; therefore, without implementation of the recommendations in the Geotechnical Investigation, a **potentially significant** impact would occur. Site-specific impacts would be mitigated to a *less-than-significant* level with implementation of Mitigation Measure 5-1 and compliance with the City of Sacramento Building Code and Chapter 15.88 of the City's Municipal Code.

### **Mitigation Measures**

Implementation of the following mitigation measure would reduce impacts related to Geology and Soils to a *less-than-significant* level.

- 5-1 *Prior to issuance of a grading permit, the grading plans shall incorporate all geotechnical recommendations specified in the Geotechnical Investigation prepared for the proposed project. All grading and foundation plans for the development must be reviewed and approved by the City Engineer and Chief Building Official prior to issuance of grading and building permits in order to ensure that recommendations in the Geotechnical Investigation are properly incorporated and utilized in the project design.*

### **Findings**

All additional significant environmental effects of the project relating to Geology and Soils can be mitigated to a less-than-significant level.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>6. HAZARDS</b> Would the project:			
A) Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities?		X	
B) Expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials or other hazardous materials?			X
C) Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities?			X

**Environmental Setting**

A Phase II Environmental Site Assessment (ESA) was prepared for the proposed project site by Rincon Consultants, Inc. in March 2016.<sup>7</sup> The information in the Hazards section is primarily drawn from the Phase II ESA. Prior to the Phase II ESA, Rincon Consultants, Inc. also completed a Phase I ESA for the property (January 2016).

Due to the regularly disturbed nature of the site associated with the existing uses, the site predominantly consists of ruderal vegetation. Existing development surrounds the project site, including commercial and industrial uses.

The following discussion addresses the potential for contaminated soil on the proposed project site. Asbestos-containing materials and lead-based paint are not expected to occur on-site, as structures do not exist on the site and, therefore, on-site demolition would not occur.

Contaminated Soil

The purpose of the Phase II ESA was to determine if Potential Recognized Environmental Conditions (RECs) identified during the Phase I ESA continue to affect the project site. During the Phase I ESA, Rincon identified the following two potential RECs in connection with the site: the former agricultural use of the northeastern portion of the site; and the northern and western adjacent railroad tracks.

Eleven soil borings (RB-1 through RB-11) were advanced throughout the project site. Soil borings RB-1 through RB-8 were advanced on the northeast portion of the site that was previously used for agricultural land uses. Three soil borings (RB-9 through RB-11) were advanced on the western boundary of the site east of the western adjacent railroad tracks. Shallow soil samples were collected at depths ranging from zero to 0.5 to 2.5 to three feet below ground surface (bgs).

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<sup>7</sup> Rincon Consultants. *Phase II Environmental Site Assessment, 2920 Ramona Avenue. March 15, 2016.*

## Standards of Significance

For the purposes of this Initial Study, an impact is considered significant if the proposed project would:

- Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities;
- Expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials or other hazardous materials; or
- Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities.

## Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated effects of development on hazardous materials, emergency response and aircraft crash hazards. See Chapter 4.6. Implementation of the General Plan may result in the exposure of people to hazards and hazardous materials during construction activities, and exposure of people to hazards and hazardous materials during the life of the General Plan. Impacts identified related to construction activities and operations were found to be less than significant. Policies included in the 2035 General Plan, including PHS 3.1.1 (investigation of sites for contamination) and PHS 3.1.2 (preparation of hazardous materials actions plans when appropriate) were effective in reducing the identified impacts.

## Answers to Checklist Questions

### Question A

The proposed project includes construction of a 225-unit student housing project on the 8.5-acre site. Excavation depths range from 0 to 36 inches for typical site grading and up to eight feet for utility trenches.

Results from the soil sampling conducted on the project site are discussed below.

### *Former Agricultural Area*

#### Arsenic

Arsenic was detected in the surface soil samples at concentrations ranging from 3.6 mg/kg to 28 mg/kg. The arsenic concentrations exceed the established Environmental Screening Levels (ESLs) for arsenic in residential soil (0.067 mg/kg). However, with the exception of one sample, the concentrations detected fall within the acceptable range of the California Background Concentrations published by the Kearney Foundation (1996) (0.6 to 11 mg/kg). The detected concentration of arsenic in soil sample RB-7 was 28 mg/kg, which is above the background concentration range. Therefore, another soil sample was collected from RB-7 at 2.5-3.0 feet bgs and again analyzed for arsenic. The detected concentration of arsenic was 7.3 mg/kg at 2.5-3.0 feet bgs, which is within the acceptable background concentration range.

### Organochlorine Pesticides

Low concentrations of organochlorine pesticides were detected in several of the surface soil samples; however, the concentrations of detected organochlorine pesticides were below the established ESLs for OCPs in residential soil.

### *Adjacent UPRR Tracks*

#### Metals

Concentrations of metals, including arsenic, beryllium and cadmium, were detected in the soil samples that were analyzed. The detected concentrations of arsenic, cadmium, and beryllium all exceed the established ESLs for each metal; however, the detected concentrations of metals are within the acceptable background concentration range for California soils.

#### Petroleum Hydrocarbons and Semi-Volatile Organic Compounds

Concentrations of petroleum hydrocarbons as diesel were detected in all three soil samples analyzed adjacent to the railroad tracks. Detected concentrations of petroleum hydrocarbons as oil were also detected. All of the detected concentrations of petroleum hydrocarbons were below the established ESLs. Semi-volatile organic compounds, which are a group of compounds that includes some pesticides, ingredients in cleaning agents and personal care products, and additives to materials such as vinyl flooring, furniture, clothing, cookware, food packaging and electronics, were not detected in the three soil samples analyzed from soils adjacent to the railroad tracks.

#### Herbicides

Herbicides were not detected in the three soil samples analyzed from soils adjacent to the railroad tracks.

### *Hazardous Materials Records*

The site is not included on a list of hazardous materials sites compiled by the County pursuant to Government Code 65962.5. In addition, known contaminated soils do not occur on the project site, according to the Department of Toxic Substances Control.

### *Conclusion*

Soil samples from the site contained detectable concentrations of organochlorine pesticides, petroleum hydrocarbons as diesel, and petroleum hydrocarbons as oil. However, according to the Phase II ESA, all soil sample concentrations were below the established ESLs. Herbicides or semi-volatile organic compounds were not detected in the three soil samples analyzed from adjacent to the railroad tracks. With the exception of arsenic in the surface soil sample RB-7, detected concentrations of total metals and arsenic were also below the ESLs, or within the acceptable background concentration ranges of metals in California soils.

Based on the results of the soil sampling that was conducted for the project site, the lateral extent of elevated arsenic in the shallow soil in the vicinity of RB-7 has not been defined. Therefore, the possibility exists that sensitive receptors could be impacted by hazardous

materials released during project construction activities, and the project would result in a **potentially significant** impact.

#### Question B

Demolition of structures can result in potential exposure of people to asbestos-containing materials and/or lead-based paint if asbestos-containing lead-based materials are present within any structures on a site. The proposed project site is currently vacant and has been vacant for over ten years. Structures do not exist on-site and demolition would not occur. Therefore, the project would result in a **less-than-significant** impact related to exposure of people to asbestos-containing materials or other hazardous materials.

#### Question C

Field investigations were conducted on the proposed project site to determine depth to the groundwater table by boring in 12 different areas on the project site to maximum depths of approximately 51.5 feet. Groundwater was encountered in Boring B1 at a depth of approximately 47 feet. In addition, information from the CASGEM indicates that historical groundwater elevations in a monitoring well approximately 0.5-mile west of the site were generally between 40 and 50 feet below grade from the late 1960s to the late 1980s.

With excavation depths varying from 0 to 36 inches for typical site grading and up to eight feet for utility trenches, dewatering activities would not occur during project construction. Therefore, construction activities would not result in exposure of people to existing contaminated groundwater, and impacts would be **less than significant**.

#### **Mitigation Measures**

Implementation of the following mitigation measure would reduce impacts related to Hazards to a **less-than-significant** level.

- 6-1 *Prior to issuance of a grading permit, step-out soil borings shall be completed around RB-7 and a surficial soil sample laboratory analysis shall be conducted in for these areas. Once the soils are collected, the soils are to be tested for arsenic. If arsenic is not found, further action is not required; however, if arsenic is found to be higher than the allowable thresholds determined by a consulting toxicologist, the project shall implement the appropriate mitigation including, but not limited to, soil remediation to an acceptable total threshold limit concentration (TTL) level per applicable State and federal regulations. All recommended mitigation measures shall be implemented by the project applicant, subject to review and approval by the County of Sacramento, Environmental Management Department. If soil remediation is necessary for arsenic levels, when remediation is complete, the project applicant shall submit to the City Community Development Department, either a site certification of completion or a "No Further Action" letter for the project site from the Department of Toxic Substances Control.*

#### **Findings**

All additional significant environmental effects of the project relating to Hazards can be mitigated to a less-than-significant level.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>7. HYDROLOGY AND WATER QUALITY</b> Would the project:			
A) Substantially degrade water quality and violate any water quality objectives set by the State Water Resources Control Board, due to increases in sediments and other contaminants generated by construction and/or development of the project?			X
B) Substantially increase the exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood?			X

### Environmental Setting

The site is located approximately five miles east of the Sacramento River and less than a mile south of the American River; however, the site itself does not contain any natural waterways. Given that the site is vacant and void of impervious surfaces, rainfall is allowed to infiltrate the on-site soils and typically drains as subsurface flow to the south and west. The project site is within the City's Drainage Basin 43. The Basin 43 watershed covers 517 acres and is drained by an underground pipe system that conveys runoff to a trunk line in Power Inn Road that flows to the south. The trunk line delivers runoff to Sump 43, which is an 81.6 cubic feet per second (cfs) pump station located adjacent to Power Inn Road, approximately 1,500 feet north of Fruitridge Road. The pump station discharges runoff into a concrete-lined drainage channel that conveys runoff south and ultimately joins with Morrison Creek.

The City of Sacramento's Grading Ordinance requires that development projects comply with the requirements of the City's Stormwater Quality Improvement Plan (SQIP). The SQIP outlines the priorities, key elements, strategies, and evaluation methods of the City's Stormwater Management Program. The Program is based on the NPDES municipal stormwater discharge permit. The comprehensive Program includes pollution reduction activities for construction sites, industrial sites, illegal discharges and illicit connections, new development, and municipal operations. In addition, before the onset of any construction activities, where the disturbed area is one acre or more in size, projects are required to obtain coverage under the NPDES General Construction Permit and include erosion and sediment control plans. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater and other non-point source runoff. Measures that reduce or eliminate post-construction-related water quality problems range from source controls, such as reduced surface disturbance, to treatment of polluted runoff, such as detention or retention basins. The City's SQIP and the *Stormwater Quality Design Manual for the Sacramento Region* (Sacramento Stormwater Quality Partnership 2014) include BMPs to be implemented to mitigate impacts from new development and redevelopment projects.

The Federal Emergency Management Agency (FEMA) publishes Flood Insurance Rate Maps (FIRMs) that delineate flood hazard zones for communities. The project site is designated by

FIRM *Community Panel Number 06067C0195H*<sup>8</sup> as being located within an area designated as shaded Zone X, which is applied to areas of 0.2 percent annual chance flood, areas of one percent annual chance flood with average depths of less than one foot, or with drainage areas less than one square mile, and areas protected by levees from one percent annual chance flood. The project site is in an area protected from the one percent annual chance (100-year) flood by levee, dike, or other structures subject to possible failure or overtopping during larger storms. FEMA does not have building regulations for development in areas designated Zone X and would not require mandatory flood insurance for structures in Zone X.

Section 13.08.145 of the Sacramento City Municipal Code (Mitigation of drainage impacts; design and procedures manual for water, sanitary sewer, storm drainage, and water quality facilities) requires that when a property would contribute drainage to the storm drain system or combined sewer system, all stormwater and surface runoff drainage impacts resulting from the improvement or development must be fully mitigated to ensure that the improvement or development does not affect the function of the storm drain system or combined sewer system, and that an increase in flooding or in water surface elevation that adversely affects individuals, streets, structures, infrastructure, or property does not occur. The City's Sewer Development Fee Fund is used to recover an appropriate share of the capital costs of the City's facilities.

The project site is located within an area of the City served by the Sacramento Area Sewer District (SASD). The SASD owns and operates thousands of miles of lower lateral and main line pipes, 108 pump stations, and is responsible for the day-to-day operations and maintenance of such sewer pipes. Once collected in the SASD system, sewage flows into the SRCSD interceptor system, where the sewage is conveyed to the Sacramento Regional Wastewater Treatment Plant (SRWWTP) located near Elk Grove. The SRWWTP is permitted to treat an average dry weather flow (ADWF) of 181 million gallons per day (mgd). According to the Regional Water Quality Control Board's 2010 wastewater discharge permit for SRCSD's SRWWTP, the average dry weather flow at the time was approximately 141 mgd. Expansion of the SRWWTP was previously proposed; however, due to slow growth and potential reclamation, the SRCSD decided not to expand the plant at that time. Sewage treated by the SRCSD at the SRWWTP is then safely discharged into the Sacramento River.

### **Standards of Significance**

For purposes of this Initial Study, impacts to hydrology and water quality may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

- Substantially degrade water quality and violate any water quality objectives set by the State Water Resources Control Board, due to increases in sediments and other contaminants generated by construction and/or development of the proposed project; or
- Substantially increase the exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood.

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<sup>8</sup> Federal Emergency Management Agency. *Flood Insurance Rate Map Community Panel Number 06067C0195H*. August 16, 2012.

## Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

Chapter 4.7 of the Master EIR evaluates the potential effects of the 2035 General Plan as they relate to surface water, groundwater, flooding, stormwater and water quality. Potential effects include water quality degradation due to construction activities (Impacts 4.7-1, 4.7-2), and exposure of people to flood risks (Impacts 4.7-3). Policies included in the 2035 General Plan, including a directive for regional cooperation (Policies ER 1.1.2, EC 2.1.1), comprehensive flood management (Policy EC 2.1.23), and construction of adequate drainage facilities with new development (Policy ER 1.1.1 to ER 1.1.10) were identified that the Master EIR concluded would reduce all impacts to a less-than-significant level.

### Answers to Checklist Questions

#### Question A

The proposed project has the potential to degrade water quality during both construction and operations. Further details regarding the potential effects are provided below.

#### *Construction*

Construction activities associated with the proposed project would create the potential to degrade water quality from increased sedimentation during storm events. Disturbance of site soils would increase the potential for erosion from storm water. The State Water Resources Control Board (SWRCB) adopted a statewide general National Pollutant Discharge Elimination System (NPDES) permit for storm water discharges associated with construction activity. Dischargers whose projects disturb one or more acres of soil are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation.

The City's SQIP contains a Construction Element that guides in implementation of the NPDES Permit for Storm Water Discharges Associated with Construction Activity. This General Construction Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP should contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list BMPs the discharger will use to protect stormwater runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutant to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP. Compliance with City requirements to protect storm water inlets would require the developer to implement BMPs such as the use of straw bales, sandbags, gravel traps, and filters; erosion control measures such as vegetation and physical stabilization; and sediment control measure such as fences, dams, barriers, berms, traps, and basins. City staff inspects and enforces the erosion, sediment and pollution control requirements in accordance with City codes (Grading, Erosion and Sediment Control ordinance).

Conformance with City regulations and permit requirements along with implementation of BMPs would ensure that construction activities of the proposed project would result in a less-than-significant impact related to water quality.

### *Operation*

The proposed project includes covering the majority of the site in impervious services. On-site storm water runoff would be collected through a series of drain inlets and underground drain piping. In addition to the on-site improvements, the proposed project would include portions of the Ramona Avenue Extension along the project frontage including new curb, gutter, and sidewalk. A new storm drain main would extend and replace the existing line within Ramona Avenue with new inlets placed to collect drainage in the new curb and gutter. All new drainage improvements would convey flows to existing offsite infrastructure ultimately to Sump 43 and discharged to Morrison Creek.

Stormwater from the proposed project site would be collected and detained on-site prior to release to storm drainage infrastructure within the Ramona Avenue Extension. Runoff from the site would be then conveyed through existing infrastructure to the City's Drainage Basin 43. Collected runoff from on-site impervious services would be detained on-site an in-pipe detention system, which not only detains peak flows during rain events, but also serves as an infiltration basin for stormwater treatment. The City Department of Utilities would review the Improvement Plans for the proposed project prior to approval to ensure that adequate water quality control facilities are incorporated. It should be noted that the project would comply with Section 13.08.145, Mitigation of drainage impacts; design and procedures manual for water, sanitary sewer, storm drainage, and water quality facilities, of the City of Sacramento Municipal Code, which requires the following: "When property that contributes drainage to the storm drain system or combined sewer system is improved or developed, all stormwater and surface runoff drainage impacts resulting from the improvement or development shall be fully mitigated to ensure that the improvement or development does not affect the function of the storm drain system or combined sewer system, and that there is no increase in flooding or in water surface elevation that adversely affects individuals, streets, structures, infrastructure, or property."

Stormwater retention calculations have been prepared for the proposed project and are included as Appendix C of this IS/MND. The calculations demonstrate multiple options for the project to provide adequate stormwater detention and drainage. The final drainage report and plans will be required to be approved by the Department of Utilities prior to approval of the Improvement Plans for the project.

### *Conclusion*

Overall, design of the proposed project site and conformance with City and state regulations would ensure that a substantial degradation to water quality or violation of any water quality objectives due to increases in sediments and other contaminants generated by construction and/or development of the project would not occur. In addition, the proposed project design provides for containment of all runoff water associated with the site; therefore, discharge of runoff to surface waters or groundwater would not result from the proposed project. The proposed project's impacts related to substantial degradation of water quality or violation of any water quality objectives set by the State Water Resources Control Board, due to increases in sediments and other contaminants generated by construction and/or development of the project would be ***less than significant***.

### Question B

The project site is not located within a 100-year flood hazard area. As such, the proposed project would not place housing or structures within a 100-year flood hazard area and would not expose people or property to the risk of injury or damage in the event of a 100-year flood.

Stormwater from the proposed project site would be collected and detained on-site prior to release to storm drainage infrastructure within the Ramona Avenue Extension. Runoff from the site would be then conveyed through existing infrastructure to the City's Drainage Basin 43. The proposed project includes on-site detention such that all increased runoff from the new impervious services are detained on-site during peak storm events and released at a rate equal to that which currently occurs at the project site. According to the project engineer, approximately 40,000 cubic feet (cf) of storage would be required on the project site. As discussed above, the stormwater retention calculations prepared for the proposed project demonstrate multiple options for the project to provide adequate stormwater detention and drainage, and the final drainage report and plans will be required to be approved by the Department of Utilities prior to approval of the Improvement Plans for the project.

Therefore, adequate on-site storage exists to ensure peak flows to downstream existing storm drainage conveyance facilities do not exceed capacity, and a ***less-than-significant*** impact would result.

### **Mitigation Measures**

None required.

### **Findings**

The project would have no additional project-specific environmental effects relating to Hydrology and Water Quality.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>8. NOISE</b> Would the project:			
A) Result in exterior noise levels in the project area that are above the upper value of the normally acceptable category for various land uses due to the project's noise level increases?		X	
B) Result in residential interior noise levels of 45 dBA L <sub>dn</sub> or greater caused by noise level increases due to the project?		X	
C) Result in construction noise levels that exceed the standards in the City of Sacramento Noise Ordinance?		X	
D) Permit existing and/or planned residential and commercial areas to be exposed to vibration-peak-particle velocities greater than 0.5 inches per second due to project construction?			X
E) Permit adjacent residential and commercial areas to be exposed to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic and rail operations?			X
F) Permit historic buildings and archaeological sites to be exposed to vibration-peak-particle velocities greater than 0.2 inches per second due to project construction and highway traffic?			X

### Environmental Setting

A Noise Assessment was prepared by Bridgenet International<sup>9</sup> to assess the potential noise-related impacts of the proposed project. This section is based upon the Noise Assessment.

The proposed project site is surrounded by U.S. Highway 50 (SR 16) to the north, Ramona Avenue to the east, and commercial/industrial uses and UPRR tracks to the north, east, and west. Existing land uses surrounding the project site include River City Chapel and other commercially-zoned land to the northeast, a commercial self-storage facility to the east, Dorris Lumber & Molding Company to the west, and a commercial printing/mailing business (DFS) to the south. The Redding Avenue Apartments, which are student-oriented housing, are located just southwest of the project site. The main noise sources in the vicinity of the project site are traffic and railway noise from SR 16 and the UPRR tracks, and noise from adjacent commercial operations.

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<sup>9</sup> *Bridgenet International, CEQA Initial Noise Study, The Crossings, May 19, 2016.*

Noise

Sound can be described technically in terms of amplitude (loudness), frequency (pitch), or duration (time). The standard unit of measurement of the loudness of sound is the decibel (dB). Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. The standard measurement of frequency is Hertz (Hz). Hertz is a unit of frequency equal to one cycle per second.

The human hearing system is not equally sensitive to sound at all frequencies. Sound waves below 16 Hz are not heard at all and are “felt” more as a vibration. Similarly, while people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz. Because the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. Community noise levels are measured in terms of the “A-weighted decibel” abbreviated dBA.

Due to the physical characteristics of noise transmission and noise perception, the relative loudness of sound does not closely match the actual amounts of sound energy. Table 7 presents the subjective effect of changes in sound pressure levels. Typical human hearing can detect changes of approximately 3 dBA or greater under normal conditions. Changes of 1 to 3 dBA are detectable under quiet, controlled conditions and changes of less than 1 dBA are usually indiscernible. A change of 5 dBA or greater is typically noticeable to most people in an exterior environment and a change of 10 dBA is perceived as a doubling (or halving) of the noise.

<b>Table 7</b>	
<b>Change in Sound Pressure Level (dB)</b>	
<b>dB Change</b>	<b>Change in Apparent Loudness</b>
+/- 3	Threshold of human perceptibility
+/- 5	Clearly noticeable change in noise level
+/- 10	Twice or half as loud
+/- 20	Much louder or quieter

*Source: Bies and Hansen, Engineering Noise Control, 1988.*

Noise may be generated from a point source, such as a piece of construction equipment, or from a line source, such as a roadway containing moving vehicles. Because noise spreads in an ever-widening pattern, the given amount of noise striking an object, such as an eardrum, is reduced with distance from the source. The typical distance reduction for point source noise is six dBA per doubling of the distance from the noise source.

A line source of noise, such as vehicles proceeding down a roadway, will also be reduced with distance, but the rate of reduction is affected by both distance and the type of terrain over which the noise passes. Hard sites, such as developed areas with paving, reduce noise at a rate of three dBA per doubling of distance, while soft sites, such as undeveloped areas, open space and vegetated areas reduce noise at a rate of 4.5 dBA per doubling of distance.

Objects that block the line of sight attenuate the noise source if the receptor is located within the “shadow” of the blockage (such as behind a sound wall). If a receptor is located behind the wall, but has a view of the source, the wall will do little to reduce the noise. Additionally, a receptor

located on the same side of the wall as the noise source may experience an increase in the perceived noise level, as the wall will reflect noise back to the receptor compounding the noise.

Several rating scales (or noise “metrics”) exist to analyze effects of noise, including traffic-generated noise, on a community. These account for the following: (1) the parameters of noise that have been shown to contribute to the effects of noise on man, (2) the variety of noises found in the environment, (3) the variations in noise levels that occur as a person moves through the environment, and (4) the variations associated with the time of day. A number of noise scales have been developed to account for this observation.

Certain land uses are particularly sensitive to noise and vibration. Noise- and vibration-sensitive land uses are defined as those locations or areas where frequent human use occur. This would include residential, school, hospital, religious facility, library, and open/space recreation areas where quiet environments are necessary for enjoyment, public health, and safety. The proposed project site is adjacent to commercial property to the north, south, east and west, as well as student housing that is under construction to the southwest.

### Vibration

Vibrating objects in contact with the ground radiate vibration waves through various soil and rock to the foundations of nearby buildings. When assessing annoyance from groundborne noise, vibration is typically expressed as root mean square (rms) velocity in units of decibels of one micro-inch per second. To distinguish vibration levels from noise levels, the unit is written as VdB. Human perception to vibration starts at levels as low as 67 VdB and sometimes lower. Groundborne vibration is almost never annoying to people who are outdoors. In extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. Common sources of groundborne vibration include trains and construction activities such as blasting, pile driving and operating heavy earthmoving equipment.

### Existing Noise Environment

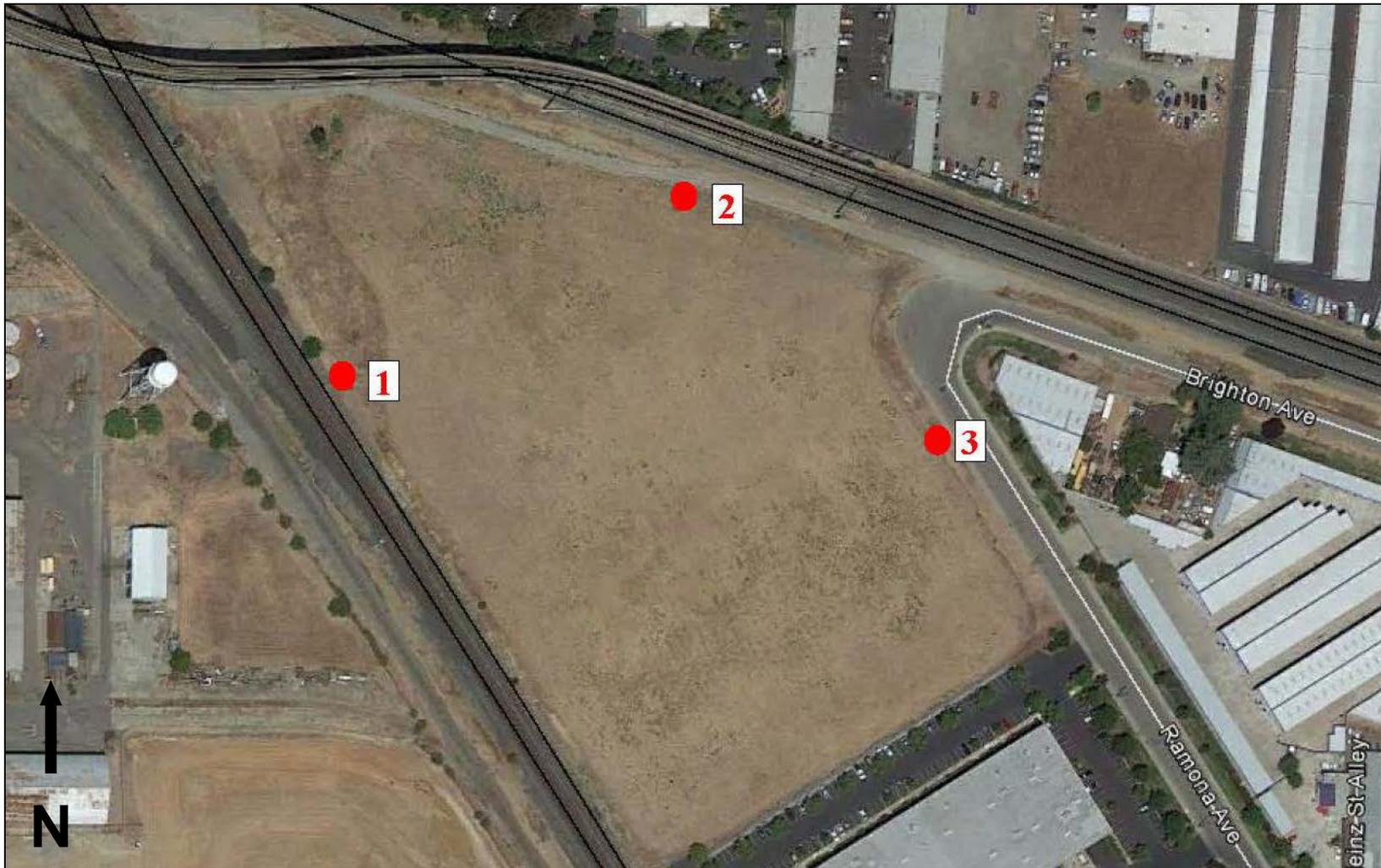
A noise measurement survey was conducted on March 16 and 18, 2016, which included three noise measurement locations located at the proposed project site to identify major noise sources in the area and to quantify the existing ambient noise environment (see Figure 10). The results of the noise measurement survey are presented in Table 8 through Table 10.

The noise at Location 1 was dominated by traffic on the freight train tracks to the west of the project. Table 8 shows that the proposed project is exposed to average hourly noise levels that range from 59.2 dBA Leq to 68.6 dBA Leq. Based on the worst-case Leq to CNEL conversion, the existing noise level at the project site would range from 57.2 dB CNEL to 70.6 dB CNEL.

The noise at Location 2 was dominated by traffic on the freight train tracks and the regional transit gold line light rail to the north of the project. Table 9 shows that the proposed project is exposed to average hourly noise levels that range from 60.2 dBA Leq to 64.0 dBA Leq. Based on the worst-case Leq to CNEL conversion, the existing noise level at the project site would range from 58.2 dB CNEL to 66.0 dB CNEL.

The noise at Location 3 was dominated by traffic on Ramona Avenue to the east of the project and traffic on the freight train tracks and the regional transit gold line light rail to the north of the project. Table 10 shows that the proposed project is exposed to average hourly noise levels that range from 57.9 dBA Leq to 61.5 dBA Leq. Based on the worst-case Leq to CNEL conversion, the existing noise level at the project site would range from 55.9 dB CNEL to 63.5 dB CNEL.

Figure 10  
Noise Measurement Locations



Source: Bridgenet International, CEQA Initial Noise Study, The Crossings, May 19, 2016.

**Table 8  
Noise Measurement Survey Results at Location 1**

Location	Primary Noise Source	Date	Start Time	End Time	Lmin (dBA)	Lmax (dBA)	Leq (dBA)
1	Traffic from the freight train tracks to the west of the project	3/17/2016	8:00 AM	9:00 AM	54.0	73.0	59.2
			9:00 AM	10:00 AM	57.5	72.3	61.6
			10:00 AM	11:00 AM	56.3	71.5	60.7
			11:00 PM	12:00 PM	56.1	73.0	60.6
			12:00 PM	1:00 PM	56.2	86.6	68.6
			1:00 PM	2:00 PM	56.9	83.9	65.2
			2:00 PM	3:00 PM	54.4	80.2	63.3
			3:00 PM	4:00 PM	52.1	72.6	59.8
		4:00 PM	5:00 PM	50.5	86.3	66.8	
		3/18/2016	8:00 AM	9:00 AM	57.3	73.9	61.5
			9:00 AM	10:00 AM	56.8	74.6	61.8
			10:00 AM	11:00 AM	56.0	74.9	60.7
			11:00 AM	12:00 PM	55.9	74.8	60.6

Source: Bridgenet International, CEQA Initial Noise Study, The Crossings, May 19, 2016.

**Table 9  
Noise Measurement Survey Results at Location 2**

Location	Primary Noise Source	Date	Start Time	End Time	Lmin (dBA)	Lmax (dBA)	Leq (dBA)
2	Traffic from the freight train tracks and regional transit gold line to the north of the project	3/17/2016	8:00 AM	9:00 AM	55.4	79.8	61.9
			9:00 AM	10:00 AM	57.9	82.0	63.1
			10:00 AM	11:00 AM	56.3	76.5	61.8
			11:00 PM	12:00 PM	57.3	81.9	62.6
			12:00 PM	1:00 PM	56.9	77.1	64.0
			1:00 PM	2:00 PM	57.5	79.4	63.4
			2:00 PM	3:00 PM	55.3	83.1	63.0
			3:00 PM	4:00 PM	52.2	80.3	62.3
		4:00 PM	5:00 PM	51.4	83.6	63.0	
		3/18/2016	8:00 AM	9:00 AM	55.7	78.6	60.2
			9:00 AM	10:00 AM	55.0	81.4	62.3
			10:00 AM	11:00 AM	54.2	81.0	60.6
			11:00 AM	12:00 PM	54.4	77.3	60.9

Source: Bridgenet International, CEQA Initial Noise Study, The Crossings, May 19, 2016.

**Table 10**  
**Noise Measurement Survey Results at Location 3**

Location	Primary Noise Source	Date	Start Time	End Time	Lmin (dBA)	Lmax (dBA)	Leq (dBA)
3	Traffic from Ramona Avenue to the east of the project and traffic from the freight train tracks and regional transit gold line to the north of the project	3/17/2016	8:00 AM	9:00 AM	53.4	81.3	60.2
			9:00 AM	10:00 AM	55.9	81.6	61.4
			10:00 AM	11:00 AM	54.3	80.0	60.2
			11:00 PM	12:00 PM	53.6	83.4	61.0
			12:00 PM	1:00 PM	54.4	80.4	61.5
			1:00 PM	2:00 PM	54.2	82.5	61.5
			2:00 PM	3:00 PM	53.6	83.7	61.2
			3:00 PM	4:00 PM	50.3	80.4	61.5
		4:00 PM	5:00 PM	47.3	84.0	60.6	
		3/18/2016	8:00 AM	9:00 AM	50.6	82.9	60.8
			9:00 AM	10:00 AM	50.7	81.8	61.5
			10:00 AM	11:00 AM	49.8	82.4	57.9
			11:00 AM	12:00 PM	48.6	79.5	58.1

Source: Bridgenet International, CEQA Initial Noise Study, The Crossings, May 19, 2016.

### Standards of Significance

For purposes of this Initial Study, impacts due to noise may be considered significant if construction and/or implementation of the Proposed Project would result in the following impacts that remain significant after implementation of General Plan policies:

- Result in exterior noise levels in the project area that are above the upper value of the normally acceptable category for various land uses due to the project's noise level increases;
- Result in residential interior noise levels of 45 dBA L<sub>dn</sub> or greater caused by noise level increases due to the project;
- Result in construction noise levels that exceed the standards in the City of Sacramento Noise Ordinance;
- Permit existing and/or planned residential and commercial areas to be exposed to vibration-peak-particle velocities greater than 0.5 inches per second due to project construction;
- Permit adjacent residential and commercial areas to be exposed to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic and rail operations; or
- Permit historic buildings and archaeological sites to be exposed to vibration-peak-particle velocities greater than 0.2 inches per second due to project construction and highway traffic.

### Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated the potential for development under the 2035 General Plan to increase noise levels in the community. New noise sources include vehicular traffic, aircraft, railways, light rail and stationary sources. The General Plan policies establish exterior (Policy EC 3.1.1) and interior (Policy EC 3.1.3) noise standards. A variety of policies provide standards for the types of development envisioned in the General Plan. See Policy EC 3.1.8, which requires new mixed-use, commercial and industrial development to mitigate the effects of noise

from operations on adjoining sensitive land use, and Policy 3.1.9, which calls for the City to limit hours of operations for parks and active recreation areas to minimize disturbance to nearby residences. Notwithstanding application of the General Plan policies, noise impacts for exterior noise levels (Impact 4.8-1) and interior noise levels (Impact 4.8-2), and vibration impacts (Impact 4.8-4) were found to be significant and unavoidable.

**Answers to Checklist Questions**

Questions A and B

The noise impacts created by the proposed project, as well as noise impacts that would occur at the proposed project site from existing sources, are addressed in the following discussion.

*Noise Impacts from the Project – Transportation Noise Sources*

Table 11 shows the roadway traffic noise from Ramona Avenue at the nearest residential property line of the project for existing (2016) and future (2026) conditions. The distance from Ramona Avenue to the nearest residential property line of the project is 25 feet.

<b>Table 11 Existing (2016) and Future (2026) Noise Conditions</b>			
<b>Roadway Segment</b>	<b>Noise Level at the Project’s Nearest Residential Property Line</b>		<b>Changes Due to Growth</b>
	Existing	Future	
Ramona Avenue	60.7	60.9	0.2

*Source: Bridgenet International. CEQA Initial Noise Study, The Crossings. May 19, 2016.*

The proposed project would result in a noise level increase of 0.2 dB CNEL from existing (2016) conditions to future (2026) conditions. The City of Sacramento’s Noise Element indicates that a significant impact would occur if, where the existing ambient noise level is between 70 dB CNEL and 75 dB CNEL, a project would result in a permanent increase in ambient noise levels of one dB CNEL or greater. As discussed above, the existing worst-case ambient noise level is as high as 70.6 dB CNEL. Therefore, a significant noise impact would occur if the project would cause an increase in ambient noise levels of one dB CNEL or greater. The project is expected to only create an increase in ambient noise level of 0.2 dB CNEL.

*Noise Impacts from the Project – Stationary Noise Sources*

The proposed multi-family residential development would lead to the introduction of heating, ventilation and air conditioning (HVAC) units which would contribute to the ambient noise environment. The new HVAC units are expected to be located on the roof of the multi-family residential building. Potential noise impacts to the adjacent commercial land uses to the south and east from the HVAC units would not be significant, as the project would be required to select and install HVAC units that comply with noise standards contained within the City of Sacramento’s Noise Ordinance of the Municipal Code.

*Noise Impacts to the Project – Exterior Noise Exposure (Roadway)*

The worst-case unmitigated future (2026) roadway noise exposure for the project that would occur at the property line was calculated to be as high as 60.9 dB CNEL, the worst-case unmitigated roadway noise at the project’s outdoor common space pool was calculated to be as high as 46.1 dB CNEL, and the worst-case unmitigated roadway noise at the project’s outdoor

common space courtyard was calculated to be as high as 49.7 dB CNEL. Based on the City's noise standard for multi-family residential uses of 65 dBA, exterior noise exposure to the project from roadways would be *less than significant*.

*Noise Impacts to the Project – Exterior Noise Exposure (Freight Railroad)*

The operational data was utilized in conjunction with the railroad modeling program to project the railroad noise to which the project would be subject. The worst-case unmitigated freight rail exterior noise from the tracks to the north of the project was calculated to be as high as 68.9 dB CNEL. The worst-case unmitigated freight rail exterior noise from the tracks to the west of the project was calculated to be as high as 74.2 dB CNEL. The worst-case unmitigated combined freight rail exterior noise levels at project property line would occur at the northwest portion of the site and were calculated to be as high as 74.2 dB CNEL. The worst-case unmitigated combined noise at the project's outdoor common space pool was calculated to be as high as 73.0 dB CNEL. The worst-case unmitigated combined noise at the project's outdoor common space courtyard was calculated to be as high as 63.0 dB CNEL. Based on the City's noise standard for multi-family residential uses of 65 dBA, exterior noise exposure to the project from railroad noise would be *potentially significant*.

*Noise Impacts to the Project – Exterior Noise Exposure (Regional Transit Gold Line Light Rail System)*

The project would be exposed to noise from traffic on the two Regional Transit (RT) Gold Line light rail tracks, which are located to the north of the project site. The operational data was utilized in conjunction with the railroad modeling program to project railroad noise to which the project would be subject. The worst-case unmitigated exterior noise levels at the project property line was calculated to be as high as 52.0 dB CNEL. The worst-case unmitigated exterior noise levels at the projects common outdoor activity area pool was calculated to be as high as 52.0 dB CNEL. The worst-case unmitigated combined noise at the project's outdoor common space courtyard was calculated to be as high as 52.0 dB CNEL. Based on the City's noise standard for multi-family residential uses of 65 dBA, exterior noise exposure to the project from the RT Gold Line light rail tracks would be *less than significant*.

*Noise Impacts to the Project – Combined Exterior Noise Exposure*

The City of Sacramento's Noise Element of the General Plan specifies an exterior noise standard of 65 dB CNEL for multi-family residential. The total noise exposure level the project site would experience consists of the sum of the roadway, freight railroad, and RT Gold Line light rail noise combined on an energy basis. The worst-case unmitigated combined noise exposure at the property line was calculated to be as high as 74.2 dB CNEL. The worst-case unmitigated combined noise at the project's outdoor common space pool was calculated to be as high as 73.0 dB CNEL. The worst-case unmitigated combined noise at the project's outdoor common space courtyard was calculated to be less than 65 dB CNEL. Based on the City's noise standard for multi-family residential uses of 65 dBA, combined exterior noise exposure to the project would be *potentially significant*.

*Noise Impacts to the Project – Interior Noise Exposure*

The City of Sacramento's Noise Element of the General Plan, as well as the 2015 Intervening California Building Code (CBC), specifies an interior noise standard of 45 dB CNEL for multi-family residential. To comply with the interior noise standard, the project must provide sufficient exterior-to-interior noise attenuation to reduce the interior noise exposure to acceptable levels.

The worst case unmitigated future with project exterior noise levels was calculated to be as high as 74.2 dB CNEL, which results in a requirement of the proposed buildings providing at least 29.2 dB of exterior-to-interior noise reduction with windows closed. Because the outdoor-to-indoor noise attenuation of a building falls to at least 12 dBA when the windows are open, any building that has an exterior noise level of 57 dB CNEL or greater should meet the 45 dB CNEL interior noise standard only with windows closed. In order to assume that windows can remain closed, adequate ventilation with windows closed must be provided. Based on the City's noise threshold of 45 dBA for any residential uses, the project's interior noise exposure would be *potentially significant*.

**Conclusion**

As discussed above, impacts related to transportation and stationary noise sources, as well as exterior noise exposure from roadways and the RT Gold Line light rail tracks would be less-than-significant. However, the project's impacts related to combined exterior noise exposure, as well as interior noise exposure, would be *potentially significant*.

Question C

Construction activities associated with the project would cause short-term (from a few days to several months depending on the specific activity) elevated noise levels throughout the proposed project site. Noise generated during construction would be dependent on the mix and make up of construction equipment used during construction, site geometry, and the distance between the noise source and receiver. Construction would occur throughout the proposed project site and would not be concentrated in or confined to one specific area. Therefore, construction noise would be acoustically dispersed throughout the site and not concentrated in one area near adjacent noise-sensitive land uses.

Construction would consist of grading, excavation and foundation work, as well as framing and interior work. A list of typical construction equipment that could be used was obtained from the project applicant. Some of the typical construction equipment that could be used consists of the following: excavators, graders and scrapers, backhoes, loaders, dump/water/concrete trucks, bull dozers, compactors, generators, cranes, forklifts, jack hammers, rollers, and concrete/industrial saws. Pile driving is not expected to occur.

Typical noise levels associated with various construction phases where all pertinent equipment is present and operating, at a reference distance of 50 feet, are shown in Table 12.

<b>Table 12</b>		
<b>Typical Noise Levels from Construction Activities for Domestic Housing Projects</b>		
<b>Construction Activity</b>	<b>Average Noise Level (dBA Leq) at 50 Feet</b>	<b>Standard Deviation (dB)</b>
Ground Clearing	83	8
Excavation	88	8
Foundations	81	10
Construction	81	10
Finishing	88	7

*Source: U.S. Environmental Protection Agency, 1971.*

As provided in Table 12, the highest overall average noise level generated during construction is estimated to be 88 dBA at a distance of 50 feet during excavation and finishing phases. The noise levels presented in Table 12 are value ranges that average the magnitude of construction

noise over time. The value range is provided because construction activity is intermittent and the power demands on construction equipment are intermittent and cyclical.

Noise levels generated by construction equipment (or by any point source) decrease at a rate of approximately six dBA per doubling of distance from the source. Therefore, if a particular construction activity generated average noise levels of 88 dBA at 50 feet, the Leq will be 82 dBA at 100 feet, 76 dBA at 200 feet, and 70 dBA at 400 feet.

The closest structures to the project site are located 80 feet to the south (commercial) and 80 feet to the east (commercial). Using the highest overall average noise level from excavation and finishing phases, the worst-case noise levels at the closest structures would be as high as 81.9 and 81.9 dBA, respectively. However, the majority of the construction would occur at greater distances away from the closest structures to the north and south. In addition, the closest sensitive receptors – the Redding Avenue Apartments (under construction) and the River City Calvary Chapel – are located approximately 150 feet from the site, respectively; therefore, construction noise levels at those locations would be approximately 75.9 dBA.

The City of Sacramento's Noise Ordinance of the Municipal Code exempts construction activities from the noise standards, provided that they take place between the hours of 7:00 AM and 6:00 PM Monday through Saturday and 9:00 AM and 6:00 PM Sundays and holidays.

Although the construction activities could result in infrequent periods of high noise, this noise will not be sustained and will only occur only during the City's permitted construction noise hours. However, construction of the project would result in a short-term ***potentially significant*** impact.

#### Questions D through F

Groundborne vibration and groundborne noise may be generated during the construction and operations phases of the proposed project.

Project construction may expose people to groundborne vibration. Construction activities can generate varying degrees of ground vibration, depending on the construction procedures, types of equipment used and proximity to noise and vibration sensitive land uses. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with increasing distance from the source. Vibration is typically noticed nearby when objects in a building generate noise from rattling windows or picture frames. Vibration is typically not perceptible outdoors, and therefore, impacts are based on distance to the nearest building.

The effect on buildings near a construction site varies depending on soil type, ground strata and receptor building construction. The generation of vibration can range from perceptible effects not occurring at the lowest vibration levels, to low rumbling sounds and perceptible ranges in buildings close to a construction site. Vibration would primarily occur during the grading phase of construction. Peak vibration levels occur when construction equipment operates closest to the boundaries of the proposed projects property line. Although the maximum vibration could be perceptible in certain instances, peak vibration events will occur infrequently. The peak events would occur during the portions of the day when most people have increased tolerance to vibration intrusions. Also, the duration for which equipment would be working in close proximity would be limited. Construction-related vibration impacts are described below.

*Structural Damage*

Ground vibrations from construction activities do not often reach the levels that can damage structures. Pile-driving generates the highest levels of vibration; however, pile-driving will not occur during construction. Nonetheless, minor architectural (e.g., cosmetic) damage from heavy construction equipment operating at the boundary of the site could occur. Project-related construction vibration was evaluated for its potential to cause minor architectural damage based on FTA’s structural damage criteria. According to guidelines from the FTA for assessing damage from vibration caused by construction equipment, the worst-case building threshold at which there is a risk of architectural damage is 0.12 peak particle velocity (PPV) in inches per second (in/sec).

Heavy construction equipment operating at the proposed project site would include bulldozers, backhoes, crane, and auger, which could be as close as one foot from the commercial structures to the north, five feet from the commercial structure to the east, and 10 feet from the commercial structure to the south. Table 13 shows the vibration levels from typical earthmoving construction equipment at the reference distance of 25 feet.

<b>Table 13</b>		
<b>Typical Vibration Levels from Construction Equipment</b>		
<b>Equipment</b>	<b>PPV at 25 ft (in/sec)</b>	<b>Approximate VdB at 25 Feet</b>
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58
<i>Source: FTA, Transit Noise and Vibration Impact Assessment, May 2006.</i>		

At the nearest structures to south and east, the vibration level could be as high as 0.016 PPV in/sec. This value is below the FTA’s criteria for vibration induced structure damage of 0.12 PPV in/sec.

*Human Annoyance*

The threshold of perception of vibration for many humans is 65 VdB and 75 VdB is the line between barely perceptible and distinctly perceptible. Human annoyance occurs with construction vibration rises significantly above the threshold of human perception for extended periods of time.

When heavy construction equipment is operating near the northern boundaries of the proposed project, vibration levels could be greater than 87 VdB and, therefore, would be distinctly perceptible. When heavy construction equipment is operating near the southern and eastern boundaries of the proposed project, vibration levels could be as high as 71.8 VdB and, therefore, could be perceptible. This value is below the FTA’s criteria for acceptable daytime vibration for offices of 84 VdB. As heavy construction equipment moves around the project site, average vibration levels at the nearest structures would diminish with increasing distance between structures and the equipment.

Therefore, overall, the proposed project would not cause any residential or commercial areas, or historic buildings or archaeological sites, to be exposed to excessive vibration peak particle velocities, and the project’s impact would be ***less than significant***.

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## Mitigation Measures

Implementation of the following mitigation measures would reduce impacts related to Noise to a less-than-significant level.

8-1 *Prior to issuance of a grading permit, the project applicant shall prepare a construction noise management plan that identifies measures to be taken to minimize construction noise on surrounding sensitive land uses and include specific noise management measures to be included within the project plans and specifications, subject to review and approval by the City Planning Division. The project applicant shall demonstrate, to the satisfaction of the City that the project complies with the following:*

- *Construction activities shall only take place between the hours of 7:00 AM and 6:00 PM Monday through Saturday and 9:00 AM and 6:00 PM Sundays and holidays.*
- *All heavy construction equipment used on the proposed project shall be maintained in good operating condition, with all internal combustion, engine-driven equipment fitted with intake and exhaust mufflers that are in good condition.*
- *All mobile or fixed noise producing equipment used on the proposed project that is regulated for noise output by a local, state, or federal agency shall comply with such regulations while in the source of project activity.*
- *Where feasible, electrically-powered equipment shall be used instead of pneumatic or internal combustion powered equipment.*
- *All stationary noise-generating equipment shall be located as far away as possible from neighboring property lines.*
- *Signs prohibiting unnecessary idling of internal combustion engines shall be posted.*
- *A truck route haul plan shall be created to avoid residential areas.*
- *The use of noise-producing signals, including horns, whistles, alarms and bells shall be for safety warning purposes only.*
- *A noise complaint coordinator shall be retained amongst the construction crew to be responsible for responding to any local complaints about construction noise. When a complaint is received, the coordinator shall notify the City within 24 hours of the complaint and determine the cause of the noise complaint and shall implement reasonable measures to resolve the complaint, as deemed acceptable by the City.*

8-2 *To ensure that the exterior and interior noise standards are met, design-level exterior and interior noise analysis reports shall be prepared by an acoustical engineering consultant once complete civil and architectural plans for the project have been developed. The exterior and interior noise analysis reports shall be submitted prior to issuance of a building permit, for review and approval by the City Planning Division.*

*Exterior noise levels for future conditions shall be estimated based on computer modeling. The exterior noise analysis report shall address compliance of the project with exterior noise standards. The interior noise analysis report shall address compliance of the project with the interior noise standard. The outdoor-*

*to-indoor noise reduction of the proposed unit plans will be calculated based upon construction details specified in the architectural plans for the project. If necessary, mitigation measures to protect indoor living areas of the project will be developed for each plan type. Mitigation measures may include, but are not limited to, increasing the STC ratings of certain windows and doors. The mechanical and structural engineer for the project shall show that the ventilation system chosen complies with the 2013 California Building and Mechanical Code as well as the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). The ventilation system selected shall not compromise the outdoor-to-indoor noise attenuation of the structure.*

- 8-3 *The worst-case unmitigated combined noise at the project's outdoor common space pool was calculated to be as high as 73.0 dB CNEL. Prior to issuance of the building permit for the pool area, an exterior noise analysis report shall be submitted for review and approval by the City Planning Division.*

*The exterior noise analysis report, detailed site plan analysis and modeling will confirm the reduction of the noise level at the pool to less than 65 dB CNEL by a combination of shielding from the buildings adjacent to the pool and the construction of an approximate eight-foot-high wall along the west side of the pool area.*

## **Findings**

All additional significant environmental effects of the project relating to Noise can be mitigated to a less-than-significant level.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>9. PUBLIC SERVICES</b>  A) Would the project result in the need for new or altered services related to fire protection, police protection, school facilities, or other governmental services beyond what was anticipated in the 2035 General Plan?			X

**Environmental Setting**

The project site is located in the eastern area of Sacramento, approximately four miles from the downtown core of the City, and is served with fire protection and police protection facilities by the City of Sacramento.

The Sacramento Fire Department (SFD) provides fire protection services to the entire City and some small areas just outside the City boundaries within the County limits. The nearest fire station is Station 10 located at 5642 66<sup>th</sup> Street, approximately 1.75 miles south of the project site.

Police protection services are provided by the Sacramento Police Department (SPD) for areas within the City. The SPD provides law enforcement protection to the proposed project site from the Rooney Station located at 5303 Franklin Boulevard. In addition to the SPD and Sheriff’s Department, the California Highway Patrol, and the Regional Transit Police Department provide police protection within the City of Sacramento. In addition, because the proposed project consists of student housing, the project is anticipated to be served by CSUS campus police.

The project site is within the Sacramento City Unified School District (SCUSD). The SCUSD is the 11<sup>th</sup> largest school district in California and serves 43,175 students on 75 campuses spanning 76 square miles. The nearest school is Hiram Johnson High School, which is located approximately 0.6 miles southwest of the project site. As noted previously, CSUS, Sacramento is located just north of the project site.

**Standards of Significance**

For the purposes of this IS/MND, an impact would be considered significant if the project resulted in the need for new or altered services related to fire protection, police protection, school facilities, roadway maintenance, or other governmental services beyond what was anticipated in the 2035 General Plan.

**Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies**

The Master EIR evaluated the potential effects of the 2035 General Plan on various public services. These include police, fire protection, schools, libraries, and emergency services (Chapter 4.10).

The General Plan provides that adequate staffing levels for police and fire are important for the long-term health, safety and well-being of the community (Goal PHS 1.1, PHS 2.1). The Master

EIR concluded that effects of development that could occur under the General Plan would be less than significant.

General Plan policies that call for the City to consider impacts of new development on schools (see, for example, Policy ERC 1.1.2 setting forth locational criteria, and Policy ERC 1.1.4 that encourages joint-use development of facilities) reduce impacts on schools to a less-than-significant level. (Impacts 4.10-3, 4) Impacts on library facilities were considered less than significant (Impact 4.10-5).

## **Answers to Checklist Questions**

### Question A

The Master EIR discusses the potential for impacts to public services as a result of increased development and population in the City of Sacramento. The Master EIR analyzes the 2035 General Plan policies related to law enforcement service, fire protection service, educational service, and library service, to determine if adequate public services will exist as development and population in the City increases. Individual projects developed in the City of Sacramento would be required to comply with the public service policies presented in the 2035 General Plan.

According to the Master EIR, implementation of the 2035 General Plan public service policies by individual projects would ensure that adequate public services are available in the City of Sacramento as development and population increases. The proposed project is consistent with the General Plan land use designation for the site and the project would be consistent with the type and intensity of development anticipated for the site in the 2035 General Plan. According to the 2035 General Plan, the City intends to provide for large mixed-use office and employment centers that include support retail and services uses, in addition to residential uses, in the Ramona Avenue area.

Therefore, based on the analysis in the Master EIR, the proposed project would not impact public services nor would the proposed project require the development of new public service facilities beyond what was anticipated in the 2035 General Plan.

### *Fire Protection*

The proposed project would include the development of a 225-unit student housing complex, including 750 beds. Four fire stations are located in close proximity to the proposed project site. The proposed project would be served by SFD Station 10, located approximately 1.5 miles south of the project site, Station 6 located approximately 2.5 miles west of the project site, Station 8 located approximately 1.3 miles north of the site, and Station 60 located approximately 1.4 miles east of the project site. According to the General Plan Master EIR, the SFD requires a ratio of one fire station per 16,000 residents.

The population of the project area requiring SFD services would be expected to increase as a result of the proposed project. The proposed project is consistent with the land use designation in the 2035 General Plan, and the General Plan Master EIR concluded that at full buildout of the General Plan, including the proposed project site, the City would be required to provide approximately 12 new fire stations and additional fire personnel to accommodate the increase in population. Furthermore, the proposed project would include fire protection features as required in the City Code including fire alarm systems, fire extinguisher systems and exit illumination. Therefore, impacts to fire service from the proposed project have already been accounted for,

and the project would comply with the requirements of the City Code and General Plan policies regarding adequate fire protection services.

#### *Police Protection*

Similar to the SFD, the added population from the proposed project would create an increased demand in police services to the project area. The project area is currently served by the Rooney Police Station of the SPD, located at 5303 Franklin Boulevard, approximately three miles southwest of the project site. Although the proposed project would increase the service population for the SPD in the project area, the SPD does not have an adopted office-to-resident ratio. The SPD uses a variety of data that includes GIS based data, call and crime frequency information, and available personnel to rebalance the deployment of resources on an annual basis to meet the changing demands of the City. Additionally, the location of the project would be consistent with established service areas in the Sacramento General Plan. It should be noted that the project applicant would be required to pay fees for the provision of public services, including police protection.

#### *Schools*

Although the proposed project is intended as student housing, the units would not be restricted to students only. Therefore, the potential exists for families and adults with children to be living at the complex and the project could potentially generate approximately students that would require accommodation in local SCUSD schools. However, it is anticipated that the majority of the residents at the proposed project apartment complex would be CSUS students who are not expected to have children living with them. It should be noted that the project developer would be required to pay statutory developer fees under California Senate Bill (SB) 50; SB 50 requires developers to pay \$2.97 per square foot for new residential development. With payment of required development fees, the project's impact to schools would not be considered significant.

Other public facilities beyond those described above are not expected to be affected by the proposed project.

#### *Conclusion*

Overall, the proposed project's impact related to Public Services would be ***less than significant***.

#### **Mitigation Measures**

None required.

#### **Findings**

The project would have no additional project-specific environmental effects relating to Public Services.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>10. RECREATION</b> Would the project:			
A) Cause or accelerate substantial physical deterioration of existing area parks or recreational facilities?			X
B) Create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan?			X

### Environmental Setting

The City of Sacramento Parks and Recreation Department maintains all parks and recreational facilities within the City of Sacramento. The Parks Department classifies parks according to three distinct types: 1) neighborhood parks; 2) community parks; and, 3) regional parks. Neighborhood parks are typically less than ten acres in size and are intended to be used primarily by residents within a half-mile radius. Community Parks are generally 10 to 60 acres and serve an area of approximately two to three miles, encompassing several neighborhoods and meeting the requirements of a large portion of the City. Regional parks are larger in size and are developed with a wide range of improvements not usually found in local neighborhood and community parks. As noted in the City’s General Plan Background Report, the City currently contains 222 developed and undeveloped park sites, 88 miles of road bikeways and trails, 21 lakes/ponds or beaches, over 20 aquatic facilities, and extensive recreation facilities in the City parks. The 222 parks comprise 3,108 acres. Of these, 1,573 acres are neighborhood and community parks and the remaining are City and non-city regional parks. The City currently provides approximately 3.4 acres of neighborhood and community park per 1,000 persons citywide. The closest park to the proposed project site is Little League Park, which is located approximately 0.15 miles south of the project site.

Residential and non-residential projects that are built in the City of Sacramento are required to pay a park development impact fee per Chapter 18.44 of the Sacramento City Code. The fees collected pursuant to Chapter 18.44 are primarily used to finance the construction of neighborhood and community park facilities.

### Standards of Significance

For purposes of this Initial Study, impacts to recreational resources are considered significant if the proposed project would do either of the following:

- Cause or accelerate substantial physical deterioration of existing area parks or recreational facilities; or
- Create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan.

### Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

Chapter 4.9 of the Master EIR considered the effects of the 2035 General Plan on the City’s existing parkland, urban forest, recreational facilities and recreational services. The General Plan

identified a goal of providing an integrated park and recreation system in the City (Goal ERC 2.1). New residential development will be required to dedicate land, pay in-lieu fees or otherwise contribute a fair share to the acquisition and development of parks and recreation facilities (Policy ERC 2.2.5). Impacts were considered less than significant after application of the applicable policies. (Impacts 4.9-1 and 4.9-2)

## Answers to Checklist Questions

### Questions A and B

The Master EIR analyzed potential impacts to parks and recreational facilities with implementation of future projects, including the proposed project. Policies have been provided in the 2035 General Plan to ensure that future residential and non-residential development would not impact existing parks and recreational facilities and to ensure that adequate park and recreational facilities are provided to the residents of Sacramento. The Master EIR concluded that, with implementation of the policies in the 2035 General Plan, future development would not impact park and recreational facilities. Therefore, the proposed project would not accelerate substantial deterioration of existing parks and recreational facilities, nor would the project require the construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan.

The proposed project consists of construction of a 225-unit market rate student-oriented housing development. As such, recreational facilities would be needed to serve the student population living on the project site. Included in the proposed project are a landscaped courtyard, a resort-style pool, and a clubhouse that would contain recreational facilities, such as a game room and fitness area.

It should be noted that the project applicant would be required to pay City park development impact fees prior to issuance of a building permit for the project. The City would determine the required park development impact fee at the time of submittal of building permit applications.

Because the project would include recreational facilities, and the project would comply with General Plan Goal ERC 2.1 and City Policy 2.2.5, the proposed project would result in a ***less-than-significant*** impact related to parks and recreational facilities.

### **Mitigation Measures**

None required.

### **Findings**

The project would have no additional project-specific environmental effects relating to Recreation.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>11. TRANSPORTATION AND CIRCULATION</b>			
Would the project:			
A) Roadway segments: degrade peak period Level of Service (LOS) from acceptable (without the project) to unacceptable (with project) or the LOS (without project) is F, and project generated traffic increases the Volume to Capacity Ratio (V/C ratio) by 0.02 or more.			X
B) Intersections: degrade peak period level of service from acceptable (without project) to unacceptable (with project) or the LOS (without project) is F, and project generated traffic increases the peak period average vehicle delay by five seconds or more?			X
C) Freeway facilities: off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway; project traffic increases that cause any ramp's merge/diverge level of service to be worse than the freeway's level of service; project traffic increases that cause the freeway level of service to deteriorate beyond level of service threshold defined in the Caltrans Route Concept Report for the facility; or the expected ramp queue is greater than the storage capacity?			X
D) Transit: adversely affect public transit operations or fail to adequately provide for access to public transit?			X
E) Bicycle facilities: adversely affect bicycle travel, bicycle paths or fail to adequately provide for access by bicycle?			X
F) Pedestrian: adversely affect pedestrian travel, pedestrian paths or fail to adequately provide for access by pedestrians?			X

**Environmental Setting**

The proposed project is located in the eastern portion of Sacramento, south of U.S. Highway 50, within the 65<sup>th</sup> Street Station Area Plan boundaries. The project site is bounded by UPRR tracks to the west, Ramona Avenue to the east, River City Chapel to the north, and a commercial printing/mailling business to the south.

Existing Site Conditions

Ramona Avenue, which bounds the project site to the east, is a north-south two-lane local road. Ramona Avenue connects to Power Inn Road, which is a north south arterial street. Power Inn Road provides access to surrounding City and regional roadways such as 14<sup>th</sup> Avenue, Folsom Boulevard, SR 16 and U.S. Highway 50. U.S. Highway 50 is a major regional roadway

connecting Sacramento to eastern portions of Sacramento County and western portions of El Dorado County. Currently, sections of SR 16, Folsom Boulevard, and Power Inn Road are designated as experiencing a current roadway level of service (LOS) of F. However, the Sacramento 2035 General Plan EIR identifies a LOS F as acceptable for nearby portions of Power Inn Road and Folsom Boulevard. The 2035 General Plan further indicates that improvements to the nearby LOS F roadways could conflict with other General Plan goals, such as the maintenance of pedestrian-friendly streets and the use Smart Growth policies. Projects effecting roadways with LOS F are exempt from roadway improvement requirements, and are instead directed to pay fair share development fees for system wide improvements.

### Site Access

Access to the project site would be provided by an extended Ramona Avenue. The Folsom Boulevard Widening/Ramona Avenue Extension Project would improve area circulation by extending Ramona Avenue north and creating a connection with Folsom Boulevard. Site access would then be available from two points on Ramona Avenue (see Figure 3, Conceptual Site Plan). The improvements planned for in the Folsom Boulevard Widening/Ramona Avenue Extension Project would increase access to the surrounding circulation system from the proposed project site, and allow for adequate emergency vehicle access. The Folsom Boulevard Widening/Ramona Avenue Extension Project is anticipated for construction in 2017.

The currently proposed project includes various improvements to the circulation system of the immediate site area. Improvements include adding a deceleration lane leading to the northern complex entrance, a roundabout at the intersection of Ramona Avenue and Brighton Avenue, bicycle lanes on Ramona Avenue, roadway improvements to existing portions of Ramona Avenue, sidewalks and cross-walks, and emergency vehicle access. The improvements are designed to increase safety, reduce the potential for design hazards, and create complete roadways, which support multiple means of transportation. The improvements associated with the project would be consistent with the Folsom Boulevard Widening/Ramona Avenue Extension Project.

### Project Trip Generation

The project site is vacant and currently does not generate any vehicle trips. Adding 225 housing units and the 10,000 sf Innovation Center to the project site would generate approximately 1,875 new daily vehicle trips, with 84 occurring in the AM peak hour and 157 occurring in the PM peak hour.

Because ITE *Trip Generation, 9<sup>th</sup> Edition* does not list a land use specific for the student housing, an estimated trip generation rate used for a similar project is used. The Jefferson Commons Project Traffic Study (March 10, 2003) developed a trip generation rate for a student housing based on surveys of the existing student apartment complexes in cities of Sacramento and Davis. Consequently, a trip generation rate of 7.36 per dwelling unit was used to estimate the daily trip generation while a trip generation rate of 0.37 and 0.61 were used to estimate the AM and PM peak hours respectively. As shown in Table 14, the proposed project would generate 84 new trips in the AM peak hour, 157 new trips in the PM peak hour, and 1,875 new daily trips. It is expected that the number of vehicle trips would be reduced further, as students would be riding transit, bicycling, or walking to the school.

**Table 14  
Daily and Peak Hour Trip Generation Summary**

Land Use	Daily		AM Peak Hour			PM Peak Hour				
	Rate	Trips	Rate	Trips			Rate	Trips		
				In	Out	Total		In	Out	Total
225 Dwelling Units	7.36	1,656	0.37	17	66	83	0.61	89	48	137
10,000 square feet Commercial	42.70	427	0.96	6	4	10	3.71	17	20	37
<i>Internal Trips (-10%)</i>	-	-208	-	-2	-7	-9	-	-10	-7	-17
<b>Net Trips</b>		<b>1,875</b>		<b>21</b>	<b>63</b>	<b>84</b>		<b>96</b>	<b>61</b>	<b>157</b>

Note: ITE Trip Generation, 9<sup>th</sup> Edition (2012) trip rates have been used for the commercial land use (820) due to a small size development component.

The project trips would be distributed according to the planned roadway improvements incorporated into the current project and improvements approved as part of the Folsom Boulevard Widening/Ramona Avenue Extension Project. Therefore, the proposed project would provide access to the arterial roadways of Power Inn Road and Folsom Boulevard by way of Ramona Avenue which is designed as a major collector roadway according to Folsom Boulevard Widening/Ramona Avenue Extension Project.

Portions of Power Inn Road and Folsom Boulevard operate at LOS F. However, as discussed above, the Sacramento 2035 General Plan considers a LOS F acceptable for the aforementioned roadways because of negative impacts to the surrounding area that could result from roadway expansion.

Transit

In the Sacramento area, public transit service is provided by Sacramento Regional Transit. The project site is within a mile of the CSUS transit center, which provides access to routes 22, 23, 29, 67 and 68. Additionally lines also service the surrounding area including 81, 65, 61, and 26. The Sacramento Light Rail Gold Line also serves the area, and the 65<sup>th</sup> Street station is less than 0.5-mile from the proposed project site.

Bicycle and Pedestrian Access

While sidewalks exist on both sides of Ramona Avenue, currently, bicycle lanes do not exist on Ramona Avenue. The proposed project would expand the sidewalk system along Ramona Avenue and add bicycle lanes to provide pedestrians with greater access to the CSUS campus and the surrounding areas.

**Standards of Significance**

For purposes of this Initial Study, impacts resulting from changes in transportation or circulation may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

### Roadway Segments

- The traffic generated by a project degrades peak period Level of Service (LOS) from acceptable (without the project) to unacceptable (with project); or
- The LOS (without project) is F and project generated traffic increases the Volume to Capacity Ratio (V/C ratio) by 0.02 or more.

### Intersections

- The traffic generated by a project degrades peak period level of service from acceptable (without project) to unacceptable (with project); or
- The LOS (without project) is F and project-generated traffic increases the peak period average vehicle delay by five seconds or more.

### Freeway Facilities

Caltrans considers the following to be significant impacts:

- Off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway;
- Project traffic increases that cause any ramp's merge/diverge level of service to be worse than the freeway's level of service;
- Project traffic increases that cause the freeway level of service to deteriorate beyond level of service threshold defined in the Caltrans Route Concept Report for the facility; or
- The expected ramp queue is greater than the storage capacity.

### Transit

- Adversely affect public transit operations; or
- Fail to adequately provide for access to public transit.

### Bicycle Facilities

- Adversely affect bicycle travel, bicycle paths; or
- Fail to adequately provide for access by bicycle.

### Pedestrian Circulation

- Adversely affect pedestrian travel, pedestrian paths; or
- Fail to adequately provide for access by pedestrians.

## **Summary of Analysis under the 2035 General Plan EIR and Applicable General Plan Policies**

Transportation and circulation were discussed in the 2035 General Plan EIR in Chapter 4.12. Various modes of travel were included in the analysis, including vehicular, transit, bicycle, pedestrian and aviation components. The analysis included consideration of roadway capacity and identification of levels of service, and effects of the 2035 General Plan on the public transportation system. Provisions of the 2035 General Plan that provide substantial guidance include Mobility Goal 1.1, calling for a transportation system that is effectively planned, managed, operated and maintained, promotion of multimodal choices (Policy M 1.2.1), identification of level

of service standards (Policy M 1.2.2), support for state highway expansion and management consistent with the Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy (SACOG MTP/SCS) (Policy M 1.5.6) and development that encourages walking and biking (Policy LU 4.2.1).

While the General Plan includes numerous policies that direct the development of the City's transportation system, the 2035 General Plan EIR concluded that General Plan development would result in significant and unavoidable effects. See Impacts 4.12-3 (roadway segments in adjacent communities, and Impact 4.12-4 (freeway segments).

## Answers to Checklist Questions

### Questions A through C

As discussed above in the trip generation assessment, the proposed project is expected to generate approximately 1,875 new daily vehicle trips, with 84 occurring in the AM peak hour and 157 occurring in the PM peak hour. The project-generated trips would be distributed to Folsom Boulevard and Power Inn Road by way of Ramona Avenue.

Folsom Boulevard, near the CSUS campus, and Power Inn Road operate at LOS F, but are exempt roadway segments as defined in the City's 2035 General Plan. The 2035 General Plan Mobility section indicates that if improving exempt roadways at LOS F would conflict with other elements of the City's General Plan, the LOS F condition would be acceptable if other provisions are made to improve the overall system. The 65<sup>th</sup> Street Station Area Plan EIR, with which the proposed project is consistent, provides for a suitable means of improvement to the overall system by implementing the 65<sup>th</sup> Street Station Area Finance Plan. The Finance Plan allows for future developments to pay a fair-share development fee for any potential impacts to circulation in the areas included in the 65<sup>th</sup> Street Station Area Plan. Because the proposed project is consistent with the 65<sup>th</sup> Street Station Area Plan, payment of development fees would ensure that the proposed project does not have a significant impact on the degradation of LOS at any nearby roadway segments or intersections, and would further ensure that significant impacts do not occur to the nearby freeway system.

Therefore, with payment of development impact fees, the proposed project would result in a **less-than-significant** impact related to degradation of peak period LOS on roadways in the project vicinity or degradation of freeway facilities.

### Question D

As stated above, Sacramento Regional Transit Routes 22, 23, 26, 29, 61, 65, 67, 68, 81, and the Sacramento Light Rail Gold Line provide transit opportunities in the vicinity of the project site. Accordingly, adequate public transit access would be available to future residents. While the project would add a substantial number of new residences to the area, the abundance of Transit Routes and options in the area would be expected to distribute the increased number of patrons over a large portion of the transit system. The distribution of riders over various Transit Routes would reduce the potential for concentrated impacts to adversely affect public transit operations. Overall, the proposed project would result in a **less-than-significant** impact related to public transit.

### Question E

As discussed above, bicycle lanes do not exist in the project area. However, the proposed project would improve Ramona Avenue by adding bicycle lanes in both directions, and would greatly improve bicycle access to the surrounding area in conjunction with the Folsom Boulevard Widening/Ramona Avenue Extension Project. The addition of Class II bicycle lanes would be consistent with the 65<sup>th</sup> Street Station Area Plan. The proposed project would provide a total of 475 bicycle parking spaces. Adequate provisions of access to the site by bicycle would be provided and the project would not negatively affect bicycle travel or paths. Therefore, impacts related to bicycle facilities would be ***less than significant***.

### Question F

The proposed project includes improvements along the project frontage on Ramona Avenue. Consistent with the Folsom Boulevard Widening/Ramona Avenue Extension Project, the improvements would include placement of new curb, gutter, and sidewalk. Crosswalks would be installed near the proposed roundabout at the intersection of Ramona Avenue and Brighton Avenue, and the extension of sidewalks along Ramona Avenue with the Folsom Boulevard Widening/Ramona Avenue Extension Project would allow for pedestrian traffic to easily access the CSUS campus and transit center. The project is not expected to involve any modifications to the existing roadway network that could adversely affect pedestrian travel or pedestrian paths. Therefore, the proposed project would result in a ***less-than-significant*** impact related to pedestrian access.

### **Mitigation Measures**

None required.

### **Findings**

The project would have no additional project-specific environmental effects relating to Transportation and Circulation.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>12. UTILITIES AND SERVICE SYSTEMS</b> Would the project:			
A) Result in the determination that adequate capacity is not available to serve the project's demand in addition to existing commitments?			X
B) Require or result in either the construction of new utilities or the expansion of existing utilities, the construction of which could cause significant environmental impacts?			X

## Environmental Setting

### Water Service

Water service in the project vicinity is currently provided by the City of Sacramento. The City of Sacramento provides domestic water service to the City through a combination of surface water and groundwater sources. Two water treatment plants supply domestic water to residents and businesses from the American and Sacramento Rivers, as well as groundwater supply wells.

### Wastewater Service

The project site is located within an area of the City served by the SASD. The SASD owns and operates thousands of miles of lower lateral and main line pipes, 108 pump stations, and is responsible for the day-to-day operations and maintenance of such sewer pipes. Once collected in the SASD system, sewage flows into the SRCSD interceptor system, where the sewage is conveyed to SRWWTP located near Elk Grove. The SRWWTP is permitted to treat an average dry weather flow (ADWF) of 181 million gallons per day (mgd). According to the Regional Water Quality Control Board's 2010 wastewater discharge permit for SRCSD's SRWWTP, the average dry weather flow at the time was approximately 141 mgd. Expansion of the SRWWTP was previously proposed; however, due to slow growth and potential reclamation, the SRCSD decided not to expand the plant at that time. Sewage treated by the SRCSD at the SRWWTP is then safely discharged into the Sacramento River.

### Solid Waste Service

The City of Sacramento does not provide commercial solid waste collection services. Rather, commercial garbage, recycling or yard waste services are provided by a franchised hauler authorized by the Sacramento Solid Waste Authority to collect commercial garbage and commingled recycling within the City. Kiefer Landfill, located at 12701 Kiefer Boulevard in Sloughhouse, California, is the primary location for the disposal of waste by the City of Sacramento. According to the Master EIR, the landfill is permitted to accept up to 10,815 tons per day and the current peak and average daily disposal is much, much lower than the permitted amount. The landfill is anticipated to be capable of adequately serving the area, including the anticipated population growth, until the year 2065.

## Standards of Significance

For the purposes of this Initial Study, an impact would be considered significant if the project resulted in the following:

- Result in the determination that adequate capacity is not available to serve the project's demand in addition to existing commitments; or
- Require or result in either the construction of new utilities or the expansion of existing utilities, the construction of which could cause significant environmental impacts.

## Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated the effects of development under the 2035 General Plan on water supply, sewer and storm drainage, solid waste, electricity, natural gas, and telecommunications. See Chapter 4.11.

The Master EIR evaluated the impacts of increased demand for water that would occur with development under the 2035 General Plan. Policies in the General Plan would reduce the impact generally to a less-than-significant level (see Impact 4.11-1) but the Master EIR concluded that the potential increase in demand for potable water in excess of the City's existing diversion and treatment capacity, which could require construction of new water supply facilities, would result in a significant and unavoidable effect (Impact 4.11-2). The potential need for expansion of wastewater treatment facilities was identified as having a less-than-significant effect (Impact 4.11-4). Impacts on solid waste facilities were less than significant (Impact 4.11-5). Implementation of energy efficient standards as set forth in Titles 20 and 24 of the California Code of Regulations for residential and non-residential buildings, would reduce effects for energy to a less-than-significant level.

## Answers to Checklist Questions

### Questions A and B

#### **Wastewater Service**

The proposed project would connect to an existing sewer line that runs along Ramona Avenue in the existing right-of-way (ROW), adjacent to the eastern boundary of the project site). The on-site sewer system for the project would connect to this sewer main for sewer flow conveyance.

The project is consistent with the City of Sacramento 2035 General Plan, the 65<sup>th</sup> Street Station Area Plan and EIR, and the South 65<sup>th</sup> Street Plan and EIR. The South 65<sup>th</sup> Street Plan EIR examined potential impacts to wastewater treatments facilities, water quality, and potential exceedances of the Regional Water Quality Control Board (RWQCB) requirements at full buildout of the EIR study area. According to the EIR, buildout of the area would not result in exceedance of RWQCB wastewater treatment requirements of the SRWWTP. Therefore, the project would not result in exceedance of RWQCB wastewater treatment requirements of the SRWWTP.

#### **Storm Drainage**

As discussed in the Hydrology and Water Quality section of this IS/MND, stormwater from the project site would be collected and detained on-site prior to release to storm drainage

infrastructure within the Ramona Avenue Extension. Runoff from the site would be then conveyed through existing infrastructure to the City's Drainage Basin 43. The proposed project includes on-site detention such that all increased runoff from the new impervious services are detained on-site during peak storm events and released at a rate equal to that which currently occurs at the project site. According to the project engineer, approximately 40,000 cf of storage would be required on the project site. As discussed in the Hydrology and Water Quality section, stormwater retention calculations have been prepared for the proposed project and are included as Appendix C of this IS/MND. The calculations demonstrate multiple options for the project to provide adequate stormwater detention and drainage. The final drainage report and plans will be required to be approved by the Department of Utilities prior to approval of the Improvement Plans for the project. Therefore, adequate on-site storage exists to ensure peak flows to downstream existing storm drainage conveyance facilities do not exceed capacity.

### **Water Supply**

An existing water supply line is currently located in the Ramona Avenue ROW along the eastern boundary of the proposed project site. Implementation of the project would include upsizing and extending the line for the purposes of connection to the project site. Using the consumption rate of 225 gallons/unit/day analyzed in the South 65<sup>th</sup> Street Plan EIR, the proposed project (225 residential student housing apartments) would create a demand of 50,625 gallons per day (gpd) of water from the City. The projected 50,625 gallons per day demand from the proposed project was accounted for in the City's General Plan, and Master EIR, as the project is consistent with the General Plan land use designation and the South 65<sup>th</sup> Street Plan EIR. The Master EIR concluded that the City's existing water right permits and United States Bureau of Reclamation (USBR) contract are sufficient to meet the total water demand projected for buildout of the proposed 2035 General Plan, including the proposed project site. In addition, according to the 2010 Sacramento Urban Water Management Plan (UWMP), the City's water supply would be well below the City's water demand during a multiple-dry year in 2015, 2020, 2025, 2030, and 2030. During a drought year in 2030, the City's water yearly supply is expected to be 346,800 acre feet (AFY), while the City's yearly water demand would be 249,984 AFY; it is anticipated that there would be a 96,816 AFY surplus of water supply in the year 2030 during drought.

### **Solid Waste**

The proposed project (225 residential student housing units) would generate approximately 562.5 pounds per day of solid waste (based on a generation rate of 2.5 pounds per day per unit from the South 65<sup>th</sup> Street Area Plan EIR). The projected solid waste generation of the proposed project was included in the Sacramento Master EIR, which concluded that at full buildout of the 2035 General Plan, the capacities at the Lockwood and Kiefer landfills would not be exceeded. The Master EIR determined that the remaining capacity and expected lifespan at the Lockwood and Kiefer Landfills, combined with the use of the existing transfer stations and development of one new transfer station in the North Sacramento area would not exceed the capacity of the landfills at full buildout of the 2035 General Plan. Because the proposed project is consistent with the General Plan land use designation for the site, impacts related to solid waste from the project have already been accounted for in the Master EIR, and were determined to be insignificant. In addition, the proposed project would be required to comply with Title 17.72 of the City of Sacramento City Code which addresses recycling and solid waste disposal requirements for new and existing developments. Such requirements include compliance with all federal, state, and local statutes and regulations related to waste reduction and recycling, including the requirement that all planning documents prepared for the project be submitted to the City Solid Waste Division for approval.

## Conclusion

Based on the above information and analysis related to wastewater services, water supply, storm drainage, and solid waste services, the proposed project is expected to result in a ***less-than-significant*** impact related to all utilities and service systems.

## Mitigation Measures

None required.

## Findings

The project would have no additional project-specific environmental effects relating to Utilities and Service Systems.

**MANDATORY FINDINGS OF SIGNIFICANCE**

Issues:	Effect remains significant with all identified mitigation	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>13. <u>MANDATORY FINDINGS OF SIGNIFICANCE</u></b>			
A.) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X	
B.) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X
C.) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X

**Answers to Checklist Questions**

Question A

As described throughout this IS/MND, implementation of the proposed project would have the potential to adversely impact sensitive natural communities, special-status animals and previously undiscovered cultural resources and/or human remains. The proposed project would implement and comply with applicable Sacramento 2035 General Plan policies, as discussed throughout this IS/MND. With implementation of the mitigation measures required by this IS/MND, compliance with City of Sacramento 2035 General Plan policies, and application of standard BMPs during construction, development of the proposed project would not result in any of the following: 1) degrade the quality of the environment; 2) substantially reduce or impact the habitat of fish or wildlife species; 3) cause fish or wildlife populations to drop below self-sustaining levels; 4) threaten to eliminate a plant or animal community; 5) reduce the number or restrict the range of a rare or endangered plant or animal; or 6) eliminate important examples of the major periods of California history or prehistory. Therefore, the project’s impact would be ***less than significant***.

Question B

The proposed project includes construction of a 225-unit student-oriented housing project consisting of three five-story residential buildings, one two-story 12,500-sf clubhouse/leasing

office, and a single-story 10,000-sf Innovation Center. The proposed project is consistent with the General Plan land use designation for the project site and, as such, the proposed project was included in the cumulative analysis of City buildout in the 2035 General Plan. Applicable policies from the 2035 General Plan and the 65<sup>th</sup> Street Station Area Plan would be implemented as part of the proposed project, as well as the project-specific mitigation measures included in this IS/MND, to reduce the project's contribution to potentially cumulative impacts. The potential impacts of the proposed project would be individually limited and would not be cumulatively considerable. As demonstrated in this IS/MND, all potential environmental impacts that could occur as a result of project implementation would be reduced to a less-than-significant level with implementation of project-specific mitigation measures and compliance with applicable 2035 General Plan policies. When viewed in conjunction with other closely related past, present or reasonably foreseeable future projects, development of the proposed project would not contribute to cumulative impacts in the City of Sacramento and the project's cumulative impact would be **less than significant**.

#### Question C

As described in this IS/MND, implementation of the proposed project could result in temporary impacts related to geology and soils, hazards, and noise during the construction period. However, the proposed project would be required to implement the project-specific mitigation measures within this IS/MND, as well as applicable policies of the Sacramento 2035 General Plan, to reduce any potential direct or indirect impacts that could occur to human beings or various resources and, as demonstrated in this IS/MND, with implementation of the identified mitigation measures, all impacts would be reduced to less-than-significant levels. Therefore, overall, the project's impact would be **less than significant**.

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**SECTION IV - ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED**

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The environmental factors checked below would potentially be affected by this project.

	Aesthetics	X	Hazards
	Air Quality	X	Noise
X	Biological Resources		Public Services
X	Cultural Resources		Recreation
X	Geology and Soils		Transportation/Circulation
	Hydrology and Water Quality		Utilities and Service Systems
	None Identified		

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SECTION V - DETERMINATION

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**On the basis of the initial study:**

I find that (a) the proposed project is an anticipated subsequent project identified and described in the 2035 General Plan Master EIR; (b) the proposed project is consistent with the 2035 General Plan land use designation and the permissible densities and intensities of use for the project site; (c) that the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the Master EIR are adequate for the proposed project; and (d) the proposed project will have additional significant environmental effects not previously examined in the Master EIR. A Mitigated Negative Declaration will be prepared. Mitigation measures from the Master EIR will be applied to the project as appropriate, and additional feasible mitigation measures and alternatives will be incorporated to revise the proposed project before the negative declaration is circulated for public review, to avoid or mitigate the identified effects to a level of insignificance. (CEQA Guidelines Section 15178[b])

  
Signature

6/23/16  
Date

Dana Mahaffey  
Printed Name

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## APPENDIX A

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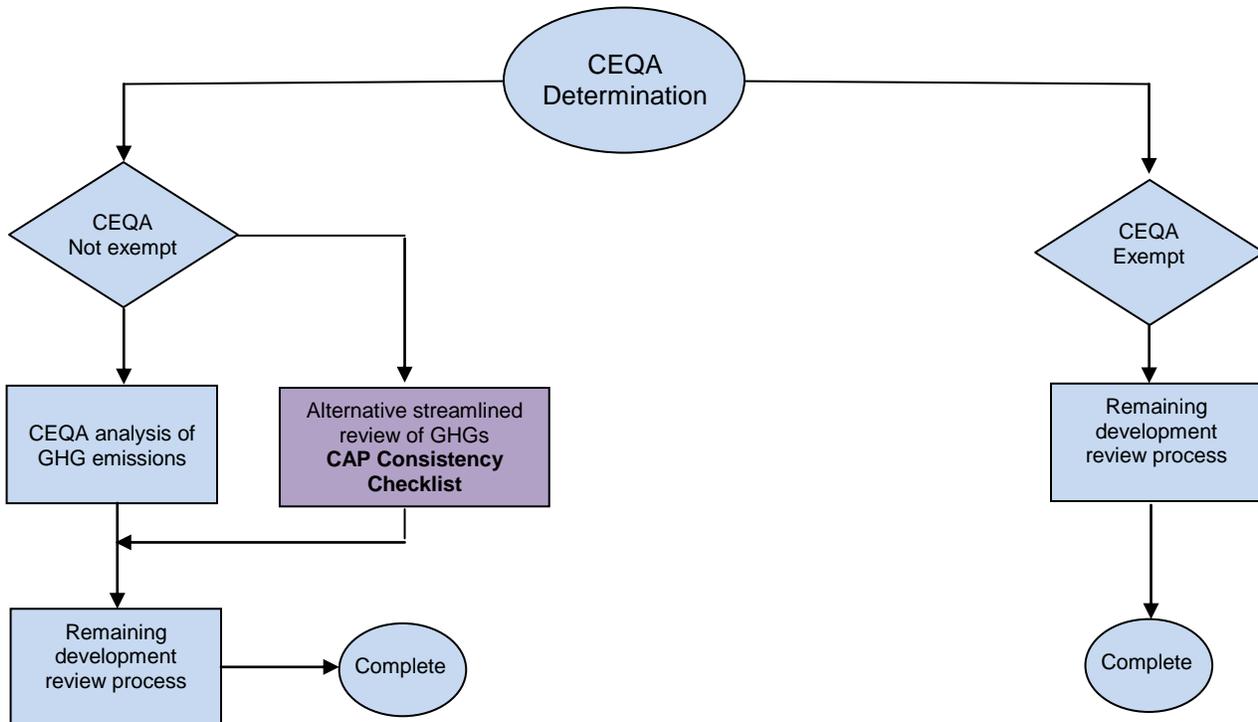
## CLIMATE ACTION PLAN – CONSISTENCY REVIEW CHECKLIST

The purpose of the Climate Action Plan Consistency Review Checklist (CAP Consistency Review Checklist) is to provide a streamlined review process for proposed new development projects which are subject to discretionary review and trigger environmental review pursuant to the California Environmental Quality Act (CEQA)..

CEQA Guidelines require the analysis of greenhouse gas (GHG) emissions and potential climate change impacts from new development. The Sacramento Climate Action Plan qualifies under section 15183.5 of the CEQA Guidelines as a plan for the reduction of GHG emissions for use in cumulative impact analysis pertaining to development projects. This allows projects that demonstrate consistency with the CAP to be eligible for this streamlining procedure. Projects that demonstrate consistency with the CAP and the Sacramento 2030 General Plan may be able to answer “No additional significant environmental effect” in the City’s initial study checklist. Projects that do not demonstrate consistency may, at the City’s discretion, prepare a more comprehensive project-specific analysis of GHG emissions consistent with CEQA requirements. (See FAQ about the CAP Consistency Review Checklist for more details.)

The diagram below shows the context for the CAP Consistency Review Checklist within the planning review process framework.

### Streamlined Review of GHG Emissions in Development Projects



## CLIMATE ACTION PLAN – CONSISTENCY REVIEW CHECKLIST

### Application Submittal Requirements

1. The CAP Consistency Review Checklist is required only for proposed new development projects which are subject to CEQA review (non-exempt projects)
2. If required, the CAP Consistency Review Checklist must be submitted in addition to the basic set of requirements set forth in the Universal Application and the Planning Application Submittal Matrix.
3. The applicant shall work with staff to meet the requirements of this checklist. These requirements will be reflected in the conditions of approval and/or mitigation measures.
4. All conditions of approval and mitigation measures from this checklist shall be shown on full-size sheets for building plan check submittals.

### Application Information

Project Number: \_\_\_\_\_

Address of Property: \_\_\_\_\_

Was a special consultant retained to complete this checklist?  Yes  No. If yes, complete following

Consultant Name\*: \_\_\_\_\_

Company: \_\_\_\_\_

Phone: \_\_\_\_\_ E-Mail: \_\_\_\_\_

**CAP Consistency Checklist Form for Projects that are Not Exempt from CEQA**

Checklist Item (Check the appropriate box, and provide explanation for your answer).	Yes	No*
1. Is the proposed project substantially consistent with the City's over-all goals for land use and urban form, allowable floor area ratio (FAR) and/or density standards in the City's 2035 General Plan, as it currently exists?		
Please explain how proposed project compares to 2035 General Plan with respect to density standards, FAR, land use and urban form. (See directions for filling out CAP Checklist)		

2. Would the project incorporate traffic calming measures? (Examples of traffic calming measures include, but are not limited to: curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, roundabouts or mini-circles, on-street parking, planter strips with street trees, chicanes/chokers.)	Yes	NA
Please explain how the proposed project meets this requirement (list traffic calming measures). If "not applicable" (NA), explain why traffic calming measures were not required.		

\*If "No", equivalent or better GHG reduction must be demonstrated as part of the project and incorporated into the conditions of approval.

Note: Requirements from this checklist should be incorporated into the conditions of approval, and shown on the full-size plans submitted for building plan check.

Checklist Item (Check the appropriate box, and provide explanation for your answer).	Yes	NA
3. Would the project incorporate pedestrian facilities and connections to public transportation consistent with the City's Pedestrian Master Plan?		
Please explain how the proposed project meets this requirement. If "not applicable" (NA), explain why this was not required.		

4. Would the project incorporate bicycle facilities consistent with the City's Bikeway Master Plan, and meet or exceed minimum standards for bicycle facilities in the Zoning Code and CALGreen?	Yes	NA
Please explain how the proposed project meets this requirement. If "not applicable" (NA), explain why this was not required.		

\*If "No", equivalent or better GHG reduction must be demonstrated as part of the project and incorporated into the conditions of approval.

*Note: Requirements from this checklist should be incorporated into the conditions of approval, and shown on the full-size plans submitted for building plan check.*

Checklist Item (Check the appropriate box, and provide explanation for your answer).	Yes	No*	NA
5. For residential projects of 10 or more units, commercial projects greater than 25,000 square feet, or industrial projects greater than 100,000 square feet, would the project include on-site renewable energy systems (e.g., photovoltaic systems) that would generate at least a minimum of 15% of the project's total energy demand on-site? (CAP Actions: 3.4.1 and 3.4.2)			
<p>Please explain how the proposed project meets this requirement. If "not applicable" (NA), explain why this was not required. If project does not meet requirements, see DIRECTIONS FOR FILLING OUT CAP CONSISTENCY REVIEW CHECKLIST re: alternatives to meeting checklist requirements.</p> <p>Attach a copy of the CalEEMod input and output. Record the model and version here _____.</p> <p>Do NOT select the "use historical" box in CalEEMod for energy demand analysis related to this requirement.</p>			
6. Would the project (if constructed on or after January 1, 2014) comply with minimum CALGreen Tier I water efficiency standards?			
<p>Please explain how the proposed project meets this requirement. If "not applicable" (NA), explain why this was not required.</p>			

\*If "No", equivalent or better GHG reduction must be demonstrated as part and incorporated into the conditions of approval.

Note: Requirements from this checklist should be incorporated into the conditions of approval, and shown on the full-size plans submitted for building plan check.

### **Certification**

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability and that the facts, statements and information presented are true and correct to the best of my knowledge and belief.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## **DIRECTIONS FOR FILLING OUT CAP CONSISTENCY REVIEW CHECKLIST**

### **General Plan Consistency & Sustainable Land Use**

**1. Is the proposed project substantially consistent with the land use and urban form designation, allowable floor area ratio (FAR) and/or density standards in the City's [2035 General Plan](#)?**

Consistency with the General Plan land use and urban form designation, FAR and/or density standards is a key determining factor in whether or not the CAP Consistency Review procedure can be used. This is because future growth and development consistent with the General Plan was used to estimate business as usual emission forecasts, as well as emission reductions from actions that would be applicable to new development.

Refer to the 2035 General Plan, Land Use and Urban Form Designations and Development Standards starting on page 2-29. If a project is not fully consistent with the General Plan, the project still may qualify for consistency with the CAP, but this determination will need to be closely coordinated with the City. The City will determine whether the proposed land uses under consideration could be found consistent with the growth projections and assumptions used to develop the GHG emissions inventory and projections in the CAP.

### **Mobility**

**2. Would the project incorporate traffic calming measures? (Applicable CAP Action: 2.1.1)**

List the traffic calming measures that have been incorporated into the project. These may include, but are not limited to: curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, roundabouts or mini-circles, on-street parking, planter strips with street trees, chicanes/chokers.

The project proponent and City staff should consult with staff in the Department of Public Works-Transportation Division to verify that traffic calming measures are adequate and in compliance with the City's Street Design Standards.

If the proposed project does not include any roadway or facility improvements, traffic calming measures may not apply. For example, certain infill projects may not result in on-street or transportation facility improvements because sufficient infrastructure already exists.

**3. Would the project incorporate pedestrian facilities and connections to public transportation consistent with the City's Pedestrian Master Plan? (Applicable CAP Action: 2.2.1)**

List the pedestrian facilities and connections to public transportation that have been included in the proposed project on the Checklist. These may include, but are not limited to: sidewalks on both sides of streets, marked crosswalks, count-down signal timers, curb extensions, median islands, transit shelters, street lighting.

The project proponent and City staff should consult with Department of Public Works-Transportation Division staff to verify that pedestrian facilities are consistent with the [Pedestrian Master Plan](#). As in the previous example, if "not applicable", an explanation shall be documented in the Checklist. For example, certain infill projects may not require on-street or transportation facility improvements because sufficient infrastructure already exists.

The “Pedestrian Review Process Guide” ([Appendix A to the Master Plan](#)) will be used to determine consistency, as follows:

- For typical infill development projects where existing streets will serve the site (no new streets are proposed): the level of pedestrian improvements necessary to determine Pedestrian Master Plan consistency will be measured according to the “Basic, Upgrade or Premium” categories defined in Appendix A to the Pedestrian Master Plan, which are based on project location, surrounding land uses, proximity to transit, etc. If the proposed project does not include the minimum level of improvements per the assigned category for the project’s location, the project will be required as a condition of approval to include appropriate features, per the approval of the Department of Public Works-Transportation Division.
- For new “greenfield” projects and/or larger infill development projects where new streets are proposed as part of the project, the following will apply:
  - “Basic, Upgrade or Premium” levels of improvement will be required based on the proposed project’s location and context, where applicable, consistent with the criteria defined in the Master Plan. If the proposed project does not include the minimum level of improvements per the assigned category, the project will be required as a condition of approval to include appropriate features, per the approval of the Department of Public Works-Transportation Division.
  - The “Pedestrian Smart Growth Scorecard” (Appendix A to the Master Plan) will be required to be completed for the project, and a minimum score of 3 or better will need to be achieved. If the proposed project cannot achieve the minimum score, changes to the proposed project may be required, and/or the project may be required as a condition of approval to include certain improvements such that the average score will meet 3 or better. (Note: an Excel version of the Pedestrian Smart Growth Scorecard is available, to assist in automating the rating & scoring process)

**4. Would the project incorporate bicycle facilities consistent with the City’s Bikeway Master Plan, and meet or exceed minimum standards for bicycle facilities in the Zoning Code and CALGreen? (Applicable CAP Action: 2.3.1)**

List the bicycle facilities that are incorporated into the proposed project on the Checklist. These include, but are not limited to: Class I bike trails and Class II bike lanes connecting the project site to an existing bike network and transit stations, bike parking [bike racks, indoor secure bike parking, bike lockers], end-of-trip facilities at non-residential land uses [showers, lockers]).

The project proponent and City staff should consult with staff in the Transportation Division of the Department of Public Works to verify that such facilities are consistent with the [Bikeway Master Plan](#) and meet or exceed Zoning Code and CALGreen standards. Generally, the following guidelines will be used:

- If existing on-street and off-street bikeways are already present and determined to be consistent with the Bikeway Master Plan, no additional on-street bikeways will be required. Check the “not applicable” box if appropriate. However, on-site facilities shall still be required to meet or exceed minimum Zoning and CALGreen requirements.
- If not applicable, fully document the reasons why using the Checklist.

- If on-street bicycle facilities are not present or are only partially consistent with the Master Plan, the project will be required as a condition of approval to construct or pay for its fair-share of on-street and/or off-street bikeways described in the Master Plan, in addition to meeting or exceeding minimum on-site facilities.
- In some cases, a combination of new or upgraded on-street and off-street bikeways may be used to determine consistency with the Master Plan, at the discretion of the Department of Public Works-Transportation Division staff.

### Energy Efficiency and Renewable Energy

- 5. For residential projects of 10 or more units, commercial projects greater than 25,000 square feet, or industrial projects greater than 100,000 square feet, would the project include on-site renewable energy systems (e.g., solar photovoltaic, solar water heating etc. ) that would generate at least 15% of the project's total energy demand? (CAP Actions: 3.4.1 and 3.4.2)**

For projects of the minimum size specified in this measure, a commitment in the project description or in a mitigation measure that the project shall generate a minimum of 15% of the project's energy demand on-site is sufficient to demonstrate consistency with this measure. However, the project conditions of approval or mitigation measures should specify the intended renewable energy technology to be used (e.g. solar photovoltaic, solar water heating, wind, etc.) and estimated size of the systems to meet project demand based on the project description.

"Total energy demand" refers to the energy (electricity and natural gas) consumed by the built environment (including HVAC systems, water heating systems, and lighting systems) as well as uses that are independent of the construction of buildings, such as office equipment and other plug-ins.

Applicants may estimate the total energy demand of their projects using California Emissions Estimator Model (CalEEMod 2013.2), the same software used to estimate greenhouse gas emissions. **For CalEEMod estimates of energy demand to meet this specific requirement, the user should NOT select the "use historical" box, otherwise they will be "double-counting" emissions reductions that have already been counted.** CalEEMod outputs for electricity demand are provided in annual kWh, and natural gas demand is provided in annual kBtu.

The energy demand estimate by CalEEMod is based on two datasets:

- The California Commercial End Use Survey (CEUS);
- The Residential Appliance Saturation Survey (RASS)

CalEEMod takes energy use intensity data (above) and forecasts energy demand based on climate zone, land use subtype (such as "hospital", "arena", or "apartments, mid rise"), building area, and the number of buildings or units. This is an appropriate level of analysis for use at the planning submittal stage, but it may not provide an accurate picture of actual project energy demand because it does not factor project specifics such as building design.

Therefore, the applicant is advised (but not required) to run a more comprehensive energy simulation once project-specific details are known: basic building design, square-footage, building envelope, lighting design (at least rudimentary), and the mechanical system (at least minimally zoned). Some of the energy simulation programs that are appropriate for this level of analysis include: DOE 2.2, Trace 700, and Energy Pro.

The U.S. DOE maintains a list of energy simulation programs that are available.

[http://apps1.eere.energy.gov/buildings/tools\\_directory/subjects.cfm/pagename=subjects/pagename\\_menu=whole\\_building\\_analysis/pagename\\_submenu=energy\\_simulation](http://apps1.eere.energy.gov/buildings/tools_directory/subjects.cfm/pagename=subjects/pagename_menu=whole_building_analysis/pagename_submenu=energy_simulation)

The applicant may then revise the estimate and make a final determination regarding the size of the PV system that is required.

**Substitutions:** Projects may substitute a quantity of energy efficiency for renewable energy, as long as the substituted GHG reduction does not “double count” GHG reductions already taken by the CAP. In other words, substitutions must reduce GHG emissions from the project beyond what is already accounted for in the CAP (to avoid double-counting).

- Additional mitigation may include equivalent or better GHG reduction from individual measures or a combination of:
- In lieu of installing PV systems that would generate 15% of the projects total energy, the project may exceed energy efficiency standards of Title 24, part 6 of the California Building Code, such as building to CALGreen Tier 1 energy standards. (Residential projects shall exceed the 2013 Title 24 energy efficiency by a minimum of 10% and commercial projects shall exceed 2013 Title 24 energy efficiency by a minimum of 5%).

#### **6. Would the project comply with minimum CALGreen Tier I water efficiency standards? (CAP Action: 5.1.1)**

The [California Green Building Standards Code \(CALGreen\)](#) includes mandatory green building measures, as well as voluntary measures that local jurisdictions may choose to adopt to achieve higher performance tiers, at either Tier 1 or Tier 2 compliance levels. Sacramento has adopted Tier 1 Water Efficiency Standards to be required on or after January 1, 2014. Currently, in order to meet the Tier 1 Water Efficiency Standards, buildings are required to implement all mandatory water efficiency and conservation measures as well as certain Tier 1 specific measures that exceed minimum mandatory measures (e.g. 30% increase in indoor water efficiency). Specific Tier 1 provisions can be found in the CALGreen Code at <http://www.bsc.ca.gov/Home/CALGreen.aspx>.

The City recognizes that project construction details are often not known at the environmental review stage, and it may be premature for a project proponent to identify compliance with precise requirements of CALGreen. A condition of approval requiring the project to comply with minimum CALGreen Tier 1 water efficiency and conservation standards is sufficient to demonstrate consistency with this criterion.

Planning approval of your project will include the following condition:

Project must meet CALGreen Tier 1 water efficiency and conservation standards. Copies of the appropriate CalGreen checklist (see FAQ) shall be included on the full-size sheets for building plan check submittals.

*Note: Requirements from this checklist should be incorporated into the conditions of approval, and shown on the full-size plans submitted for building plan check.*

## APPENDIX B

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## The Crossings Student Housing Sacramento County, Summer

### 1.0 Project Characteristics

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#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	10.00	1000sqft	0.00	10,000.00	0
Parking Lot	444.00	Space	0.00	177,600.00	0
Apartments Mid Rise	225.00	Dwelling Unit	8.50	225,000.00	601

#### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	3.5	<b>Precipitation Freq (Days)</b>	58
<b>Climate Zone</b>	6			<b>Operational Year</b>	2018
<b>Utility Company</b>	Sacramento Municipal Utility District				
<b>CO2 Intensity (lb/MWhr)</b>	479.09	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

#### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity factor adjusted based on SMUD's anticipated progress towards statewide RPS goals

Land Use - according to site plan

Construction Phase - Customized per applicant

Energy Use - \*

Land Use Change -

Construction Off-road Equipment Mitigation - construction equipment would be minimum EPA Tier 1 engines according to applicant

Mobile Land Use Mitigation -

Area Mitigation - Low VOC per SMAQMD Regulations

Energy Mitigation -

Water Mitigation -

Grading - project site acreage = 8.5 acres

Vehicle Trips - based on transportation section of IS/MND

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1

tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
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tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstructionPhase	NumDays	20.00	305.00
tblConstructionPhase	NumDays	230.00	305.00
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	PhaseEndDate	6/21/2019	5/4/2018
tblConstructionPhase	PhaseStartDate	4/21/2018	3/5/2017
tblConstructionPhase	PhaseStartDate	2/18/2017	2/19/2017
tblGrading	AcresOfGrading	12.50	8.50
tblLandUse	LotAcreage	0.23	0.00
tblLandUse	LotAcreage	4.00	0.00
tblLandUse	LotAcreage	5.92	8.50
tblProjectCharacteristics	CO2IntensityFactor	590.31	479.09
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	7.16	7.36
tblVehicleTrips	ST_TR	1.90	21.90
tblVehicleTrips	SU_TR	6.07	7.36
tblVehicleTrips	SU_TR	1.11	21.90
tblVehicleTrips	WD_TR	6.59	7.36

tblVehicleTrips	WD_TR	8.11	21.90
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## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	14.9676	36.0308	39.3797	0.0693	6.4968	2.0396	8.5364	3.3794	1.9167	5.2559	0.0000	6,261.7870	6,261.7870	0.9379	0.0000	6,281.4820
2018	14.2976	29.6293	36.6657	0.0692	2.5139	1.7162	4.2300	0.6731	1.6210	2.2941	0.0000	6,127.6377	6,127.6377	0.7670	0.0000	6,143.7452
<b>Total</b>	<b>29.2652</b>	<b>65.6600</b>	<b>76.0453</b>	<b>0.1385</b>	<b>9.0107</b>	<b>3.7558</b>	<b>12.7664</b>	<b>4.0525</b>	<b>3.5377</b>	<b>7.5500</b>	<b>0.0000</b>	<b>12,389.4247</b>	<b>12,389.4247</b>	<b>1.7049</b>	<b>0.0000</b>	<b>12,425.2272</b>

#### 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	17.5446	40.1937	56.8036	0.0693	2.9863	2.6767	5.1906	1.5374	2.6705	3.4229	0.0000	6,261.7870	6,261.7870	0.9379	0.0000	6,281.4820
2018	17.3419	39.7160	54.6999	0.0692	2.5139	2.6714	5.1853	0.6731	2.6658	3.3389	0.0000	6,127.6377	6,127.6377	0.7670	0.0000	6,143.7452
<b>Total</b>	<b>34.8864</b>	<b>79.9097</b>	<b>111.5035</b>	<b>0.1385</b>	<b>5.5002</b>	<b>5.3481</b>	<b>10.3760</b>	<b>2.2105</b>	<b>5.3363</b>	<b>6.7618</b>	<b>0.0000</b>	<b>12,389.4247</b>	<b>12,389.4247</b>	<b>1.7049</b>	<b>0.0000</b>	<b>12,425.2272</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	-19.21	-21.70	-46.63	0.00	38.96	-42.40	18.72	45.45	-50.84	10.44	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	10.2402	0.2174	18.7411	9.8000e-004		0.1022	0.1022		0.1022	0.1022	0.0000	33.5236	33.5236	0.0334	0.0000	34.2250
Energy	0.0773	0.6663	0.3247	4.2100e-003		0.0534	0.0534		0.0534	0.0534		842.9430	842.9430	0.0162	0.0155	848.0730
Mobile	6.5452	12.0284	64.0876	0.1502	10.0022	0.1781	10.1803	2.6719	0.1641	2.8360		12,162.6109	12,162.6109	0.4560		12,172.1860
<b>Total</b>	<b>16.8627</b>	<b>12.9121</b>	<b>83.1534</b>	<b>0.1554</b>	<b>10.0022</b>	<b>0.3337</b>	<b>10.3359</b>	<b>2.6719</b>	<b>0.3197</b>	<b>2.9916</b>	<b>0.0000</b>	<b>13,039.0775</b>	<b>13,039.0775</b>	<b>0.5055</b>	<b>0.0155</b>	<b>13,054.4840</b>

**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	10.2402	0.2174	18.7411	9.8000e-004		0.1022	0.1022		0.1022	0.1022	0.0000	33.5236	33.5236	0.0334	0.0000	34.2250
Energy	0.0493	0.4253	0.2099	2.6900e-003		0.0341	0.0341		0.0341	0.0341		537.6420	537.6420	0.0103	9.8600e-003	540.9140
Mobile	6.1397	9.7821	52.6646	0.1167	7.6969	0.1408	7.8377	2.0561	0.1297	2.1858		9,448.0943	9,448.0943	0.3630		9,455.7162
<b>Total</b>	<b>16.4292</b>	<b>10.4249</b>	<b>71.6156</b>	<b>0.1203</b>	<b>7.6969</b>	<b>0.2770</b>	<b>7.9739</b>	<b>2.0561</b>	<b>0.2660</b>	<b>2.3220</b>	<b>0.0000</b>	<b>10,019.2599</b>	<b>10,019.2599</b>	<b>0.4067</b>	<b>9.8600e-003</b>	<b>10,030.8552</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	2.57	19.26	13.88	22.55	23.05	16.99	22.85	23.05	16.81	22.38	0.00	23.16	23.16	19.56	36.18	23.16

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2017	2/3/2017	5	25	
2	Paving	Paving	2/4/2017	2/17/2017	5	10	
3	Building Construction	Building Construction	2/19/2017	4/20/2018	5	305	
4	Architectural Coating	Architectural Coating	3/5/2017	5/4/2018	5	305	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 8.5

Acres of Paving: 0

Residential Indoor: 455,625; Residential Outdoor: 151,875; Non-Residential Indoor: 22,992; Non-Residential Outdoor: 7,664 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
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
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
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	240.00	55.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	48.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

### 3.2 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					6.3827	0.0000	6.3827	3.3492	0.0000	3.3492			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757		3,043.6667	3,043.6667	0.9326		3,063.2507
<b>Total</b>	<b>3.4555</b>	<b>35.9825</b>	<b>25.3812</b>	<b>0.0297</b>	<b>6.3827</b>	<b>2.0388</b>	<b>8.4215</b>	<b>3.3492</b>	<b>1.8757</b>	<b>5.2249</b>		<b>3,043.6667</b>	<b>3,043.6667</b>	<b>0.9326</b>		<b>3,063.2507</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0536	0.0483	0.6480	1.4600e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		115.1849	115.1849	5.2800e-003		115.2959
<b>Total</b>	<b>0.0536</b>	<b>0.0483</b>	<b>0.6480</b>	<b>1.4600e-003</b>	<b>0.1141</b>	<b>8.1000e-004</b>	<b>0.1149</b>	<b>0.0303</b>	<b>7.5000e-004</b>	<b>0.0310</b>		<b>115.1849</b>	<b>115.1849</b>	<b>5.2800e-003</b>		<b>115.2959</b>

### 3.2 Grading - 2017

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8722	0.0000	2.8722	1.5071	0.0000	1.5071			0.0000			0.0000
Off-Road	4.8654	38.4167	41.6891	0.0297		1.8848	1.8848		1.8848	1.8848	0.0000	3,043.6667	3,043.6667	0.9326		3,063.2507
<b>Total</b>	<b>4.8654</b>	<b>38.4167</b>	<b>41.6891</b>	<b>0.0297</b>	<b>2.8722</b>	<b>1.8848</b>	<b>4.7570</b>	<b>1.5071</b>	<b>1.8848</b>	<b>3.3919</b>	<b>0.0000</b>	<b>3,043.6667</b>	<b>3,043.6667</b>	<b>0.9326</b>		<b>3,063.2507</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0536	0.0483	0.6480	1.4600e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		115.1849	115.1849	5.2800e-003		115.2959
<b>Total</b>	<b>0.0536</b>	<b>0.0483</b>	<b>0.6480</b>	<b>1.4600e-003</b>	<b>0.1141</b>	<b>8.1000e-004</b>	<b>0.1149</b>	<b>0.0303</b>	<b>7.5000e-004</b>	<b>0.0310</b>		<b>115.1849</b>	<b>115.1849</b>	<b>5.2800e-003</b>		<b>115.2959</b>

### 3.3 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		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.9074</b>	<b>20.2964</b>	<b>14.7270</b>	<b>0.0223</b>		<b>1.1384</b>	<b>1.1384</b>		<b>1.0473</b>	<b>1.0473</b>		<b>2,281.0588</b>	<b>2,281.0588</b>	<b>0.6989</b>		<b>2,295.7360</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0536	0.0483	0.6480	1.4600e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		115.1849	115.1849	5.2800e-003		115.2959
<b>Total</b>	<b>0.0536</b>	<b>0.0483</b>	<b>0.6480</b>	<b>1.4600e-003</b>	<b>0.1141</b>	<b>8.1000e-004</b>	<b>0.1149</b>	<b>0.0303</b>	<b>7.5000e-004</b>	<b>0.0310</b>		<b>115.1849</b>	<b>115.1849</b>	<b>5.2800e-003</b>		<b>115.2959</b>

### 3.3 Paving - 2017

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.1483	29.9207	31.5677	0.0223		1.5517	1.5517		1.5517	1.5517	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>4.1483</b>	<b>29.9207</b>	<b>31.5677</b>	<b>0.0223</b>		<b>1.5517</b>	<b>1.5517</b>		<b>1.5517</b>	<b>1.5517</b>	<b>0.0000</b>	<b>2,281.0588</b>	<b>2,281.0588</b>	<b>0.6989</b>		<b>2,295.7360</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0536	0.0483	0.6480	1.4600e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		115.1849	115.1849	5.2800e-003		115.2959
<b>Total</b>	<b>0.0536</b>	<b>0.0483</b>	<b>0.6480</b>	<b>1.4600e-003</b>	<b>0.1141</b>	<b>8.1000e-004</b>	<b>0.1149</b>	<b>0.0303</b>	<b>7.5000e-004</b>	<b>0.0310</b>		<b>115.1849</b>	<b>115.1849</b>	<b>5.2800e-003</b>		<b>115.2959</b>

### 3.4 Building Construction - 2017

#### Unmitigated Construction On-Site

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

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5730	3.9122	6.9406	0.0115	0.3232	0.0610	0.3842	0.0920	0.0561	0.1481		1,128.9842	1,128.9842	8.4200e-003		1,129.1610
Worker	0.8576	0.7734	10.3682	0.0234	1.8257	0.0130	1.8386	0.4843	0.0120	0.4962		1,842.9579	1,842.9579	0.0846		1,844.7335
<b>Total</b>	<b>1.4306</b>	<b>4.6857</b>	<b>17.3088</b>	<b>0.0348</b>	<b>2.1488</b>	<b>0.0740</b>	<b>2.2228</b>	<b>0.5763</b>	<b>0.0680</b>	<b>0.6443</b>		<b>2,971.9421</b>	<b>2,971.9421</b>	<b>0.0930</b>		<b>2,973.8946</b>

### 3.4 Building Construction - 2017

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.4223	32.1144	34.0039	0.0268		2.3267	2.3267		2.3267	2.3267	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
<b>Total</b>	<b>5.4223</b>	<b>32.1144</b>	<b>34.0039</b>	<b>0.0268</b>		<b>2.3267</b>	<b>2.3267</b>		<b>2.3267</b>	<b>2.3267</b>	<b>0.0000</b>	<b>2,639.8053</b>	<b>2,639.8053</b>	<b>0.6497</b>		<b>2,653.4490</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5730	3.9122	6.9406	0.0115	0.3232	0.0610	0.3842	0.0920	0.0561	0.1481		1,128.9842	1,128.9842	8.4200e-003		1,129.1610
Worker	0.8576	0.7734	10.3682	0.0234	1.8257	0.0130	1.8386	0.4843	0.0120	0.4962		1,842.9579	1,842.9579	0.0846		1,844.7335
<b>Total</b>	<b>1.4306</b>	<b>4.6857</b>	<b>17.3088</b>	<b>0.0348</b>	<b>2.1488</b>	<b>0.0740</b>	<b>2.2228</b>	<b>0.5763</b>	<b>0.0680</b>	<b>0.6443</b>		<b>2,971.9421</b>	<b>2,971.9421</b>	<b>0.0930</b>		<b>2,973.8946</b>

### 3.4 Building Construction - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>		<b>2,609.9390</b>	<b>2,609.9390</b>	<b>0.6387</b>		<b>2,623.3517</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4763	3.5265	6.0566	0.0114	0.3231	0.0561	0.3792	0.0920	0.0515	0.1435		1,108.1466	1,108.1466	8.2100e-003		1,108.3190
Worker	0.7693	0.6968	9.3518	0.0233	1.8257	0.0127	1.8384	0.4843	0.0118	0.4960		1,773.4197	1,773.4197	0.0778		1,775.0536
<b>Total</b>	<b>1.2456</b>	<b>4.2233</b>	<b>15.4084</b>	<b>0.0348</b>	<b>2.1488</b>	<b>0.0688</b>	<b>2.2175</b>	<b>0.5763</b>	<b>0.0633</b>	<b>0.6396</b>		<b>2,881.5663</b>	<b>2,881.5663</b>	<b>0.0860</b>		<b>2,883.3726</b>

### 3.4 Building Construction - 2018

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.4223	32.1144	34.0039	0.0268		2.3267	2.3267		2.3267	2.3267	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
<b>Total</b>	<b>5.4223</b>	<b>32.1144</b>	<b>34.0039</b>	<b>0.0268</b>		<b>2.3267</b>	<b>2.3267</b>		<b>2.3267</b>	<b>2.3267</b>	<b>0.0000</b>	<b>2,609.9389</b>	<b>2,609.9389</b>	<b>0.6387</b>		<b>2,623.3517</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4763	3.5265	6.0566	0.0114	0.3231	0.0561	0.3792	0.0920	0.0515	0.1435		1,108.1466	1,108.1466	8.2100e-003		1,108.3190
Worker	0.7693	0.6968	9.3518	0.0233	1.8257	0.0127	1.8384	0.4843	0.0118	0.4960		1,773.4197	1,773.4197	0.0778		1,775.0536
<b>Total</b>	<b>1.2456</b>	<b>4.2233</b>	<b>15.4084</b>	<b>0.0348</b>	<b>2.1488</b>	<b>0.0688</b>	<b>2.2175</b>	<b>0.5763</b>	<b>0.0633</b>	<b>0.6396</b>		<b>2,881.5663</b>	<b>2,881.5663</b>	<b>0.0860</b>		<b>2,883.3726</b>

**3.5 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	9.9308					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
<b>Total</b>	<b>10.2631</b>	<b>2.1850</b>	<b>1.8681</b>	<b>2.9700e-003</b>		<b>0.1733</b>	<b>0.1733</b>		<b>0.1733</b>	<b>0.1733</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0297</b>		<b>282.0721</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1715	0.1547	2.0737	4.6700e-003	0.3651	2.5900e-003	0.3677	0.0969	2.3900e-003	0.0993		368.5916	368.5916	0.0169		368.9467
<b>Total</b>	<b>0.1715</b>	<b>0.1547</b>	<b>2.0737</b>	<b>4.6700e-003</b>	<b>0.3651</b>	<b>2.5900e-003</b>	<b>0.3677</b>	<b>0.0969</b>	<b>2.3900e-003</b>	<b>0.0993</b>		<b>368.5916</b>	<b>368.5916</b>	<b>0.0169</b>		<b>368.9467</b>

### 3.5 Architectural Coating - 2017

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.9308					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5893	3.2389	3.4172	2.9700e-003		0.2734	0.2734		0.2734	0.2734	0.0000	281.4481	281.4481	0.0297		282.0721
<b>Total</b>	<b>10.5202</b>	<b>3.2389</b>	<b>3.4172</b>	<b>2.9700e-003</b>		<b>0.2734</b>	<b>0.2734</b>		<b>0.2734</b>	<b>0.2734</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0297</b>		<b>282.0721</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1715	0.1547	2.0737	4.6700e-003	0.3651	2.5900e-003	0.3677	0.0969	2.3900e-003	0.0993		368.5916	368.5916	0.0169		368.9467
<b>Total</b>	<b>0.1715</b>	<b>0.1547</b>	<b>2.0737</b>	<b>4.6700e-003</b>	<b>0.3651</b>	<b>2.5900e-003</b>	<b>0.3677</b>	<b>0.0969</b>	<b>2.3900e-003</b>	<b>0.0993</b>		<b>368.5916</b>	<b>368.5916</b>	<b>0.0169</b>		<b>368.9467</b>

### 3.5 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	9.9308					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267			282.0102
<b>Total</b>	<b>10.2294</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>		<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>			<b>282.0102</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.1539	0.1394	1.8704	4.6700e-003	0.3651	2.5400e-003	0.3677	0.0969	2.3500e-003	0.0992		354.6839	354.6839	0.0156			355.0107
<b>Total</b>	<b>0.1539</b>	<b>0.1394</b>	<b>1.8704</b>	<b>4.6700e-003</b>	<b>0.3651</b>	<b>2.5400e-003</b>	<b>0.3677</b>	<b>0.0969</b>	<b>2.3500e-003</b>	<b>0.0992</b>		<b>354.6839</b>	<b>354.6839</b>	<b>0.0156</b>			<b>355.0107</b>

### 3.5 Architectural Coating - 2018

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.9308					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5893	3.2389	3.4172	2.9700e-003		0.2734	0.2734		0.2734	0.2734	0.0000	281.4485	281.4485	0.0267		282.0102
<b>Total</b>	<b>10.5202</b>	<b>3.2389</b>	<b>3.4172</b>	<b>2.9700e-003</b>		<b>0.2734</b>	<b>0.2734</b>		<b>0.2734</b>	<b>0.2734</b>	<b>0.0000</b>	<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.0102</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1539	0.1394	1.8704	4.6700e-003	0.3651	2.5400e-003	0.3677	0.0969	2.3500e-003	0.0992		354.6839	354.6839	0.0156		355.0107
<b>Total</b>	<b>0.1539</b>	<b>0.1394</b>	<b>1.8704</b>	<b>4.6700e-003</b>	<b>0.3651</b>	<b>2.5400e-003</b>	<b>0.3677</b>	<b>0.0969</b>	<b>2.3500e-003</b>	<b>0.0992</b>		<b>354.6839</b>	<b>354.6839</b>	<b>0.0156</b>		<b>355.0107</b>

### 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive 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	6.1397	9.7821	52.6646	0.1167	7.6969	0.1408	7.8377	2.0561	0.1297	2.1858		9,448.0943	9,448.0943	0.3630		9,455.7162
Unmitigated	6.5452	12.0284	64.0876	0.1502	10.0022	0.1781	10.1803	2.6719	0.1641	2.8360		12,162.6109	12,162.6109	0.4560		12,172.1860

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,656.00	1,656.00	1656.00	4,249,477	3,270,053
Parking Lot	0.00	0.00	0.00		
Research & Development	219.00	219.00	219.00	474,291	364,976
<b>Total</b>	<b>1,875.00</b>	<b>1,875.00</b>	<b>1,875.00</b>	<b>4,723,768</b>	<b>3,635,029</b>

### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3
Parking Lot	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0
Research & Development	10.00	5.00	6.50	33.00	48.00	19.00	82	15	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.504263	0.068212	0.178684	0.146863	0.044671	0.006294	0.020946	0.016568	0.002299	0.002275	0.006187	0.000564	0.002174

**5.0 Energy Detail**

**4.4 Fleet Mix**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Exceed Title 24

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
NaturalGas Mitigated	0.0493	0.4253	0.2099	2.6900e-003		0.0341	0.0341		0.0341	0.0341		537.6420	537.6420	0.0103	9.8600e-003	540.9140
NaturalGas Unmitigated	0.0773	0.6663	0.3247	4.2100e-003		0.0534	0.0534		0.0534	0.0534		842.9430	842.9430	0.0162	0.0155	848.0730

### 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					
Research & Development	1014.52	0.0109	0.0995	0.0836	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3554	119.3554	2.2900e-003	2.1900e-003	120.0817
Apartments Mid Rise	6150.5	0.0663	0.5668	0.2412	3.6200e-003		0.0458	0.0458		0.0458	0.0458		723.5877	723.5877	0.0139	0.0133	727.9913
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0773</b>	<b>0.6663</b>	<b>0.3248</b>	<b>4.2200e-003</b>		<b>0.0534</b>	<b>0.0534</b>		<b>0.0534</b>	<b>0.0534</b>		<b>842.9430</b>	<b>842.9430</b>	<b>0.0162</b>	<b>0.0155</b>	<b>848.0731</b>

#### 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					
Research & Development	0.71111	7.6700e-003	0.0697	0.0586	4.2000e-004		5.3000e-003	5.3000e-003		5.3000e-003	5.3000e-003		83.6600	83.6600	1.6000e-003	1.5300e-003	84.1691
Apartments Mid Rise	3.85885	0.0416	0.3556	0.1513	2.2700e-003		0.0288	0.0288		0.0288	0.0288		453.9820	453.9820	8.7000e-003	8.3200e-003	456.7449
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0493</b>	<b>0.4253</b>	<b>0.2099</b>	<b>2.6900e-003</b>		<b>0.0341</b>	<b>0.0341</b>		<b>0.0341</b>	<b>0.0341</b>		<b>537.6420</b>	<b>537.6420</b>	<b>0.0103</b>	<b>9.8500e-003</b>	<b>540.9140</b>

### 6.0 Area Detail

### 6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.2402	0.2174	18.7411	9.8000e-004		0.1022	0.1022		0.1022	0.1022	0.0000	33.5236	33.5236	0.0334	0.0000	34.2250
Unmitigated	10.2402	0.2174	18.7411	9.8000e-004		0.1022	0.1022		0.1022	0.1022	0.0000	33.5236	33.5236	0.0334	0.0000	34.2250

### 6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.8298					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.8296					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.5808	0.2174	18.7411	9.8000e-004		0.1022	0.1022		0.1022	0.1022		33.5236	33.5236	0.0334		34.2250
<b>Total</b>	<b>10.2402</b>	<b>0.2174</b>	<b>18.7411</b>	<b>9.8000e-004</b>		<b>0.1022</b>	<b>0.1022</b>		<b>0.1022</b>	<b>0.1022</b>	<b>0.0000</b>	<b>33.5236</b>	<b>33.5236</b>	<b>0.0334</b>	<b>0.0000</b>	<b>34.2250</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.8298					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.8296					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.5808	0.2174	18.7411	9.8000e-004		0.1022	0.1022		0.1022	0.1022		33.5236	33.5236	0.0334		34.2250
<b>Total</b>	<b>10.2402</b>	<b>0.2174</b>	<b>18.7411</b>	<b>9.8000e-004</b>		<b>0.1022</b>	<b>0.1022</b>		<b>0.1022</b>	<b>0.1022</b>	<b>0.0000</b>	<b>33.5236</b>	<b>33.5236</b>	<b>0.0334</b>	<b>0.0000</b>	<b>34.2250</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Apply Water Conservation Strategy

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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



## The Crossings Student Housing Sacramento County, Winter

### 1.0 Project Characteristics

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#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	10.00	1000sqft	0.00	10,000.00	0
Parking Lot	444.00	Space	0.00	177,600.00	0
Apartments Mid Rise	225.00	Dwelling Unit	8.50	225,000.00	601

#### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	3.5	<b>Precipitation Freq (Days)</b>	58
<b>Climate Zone</b>	6			<b>Operational Year</b>	2018
<b>Utility Company</b>	Sacramento Municipal Utility District				
<b>CO2 Intensity (lb/MWhr)</b>	479.09	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

#### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity factor adjusted based on SMUD's anticipated progress towards statewide RPS goals

Land Use - according to site plan

Construction Phase - Customized per applicant

Energy Use - \*

Land Use Change -

Construction Off-road Equipment Mitigation - construction equipment would be minimum EPA Tier 1 engines according to applicant

Mobile Land Use Mitigation -

Area Mitigation - Low VOC per SMAQMD Regulations

Energy Mitigation -

Water Mitigation -

Grading - project site acreage = 8.5 acres

Vehicle Trips - based on transportation section of IS/MND

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1

tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstructionPhase	NumDays	20.00	305.00
tblConstructionPhase	NumDays	230.00	305.00
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	PhaseEndDate	6/21/2019	5/4/2018
tblConstructionPhase	PhaseStartDate	4/21/2018	3/5/2017
tblConstructionPhase	PhaseStartDate	2/18/2017	2/19/2017
tblGrading	AcresOfGrading	12.50	8.50
tblLandUse	LotAcreage	0.23	0.00
tblLandUse	LotAcreage	4.00	0.00
tblLandUse	LotAcreage	5.92	8.50
tblProjectCharacteristics	CO2IntensityFactor	590.31	479.09
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	7.16	7.36
tblVehicleTrips	ST_TR	1.90	21.90
tblVehicleTrips	SU_TR	6.07	7.36
tblVehicleTrips	SU_TR	1.11	21.90
tblVehicleTrips	WD_TR	6.59	7.36

tblVehicleTrips	WD_TR	8.11	21.90
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## 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	15.0018	36.0424	41.6313	0.0658	6.4968	2.0396	8.5364	3.3794	1.9175	5.2559	0.0000	5,981.764 4	5,981.764 4	0.9379	0.0000	6,001.459 5
2018	14.2968	30.0776	39.0191	0.0657	2.5139	1.7170	4.2309	0.6731	1.6217	2.2949	0.0000	5,857.773 5	5,857.773 5	0.7673	0.0000	5,873.886 9
<b>Total</b>	<b>29.2985</b>	<b>66.1200</b>	<b>80.6504</b>	<b>0.1315</b>	<b>9.0107</b>	<b>3.7566</b>	<b>12.7672</b>	<b>4.0525</b>	<b>3.5393</b>	<b>7.5507</b>	<b>0.0000</b>	<b>11,839.53 79</b>	<b>11,839.53 79</b>	<b>1.7052</b>	<b>0.0000</b>	<b>11,875.34 63</b>

#### 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	17.5787	40.6950	59.0552	0.0658	2.9863	2.6776	5.1915	1.5374	2.6713	3.4229	0.0000	5,981.764 4	5,981.764 4	0.9379	0.0000	6,001.459 5
2018	17.3411	40.1644	57.0534	0.0657	2.5139	2.6722	5.1861	0.6731	2.6665	3.3396	0.0000	5,857.773 5	5,857.773 5	0.7673	0.0000	5,873.886 9
<b>Total</b>	<b>34.9198</b>	<b>80.8594</b>	<b>116.1086</b>	<b>0.1315</b>	<b>5.5002</b>	<b>5.3498</b>	<b>10.3777</b>	<b>2.2105</b>	<b>5.3378</b>	<b>6.7625</b>	<b>0.0000</b>	<b>11,839.53 79</b>	<b>11,839.53 79</b>	<b>1.7052</b>	<b>0.0000</b>	<b>11,875.34 63</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	-19.19	-22.29	-43.97	0.00	38.96	-42.41	18.72	45.45	-50.82	10.44	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	10.2402	0.2174	18.7411	9.8000e-004		0.1022	0.1022		0.1022	0.1022	0.0000	33.5236	33.5236	0.0334	0.0000	34.2250
Energy	0.0773	0.6663	0.3247	4.2100e-003		0.0534	0.0534		0.0534	0.0534		842.9430	842.9430	0.0162	0.0155	848.0730
Mobile	6.0633	13.7011	66.5352	0.1354	10.0022	0.1793	10.1814	2.6719	0.1652	2.8371		11,015.6902	11,015.6902	0.4563		11,025.2729
<b>Total</b>	<b>16.3808</b>	<b>14.5848</b>	<b>85.6010</b>	<b>0.1406</b>	<b>10.0022</b>	<b>0.3349</b>	<b>10.3370</b>	<b>2.6719</b>	<b>0.3208</b>	<b>2.9927</b>	<b>0.0000</b>	<b>11,892.1568</b>	<b>11,892.1568</b>	<b>0.5059</b>	<b>0.0155</b>	<b>11,907.5709</b>

**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	10.2402	0.2174	18.7411	9.8000e-004		0.1022	0.1022		0.1022	0.1022	0.0000	33.5236	33.5236	0.0334	0.0000	34.2250
Energy	0.0493	0.4253	0.2099	2.6900e-003		0.0341	0.0341		0.0341	0.0341		537.6420	537.6420	0.0103	9.8600e-003	540.9140
Mobile	5.6829	11.1134	57.3125	0.1053	7.6969	0.1419	7.8388	2.0561	0.1308	2.1868		8,562.4223	8,562.4223	0.3633		8,570.0519
<b>Total</b>	<b>15.9724</b>	<b>11.7561</b>	<b>76.2634</b>	<b>0.1090</b>	<b>7.6969</b>	<b>0.2782</b>	<b>7.9750</b>	<b>2.0561</b>	<b>0.2670</b>	<b>2.3231</b>	<b>0.0000</b>	<b>9,133.5879</b>	<b>9,133.5879</b>	<b>0.4070</b>	<b>9.8600e-003</b>	<b>9,145.1908</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	2.49	19.39	10.91	22.49	23.05	16.93	22.85	23.05	16.76	22.37	0.00	23.20	23.20	19.54	36.18	23.20

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2017	2/3/2017	5	25	
2	Paving	Paving	2/4/2017	2/17/2017	5	10	
3	Building Construction	Building Construction	2/19/2017	4/20/2018	5	305	
4	Architectural Coating	Architectural Coating	3/5/2017	5/4/2018	5	305	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 8.5

Acres of Paving: 0

Residential Indoor: 455,625; Residential Outdoor: 151,875; Non-Residential Indoor: 22,992; Non-Residential Outdoor: 7,664 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
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
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
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	240.00	55.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	48.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

### 3.2 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					6.3827	0.0000	6.3827	3.3492	0.0000	3.3492			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757		3,043.6667	3,043.6667	0.9326		3,063.2507
<b>Total</b>	<b>3.4555</b>	<b>35.9825</b>	<b>25.3812</b>	<b>0.0297</b>	<b>6.3827</b>	<b>2.0388</b>	<b>8.4215</b>	<b>3.3492</b>	<b>1.8757</b>	<b>5.2249</b>		<b>3,043.6667</b>	<b>3,043.6667</b>	<b>0.9326</b>		<b>3,063.2507</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0463	0.0599	0.5804	1.2800e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		101.1147	101.1147	5.2800e-003		101.2257
<b>Total</b>	<b>0.0463</b>	<b>0.0599</b>	<b>0.5804</b>	<b>1.2800e-003</b>	<b>0.1141</b>	<b>8.1000e-004</b>	<b>0.1149</b>	<b>0.0303</b>	<b>7.5000e-004</b>	<b>0.0310</b>		<b>101.1147</b>	<b>101.1147</b>	<b>5.2800e-003</b>		<b>101.2257</b>

### 3.2 Grading - 2017

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8722	0.0000	2.8722	1.5071	0.0000	1.5071			0.0000			0.0000
Off-Road	4.8654	38.4167	41.6891	0.0297		1.8848	1.8848		1.8848	1.8848	0.0000	3,043.6667	3,043.6667	0.9326		3,063.2507
<b>Total</b>	<b>4.8654</b>	<b>38.4167</b>	<b>41.6891</b>	<b>0.0297</b>	<b>2.8722</b>	<b>1.8848</b>	<b>4.7570</b>	<b>1.5071</b>	<b>1.8848</b>	<b>3.3919</b>	<b>0.0000</b>	<b>3,043.6667</b>	<b>3,043.6667</b>	<b>0.9326</b>		<b>3,063.2507</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0463	0.0599	0.5804	1.2800e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		101.1147	101.1147	5.2800e-003		101.2257
<b>Total</b>	<b>0.0463</b>	<b>0.0599</b>	<b>0.5804</b>	<b>1.2800e-003</b>	<b>0.1141</b>	<b>8.1000e-004</b>	<b>0.1149</b>	<b>0.0303</b>	<b>7.5000e-004</b>	<b>0.0310</b>		<b>101.1147</b>	<b>101.1147</b>	<b>5.2800e-003</b>		<b>101.2257</b>

### 3.3 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		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.9074</b>	<b>20.2964</b>	<b>14.7270</b>	<b>0.0223</b>		<b>1.1384</b>	<b>1.1384</b>		<b>1.0473</b>	<b>1.0473</b>		<b>2,281.0588</b>	<b>2,281.0588</b>	<b>0.6989</b>		<b>2,295.7360</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0463	0.0599	0.5804	1.2800e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		101.1147	101.1147	5.2800e-003		101.2257
<b>Total</b>	<b>0.0463</b>	<b>0.0599</b>	<b>0.5804</b>	<b>1.2800e-003</b>	<b>0.1141</b>	<b>8.1000e-004</b>	<b>0.1149</b>	<b>0.0303</b>	<b>7.5000e-004</b>	<b>0.0310</b>		<b>101.1147</b>	<b>101.1147</b>	<b>5.2800e-003</b>		<b>101.2257</b>

### 3.3 Paving - 2017

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.1483	29.9207	31.5677	0.0223		1.5517	1.5517		1.5517	1.5517	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>4.1483</b>	<b>29.9207</b>	<b>31.5677</b>	<b>0.0223</b>		<b>1.5517</b>	<b>1.5517</b>		<b>1.5517</b>	<b>1.5517</b>	<b>0.0000</b>	<b>2,281.0588</b>	<b>2,281.0588</b>	<b>0.6989</b>		<b>2,295.7360</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0463	0.0599	0.5804	1.2800e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		101.1147	101.1147	5.2800e-003		101.2257
<b>Total</b>	<b>0.0463</b>	<b>0.0599</b>	<b>0.5804</b>	<b>1.2800e-003</b>	<b>0.1141</b>	<b>8.1000e-004</b>	<b>0.1149</b>	<b>0.0303</b>	<b>7.5000e-004</b>	<b>0.0310</b>		<b>101.1147</b>	<b>101.1147</b>	<b>5.2800e-003</b>		<b>101.2257</b>

### 3.4 Building Construction - 2017

#### Unmitigated Construction On-Site

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

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7473	4.1913	10.4902	0.0114	0.3232	0.0619	0.3851	0.0920	0.0569	0.1489		1,119.1089	1,119.1089	8.6900e-003		1,119.2914
Worker	0.7409	0.9587	9.2866	0.0205	1.8257	0.0130	1.8386	0.4843	0.0120	0.4962		1,617.8352	1,617.8352	0.0846		1,619.6109
<b>Total</b>	<b>1.4881</b>	<b>5.1499</b>	<b>19.7768</b>	<b>0.0319</b>	<b>2.1488</b>	<b>0.0749</b>	<b>2.2237</b>	<b>0.5763</b>	<b>0.0688</b>	<b>0.6451</b>		<b>2,736.9440</b>	<b>2,736.9440</b>	<b>0.0933</b>		<b>2,738.9022</b>

### 3.4 Building Construction - 2017

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.4223	32.1144	34.0039	0.0268		2.3267	2.3267		2.3267	2.3267	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
<b>Total</b>	<b>5.4223</b>	<b>32.1144</b>	<b>34.0039</b>	<b>0.0268</b>		<b>2.3267</b>	<b>2.3267</b>		<b>2.3267</b>	<b>2.3267</b>	<b>0.0000</b>	<b>2,639.8053</b>	<b>2,639.8053</b>	<b>0.6497</b>		<b>2,653.4490</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7473	4.1913	10.4902	0.0114	0.3232	0.0619	0.3851	0.0920	0.0569	0.1489		1,119.1089	1,119.1089	8.6900e-003		1,119.2914
Worker	0.7409	0.9587	9.2866	0.0205	1.8257	0.0130	1.8386	0.4843	0.0120	0.4962		1,617.8352	1,617.8352	0.0846		1,619.6109
<b>Total</b>	<b>1.4881</b>	<b>5.1499</b>	<b>19.7768</b>	<b>0.0319</b>	<b>2.1488</b>	<b>0.0749</b>	<b>2.2237</b>	<b>0.5763</b>	<b>0.0688</b>	<b>0.6451</b>		<b>2,736.9440</b>	<b>2,736.9440</b>	<b>0.0933</b>		<b>2,738.9022</b>

### 3.4 Building Construction - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>		<b>2,609.9390</b>	<b>2,609.9390</b>	<b>0.6387</b>		<b>2,623.3517</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6088	3.7756	9.6619	0.0114	0.3231	0.0569	0.3800	0.0920	0.0523	0.1443		1,098.4145	1,098.4145	8.4900e-003		1,098.5927
Worker	0.6582	0.8629	8.3087	0.0205	1.8257	0.0127	1.8384	0.4843	0.0118	0.4960		1,556.6429	1,556.6429	0.0778		1,558.2769
<b>Total</b>	<b>1.2670</b>	<b>4.6385</b>	<b>17.9705</b>	<b>0.0319</b>	<b>2.1488</b>	<b>0.0696</b>	<b>2.2184</b>	<b>0.5763</b>	<b>0.0641</b>	<b>0.6403</b>		<b>2,655.0574</b>	<b>2,655.0574</b>	<b>0.0863</b>		<b>2,656.8696</b>

### 3.4 Building Construction - 2018

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.4223	32.1144	34.0039	0.0268		2.3267	2.3267		2.3267	2.3267	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
<b>Total</b>	<b>5.4223</b>	<b>32.1144</b>	<b>34.0039</b>	<b>0.0268</b>		<b>2.3267</b>	<b>2.3267</b>		<b>2.3267</b>	<b>2.3267</b>	<b>0.0000</b>	<b>2,609.9389</b>	<b>2,609.9389</b>	<b>0.6387</b>		<b>2,623.3517</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6088	3.7756	9.6619	0.0114	0.3231	0.0569	0.3800	0.0920	0.0523	0.1443		1,098.4145	1,098.4145	8.4900e-003		1,098.5927
Worker	0.6582	0.8629	8.3087	0.0205	1.8257	0.0127	1.8384	0.4843	0.0118	0.4960		1,556.6429	1,556.6429	0.0778		1,558.2769
<b>Total</b>	<b>1.2670</b>	<b>4.6385</b>	<b>17.9705</b>	<b>0.0319</b>	<b>2.1488</b>	<b>0.0696</b>	<b>2.2184</b>	<b>0.5763</b>	<b>0.0641</b>	<b>0.6403</b>		<b>2,655.0574</b>	<b>2,655.0574</b>	<b>0.0863</b>		<b>2,656.8696</b>

### 3.5 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	9.9308					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
<b>Total</b>	<b>10.2631</b>	<b>2.1850</b>	<b>1.8681</b>	<b>2.9700e-003</b>		<b>0.1733</b>	<b>0.1733</b>		<b>0.1733</b>	<b>0.1733</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0297</b>		<b>282.0721</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1482	0.1917	1.8573	4.0900e-003	0.3651	2.5900e-003	0.3677	0.0969	2.3900e-003	0.0993		323.5670	323.5670	0.0169		323.9222
<b>Total</b>	<b>0.1482</b>	<b>0.1917</b>	<b>1.8573</b>	<b>4.0900e-003</b>	<b>0.3651</b>	<b>2.5900e-003</b>	<b>0.3677</b>	<b>0.0969</b>	<b>2.3900e-003</b>	<b>0.0993</b>		<b>323.5670</b>	<b>323.5670</b>	<b>0.0169</b>		<b>323.9222</b>

### 3.5 Architectural Coating - 2017

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.9308					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5893	3.2389	3.4172	2.9700e-003		0.2734	0.2734		0.2734	0.2734	0.0000	281.4481	281.4481	0.0297		282.0721
<b>Total</b>	<b>10.5202</b>	<b>3.2389</b>	<b>3.4172</b>	<b>2.9700e-003</b>		<b>0.2734</b>	<b>0.2734</b>		<b>0.2734</b>	<b>0.2734</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0297</b>		<b>282.0721</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1482	0.1917	1.8573	4.0900e-003	0.3651	2.5900e-003	0.3677	0.0969	2.3900e-003	0.0993		323.5670	323.5670	0.0169		323.9222
<b>Total</b>	<b>0.1482</b>	<b>0.1917</b>	<b>1.8573</b>	<b>4.0900e-003</b>	<b>0.3651</b>	<b>2.5900e-003</b>	<b>0.3677</b>	<b>0.0969</b>	<b>2.3900e-003</b>	<b>0.0993</b>		<b>323.5670</b>	<b>323.5670</b>	<b>0.0169</b>		<b>323.9222</b>

### 3.5 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	9.9308					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267			282.0102
<b>Total</b>	<b>10.2294</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>		<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>			<b>282.0102</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.1317	0.1726	1.6617	4.0900e-003	0.3651	2.5400e-003	0.3677	0.0969	2.3500e-003	0.0992		311.3286	311.3286	0.0156			311.6554
<b>Total</b>	<b>0.1317</b>	<b>0.1726</b>	<b>1.6617</b>	<b>4.0900e-003</b>	<b>0.3651</b>	<b>2.5400e-003</b>	<b>0.3677</b>	<b>0.0969</b>	<b>2.3500e-003</b>	<b>0.0992</b>		<b>311.3286</b>	<b>311.3286</b>	<b>0.0156</b>			<b>311.6554</b>

### 3.5 Architectural Coating - 2018

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.9308					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5893	3.2389	3.4172	2.9700e-003		0.2734	0.2734		0.2734	0.2734	0.0000	281.4485	281.4485	0.0267		282.0102
<b>Total</b>	<b>10.5202</b>	<b>3.2389</b>	<b>3.4172</b>	<b>2.9700e-003</b>		<b>0.2734</b>	<b>0.2734</b>		<b>0.2734</b>	<b>0.2734</b>	<b>0.0000</b>	<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.0102</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1317	0.1726	1.6617	4.0900e-003	0.3651	2.5400e-003	0.3677	0.0969	2.3500e-003	0.0992		311.3286	311.3286	0.0156		311.6554
<b>Total</b>	<b>0.1317</b>	<b>0.1726</b>	<b>1.6617</b>	<b>4.0900e-003</b>	<b>0.3651</b>	<b>2.5400e-003</b>	<b>0.3677</b>	<b>0.0969</b>	<b>2.3500e-003</b>	<b>0.0992</b>		<b>311.3286</b>	<b>311.3286</b>	<b>0.0156</b>		<b>311.6554</b>

### 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

- Increase Density
- Increase Diversity
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive 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	5.6829	11.1134	57.3125	0.1053	7.6969	0.1419	7.8388	2.0561	0.1308	2.1868		8,562.4223	8,562.4223	0.3633		8,570.0519
Unmitigated	6.0633	13.7011	66.5352	0.1354	10.0022	0.1793	10.1814	2.6719	0.1652	2.8371		11,015.6902	11,015.6902	0.4563		11,025.2729

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,656.00	1,656.00	1656.00	4,249,477	3,270,053
Parking Lot	0.00	0.00	0.00		
Research & Development	219.00	219.00	219.00	474,291	364,976
<b>Total</b>	<b>1,875.00</b>	<b>1,875.00</b>	<b>1,875.00</b>	<b>4,723,768</b>	<b>3,635,029</b>

### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3
Parking Lot	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0
Research & Development	10.00	5.00	6.50	33.00	48.00	19.00	82	15	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.504263	0.068212	0.178684	0.146863	0.044671	0.006294	0.020946	0.016568	0.002299	0.002275	0.006187	0.000564	0.002174

### 5.0 Energy Detail

#### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
NaturalGas Mitigated	0.0493	0.4253	0.2099	2.6900e-003		0.0341	0.0341		0.0341	0.0341		537.6420	537.6420	0.0103	9.8600e-003	540.9140
NaturalGas Unmitigated	0.0773	0.6663	0.3247	4.2100e-003		0.0534	0.0534		0.0534	0.0534		842.9430	842.9430	0.0162	0.0155	848.0730

### 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					
Research & Development	1014.52	0.0109	0.0995	0.0836	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3554	119.3554	2.2900e-003	2.1900e-003	120.0817
Apartments Mid Rise	6150.5	0.0663	0.5668	0.2412	3.6200e-003		0.0458	0.0458		0.0458	0.0458		723.5877	723.5877	0.0139	0.0133	727.9913
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0773</b>	<b>0.6663</b>	<b>0.3248</b>	<b>4.2200e-003</b>		<b>0.0534</b>	<b>0.0534</b>		<b>0.0534</b>	<b>0.0534</b>		<b>842.9430</b>	<b>842.9430</b>	<b>0.0162</b>	<b>0.0155</b>	<b>848.0731</b>

#### 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					
Research & Development	0.71111	7.6700e-003	0.0697	0.0586	4.2000e-004		5.3000e-003	5.3000e-003		5.3000e-003	5.3000e-003		83.6600	83.6600	1.6000e-003	1.5300e-003	84.1691
Apartments Mid Rise	3.85885	0.0416	0.3556	0.1513	2.2700e-003		0.0288	0.0288		0.0288	0.0288		453.9820	453.9820	8.7000e-003	8.3200e-003	456.7449
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0493</b>	<b>0.4253</b>	<b>0.2099</b>	<b>2.6900e-003</b>		<b>0.0341</b>	<b>0.0341</b>		<b>0.0341</b>	<b>0.0341</b>		<b>537.6420</b>	<b>537.6420</b>	<b>0.0103</b>	<b>9.8500e-003</b>	<b>540.9140</b>

### 6.0 Area Detail

### 6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.2402	0.2174	18.7411	9.8000e-004		0.1022	0.1022		0.1022	0.1022	0.0000	33.5236	33.5236	0.0334	0.0000	34.2250
Unmitigated	10.2402	0.2174	18.7411	9.8000e-004		0.1022	0.1022		0.1022	0.1022	0.0000	33.5236	33.5236	0.0334	0.0000	34.2250

### 6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.8298					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.8296					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.5808	0.2174	18.7411	9.8000e-004		0.1022	0.1022		0.1022	0.1022		33.5236	33.5236	0.0334		34.2250
<b>Total</b>	<b>10.2402</b>	<b>0.2174</b>	<b>18.7411</b>	<b>9.8000e-004</b>		<b>0.1022</b>	<b>0.1022</b>		<b>0.1022</b>	<b>0.1022</b>	<b>0.0000</b>	<b>33.5236</b>	<b>33.5236</b>	<b>0.0334</b>	<b>0.0000</b>	<b>34.2250</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.8298					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.8296					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.5808	0.2174	18.7411	9.8000e-004		0.1022	0.1022		0.1022	0.1022		33.5236	33.5236	0.0334		34.2250
<b>Total</b>	<b>10.2402</b>	<b>0.2174</b>	<b>18.7411</b>	<b>9.8000e-004</b>		<b>0.1022</b>	<b>0.1022</b>		<b>0.1022</b>	<b>0.1022</b>	<b>0.0000</b>	<b>33.5236</b>	<b>33.5236</b>	<b>0.0334</b>	<b>0.0000</b>	<b>34.2250</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Apply Water Conservation Strategy

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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



## The Crossings Student Housing Sacramento County, Annual

### 1.0 Project Characteristics

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#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	10.00	1000sqft	0.00	10,000.00	0
Parking Lot	444.00	Space	0.00	177,600.00	0
Apartments Mid Rise	225.00	Dwelling Unit	8.50	225,000.00	601

#### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	3.5	<b>Precipitation Freq (Days)</b>	58
<b>Climate Zone</b>	6			<b>Operational Year</b>	2018
<b>Utility Company</b>	Sacramento Municipal Utility District				
<b>CO2 Intensity (lb/MWhr)</b>	479.09	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

#### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity factor adjusted based on SMUD's anticipated progress towards statewide RPS goals

Land Use - according to site plan

Construction Phase - Customized per applicant

Energy Use - \*

Land Use Change -

Construction Off-road Equipment Mitigation - construction equipment would be minimum EPA Tier 1 engines according to applicant

Mobile Land Use Mitigation -

Area Mitigation - Low VOC per SMAQMD Regulations

Energy Mitigation -

Water Mitigation -

Grading - project site acreage = 8.5 acres

Vehicle Trips - based on transportation section of IS/MND

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1

tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstructionPhase	NumDays	20.00	305.00
tblConstructionPhase	NumDays	230.00	305.00
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	PhaseEndDate	6/21/2019	5/4/2018
tblConstructionPhase	PhaseStartDate	4/21/2018	3/5/2017
tblConstructionPhase	PhaseStartDate	2/18/2017	2/19/2017
tblGrading	AcresOfGrading	12.50	8.50
tblLandUse	LotAcreage	0.23	0.00
tblLandUse	LotAcreage	4.00	0.00
tblLandUse	LotAcreage	5.92	8.50
tblProjectCharacteristics	CO2IntensityFactor	590.31	479.09
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	7.16	7.36
tblVehicleTrips	ST_TR	1.90	21.90
tblVehicleTrips	SU_TR	6.07	7.36
tblVehicleTrips	SU_TR	1.11	21.90
tblVehicleTrips	WD_TR	6.59	7.36

tblVehicleTrips	WD_TR	8.11	21.90
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## 2.0 Emissions Summary

### 2.1 Overall Construction

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	1.6725	4.3363	4.7762	7.9500e-003	0.3532	0.2589	0.6121	0.1153	0.2435	0.3588	0.0000	660.6296	660.6296	0.0942	0.0000	662.6075
2018	0.6192	1.2070	1.4790	2.6900e-003	0.0989	0.0694	0.1683	0.0266	0.0656	0.0922	0.0000	217.4946	217.4946	0.0280	0.0000	218.0832
<b>Total</b>	<b>2.2917</b>	<b>5.5433</b>	<b>6.2552</b>	<b>0.0106</b>	<b>0.4521</b>	<b>0.3283</b>	<b>0.7804</b>	<b>0.1419</b>	<b>0.3091</b>	<b>0.4510</b>	<b>0.0000</b>	<b>878.1242</b>	<b>878.1242</b>	<b>0.1222</b>	<b>0.0000</b>	<b>880.6907</b>

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	1.9900	5.1703	7.0167	7.9500e-003	0.3093	0.3311	0.6404	0.0923	0.3304	0.4227	0.0000	660.6292	660.6292	0.0942	0.0000	662.6071
2018	0.7424	1.6166	2.2081	2.6900e-003	0.0989	0.1083	0.2072	0.0266	0.1080	0.1346	0.0000	217.4945	217.4945	0.0280	0.0000	218.0831
<b>Total</b>	<b>2.7324</b>	<b>6.7870</b>	<b>9.2248</b>	<b>0.0106</b>	<b>0.4082</b>	<b>0.4394</b>	<b>0.8476</b>	<b>0.1188</b>	<b>0.4384</b>	<b>0.5573</b>	<b>0.0000</b>	<b>878.1237</b>	<b>878.1237</b>	<b>0.1222</b>	<b>0.0000</b>	<b>880.6902</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	-19.23	-22.44	-47.48	0.00	9.71	-33.84	-8.61	16.24	-41.84	-23.58	0.00	0.00	0.00	0.00	0.00	0.00

## 2.2 Overall Operational

### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.8355	0.0272	2.3426	1.2000e-004		0.0128	0.0128		0.0128	0.0128	0.0000	3.8015	3.8015	3.7900e-003	0.0000	3.8811
Energy	0.0141	0.1216	0.0593	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	386.4302	386.4302	0.0176	5.6500e-003	388.5518
Mobile	1.0504	2.3589	11.0135	0.0252	1.7584	0.0325	1.7908	0.4711	0.0299	0.5010	0.0000	1,857.4225	1,857.4225	0.0752	0.0000	1,859.0021
Waste						0.0000	0.0000		0.0000	0.0000	21.1638	0.0000	21.1638	1.2508	0.0000	47.4295
Water						0.0000	0.0000		0.0000	0.0000	6.9262	28.2264	35.1527	0.0256	0.0154	40.4681
<b>Total</b>	<b>2.8999</b>	<b>2.5076</b>	<b>13.4154</b>	<b>0.0261</b>	<b>1.7584</b>	<b>0.0550</b>	<b>1.8134</b>	<b>0.4711</b>	<b>0.0524</b>	<b>0.5235</b>	<b>28.0901</b>	<b>2,275.8807</b>	<b>2,303.9708</b>	<b>1.3729</b>	<b>0.0211</b>	<b>2,339.3325</b>

## 2.2 Overall Operational

### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.8355	0.0272	2.3426	1.2000e-004		0.0128	0.0128		0.0128	0.0128	0.0000	3.8015	3.8015	3.7900e-003	0.0000	3.8811
Energy	8.9900e-003	0.0776	0.0383	4.9000e-004		6.2100e-003	6.2100e-003		6.2100e-003	6.2100e-003	0.0000	324.7109	324.7109	0.0160	4.5800e-003	326.4673
Mobile	0.9810	1.9144	9.2937	0.0196	1.3531	0.0257	1.3788	0.3625	0.0237	0.3862	0.0000	1,443.7408	1,443.7408	0.0599	0.0000	1,444.9983
Waste						0.0000	0.0000		0.0000	0.0000	21.1638	0.0000	21.1638	1.2508	0.0000	47.4295
Water						0.0000	0.0000		0.0000	0.0000	4.8484	22.9179	27.7663	0.0181	0.0108	31.5034
<b>Total</b>	<b>2.8255</b>	<b>2.0192</b>	<b>11.6747</b>	<b>0.0202</b>	<b>1.3531</b>	<b>0.0447</b>	<b>1.3978</b>	<b>0.3625</b>	<b>0.0426</b>	<b>0.4051</b>	<b>26.0122</b>	<b>1,795.1712</b>	<b>1,821.1834</b>	<b>1.3485</b>	<b>0.0154</b>	<b>1,854.2795</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>2.57</b>	<b>19.48</b>	<b>12.98</b>	<b>22.56</b>	<b>23.05</b>	<b>18.77</b>	<b>22.92</b>	<b>23.05</b>	<b>18.67</b>	<b>22.61</b>	<b>7.40</b>	<b>21.12</b>	<b>20.95</b>	<b>1.78</b>	<b>26.86</b>	<b>20.73</b>

## 3.0 Construction Detail

### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2017	2/3/2017	5	25	
2	Paving	Paving	2/4/2017	2/17/2017	5	10	
3	Building Construction	Building Construction	2/19/2017	4/20/2018	5	305	
4	Architectural Coating	Architectural Coating	3/5/2017	5/4/2018	5	305	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 8.5**

**Acres of Paving: 0**

**Residential Indoor: 455,625; Residential Outdoor: 151,875; Non-Residential Indoor: 22,992; Non-Residential Outdoor: 7,664 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
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
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
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	240.00	55.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	48.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

**3.2 Grading - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0798	0.0000	0.0798	0.0419	0.0000	0.0419	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0432	0.4498	0.3173	3.7000e-004		0.0255	0.0255		0.0235	0.0235	0.0000	34.5146	34.5146	0.0106	0.0000	34.7367
<b>Total</b>	<b>0.0432</b>	<b>0.4498</b>	<b>0.3173</b>	<b>3.7000e-004</b>	<b>0.0798</b>	<b>0.0255</b>	<b>0.1053</b>	<b>0.0419</b>	<b>0.0235</b>	<b>0.0653</b>	<b>0.0000</b>	<b>34.5146</b>	<b>34.5146</b>	<b>0.0106</b>	<b>0.0000</b>	<b>34.7367</b>

### 3.2 Grading - 2017

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	6.7000e-004	7.0100e-003	2.0000e-005	1.3800e-003	1.0000e-005	1.3900e-003	3.7000e-004	1.0000e-005	3.8000e-004	0.0000	1.1804	1.1804	6.0000e-005	0.0000	1.1816
<b>Total</b>	<b>5.6000e-004</b>	<b>6.7000e-004</b>	<b>7.0100e-003</b>	<b>2.0000e-005</b>	<b>1.3800e-003</b>	<b>1.0000e-005</b>	<b>1.3900e-003</b>	<b>3.7000e-004</b>	<b>1.0000e-005</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>1.1804</b>	<b>1.1804</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>1.1816</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0359	0.0000	0.0359	0.0188	0.0000	0.0188	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0608	0.4802	0.5211	3.7000e-004		0.0236	0.0236		0.0236	0.0236	0.0000	34.5146	34.5146	0.0106	0.0000	34.7366
<b>Total</b>	<b>0.0608</b>	<b>0.4802</b>	<b>0.5211</b>	<b>3.7000e-004</b>	<b>0.0359</b>	<b>0.0236</b>	<b>0.0595</b>	<b>0.0188</b>	<b>0.0236</b>	<b>0.0424</b>	<b>0.0000</b>	<b>34.5146</b>	<b>34.5146</b>	<b>0.0106</b>	<b>0.0000</b>	<b>34.7366</b>

### 3.2 Grading - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	6.7000e-004	7.0100e-003	2.0000e-005	1.3800e-003	1.0000e-005	1.3900e-003	3.7000e-004	1.0000e-005	3.8000e-004	0.0000	1.1804	1.1804	6.0000e-005	0.0000	1.1816
<b>Total</b>	<b>5.6000e-004</b>	<b>6.7000e-004</b>	<b>7.0100e-003</b>	<b>2.0000e-005</b>	<b>1.3800e-003</b>	<b>1.0000e-005</b>	<b>1.3900e-003</b>	<b>3.7000e-004</b>	<b>1.0000e-005</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>1.1804</b>	<b>1.1804</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>1.1816</b>

### 3.3 Paving - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.5400e-003	0.1015	0.0736	1.1000e-004		5.6900e-003	5.6900e-003		5.2400e-003	5.2400e-003	0.0000	10.3467	10.3467	3.1700e-003	0.0000	10.4133
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>9.5400e-003</b>	<b>0.1015</b>	<b>0.0736</b>	<b>1.1000e-004</b>		<b>5.6900e-003</b>	<b>5.6900e-003</b>		<b>5.2400e-003</b>	<b>5.2400e-003</b>	<b>0.0000</b>	<b>10.3467</b>	<b>10.3467</b>	<b>3.1700e-003</b>	<b>0.0000</b>	<b>10.4133</b>

### 3.3 Paving - 2017

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	2.7000e-004	2.8100e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4721	0.4721	2.0000e-005	0.0000	0.4727
<b>Total</b>	<b>2.2000e-004</b>	<b>2.7000e-004</b>	<b>2.8100e-003</b>	<b>1.0000e-005</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>5.5000e-004</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>0.4721</b>	<b>0.4721</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.4727</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0207	0.1496	0.1578	1.1000e-004		7.7600e-003	7.7600e-003		7.7600e-003	7.7600e-003	0.0000	10.3467	10.3467	3.1700e-003	0.0000	10.4133
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0207</b>	<b>0.1496</b>	<b>0.1578</b>	<b>1.1000e-004</b>		<b>7.7600e-003</b>	<b>7.7600e-003</b>		<b>7.7600e-003</b>	<b>7.7600e-003</b>	<b>0.0000</b>	<b>10.3467</b>	<b>10.3467</b>	<b>3.1700e-003</b>	<b>0.0000</b>	<b>10.4133</b>

### 3.3 Paving - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	2.7000e-004	2.8100e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4721	0.4721	2.0000e-005	0.0000	0.4727
<b>Total</b>	<b>2.2000e-004</b>	<b>2.7000e-004</b>	<b>2.8100e-003</b>	<b>1.0000e-005</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>5.5000e-004</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>0.4721</b>	<b>0.4721</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.4727</b>

### 3.4 Building Construction - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3490	2.9706	2.0395	3.0200e-003		0.2004	0.2004		0.1882	0.1882	0.0000	269.4140	269.4140	0.0663	0.0000	270.8065
<b>Total</b>	<b>0.3490</b>	<b>2.9706</b>	<b>2.0395</b>	<b>3.0200e-003</b>		<b>0.2004</b>	<b>0.2004</b>		<b>0.1882</b>	<b>0.1882</b>	<b>0.0000</b>	<b>269.4140</b>	<b>269.4140</b>	<b>0.0663</b>	<b>0.0000</b>	<b>270.8065</b>

### 3.4 Building Construction - 2017

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0711	0.4637	0.9323	1.2900e-003	0.0353	6.9100e-003	0.0422	0.0101	6.3400e-003	0.0164	0.0000	114.7989	114.7989	8.7000e-004	0.0000	114.8172
Worker	0.0803	0.0965	1.0099	2.3700e-003	0.1983	1.4600e-003	0.1998	0.0527	1.3500e-003	0.0541	0.0000	169.9719	169.9719	8.6300e-003	0.0000	170.1531
<b>Total</b>	<b>0.1514</b>	<b>0.5601</b>	<b>1.9421</b>	<b>3.6600e-003</b>	<b>0.2336</b>	<b>8.3700e-003</b>	<b>0.2420</b>	<b>0.0628</b>	<b>7.6900e-003</b>	<b>0.0705</b>	<b>0.0000</b>	<b>284.7708</b>	<b>284.7708</b>	<b>9.5000e-003</b>	<b>0.0000</b>	<b>284.9703</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.6100	3.6129	3.8254	3.0200e-003		0.2618	0.2618		0.2618	0.2618	0.0000	269.4137	269.4137	0.0663	0.0000	270.8061
<b>Total</b>	<b>0.6100</b>	<b>3.6129</b>	<b>3.8254</b>	<b>3.0200e-003</b>		<b>0.2618</b>	<b>0.2618</b>		<b>0.2618</b>	<b>0.2618</b>	<b>0.0000</b>	<b>269.4137</b>	<b>269.4137</b>	<b>0.0663</b>	<b>0.0000</b>	<b>270.8061</b>

### 3.4 Building Construction - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0711	0.4637	0.9323	1.2900e-003	0.0353	6.9100e-003	0.0422	0.0101	6.3400e-003	0.0164	0.0000	114.7989	114.7989	8.7000e-004	0.0000	114.8172
Worker	0.0803	0.0965	1.0099	2.3700e-003	0.1983	1.4600e-003	0.1998	0.0527	1.3500e-003	0.0541	0.0000	169.9719	169.9719	8.6300e-003	0.0000	170.1531
<b>Total</b>	<b>0.1514</b>	<b>0.5601</b>	<b>1.9421</b>	<b>3.6600e-003</b>	<b>0.2336</b>	<b>8.3700e-003</b>	<b>0.2420</b>	<b>0.0628</b>	<b>7.6900e-003</b>	<b>0.0705</b>	<b>0.0000</b>	<b>284.7708</b>	<b>284.7708</b>	<b>9.5000e-003</b>	<b>0.0000</b>	<b>284.9703</b>

### 3.4 Building Construction - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1068	0.9304	0.7013	1.0700e-003		0.0598	0.0598		0.0562	0.0562	0.0000	94.7079	94.7079	0.0232	0.0000	95.1946
<b>Total</b>	<b>0.1068</b>	<b>0.9304</b>	<b>0.7013</b>	<b>1.0700e-003</b>		<b>0.0598</b>	<b>0.0598</b>		<b>0.0562</b>	<b>0.0562</b>	<b>0.0000</b>	<b>94.7079</b>	<b>94.7079</b>	<b>0.0232</b>	<b>0.0000</b>	<b>95.1946</b>

### 3.4 Building Construction - 2018

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0209	0.1485	0.2990	4.6000e-004	0.0126	2.2600e-003	0.0148	3.5900e-003	2.0700e-003	5.6600e-003	0.0000	40.0634	40.0634	3.0000e-004	0.0000	40.0698
Worker	0.0255	0.0309	0.3226	8.4000e-004	0.0705	5.1000e-004	0.0710	0.0188	4.7000e-004	0.0192	0.0000	58.1499	58.1499	2.8200e-003	0.0000	58.2092
<b>Total</b>	<b>0.0464</b>	<b>0.1794</b>	<b>0.6216</b>	<b>1.3000e-003</b>	<b>0.0831</b>	<b>2.7700e-003</b>	<b>0.0858</b>	<b>0.0223</b>	<b>2.5400e-003</b>	<b>0.0249</b>	<b>0.0000</b>	<b>98.2133</b>	<b>98.2133</b>	<b>3.1200e-003</b>	<b>0.0000</b>	<b>98.2790</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2169	1.2846	1.3602	1.0700e-003		0.0931	0.0931		0.0931	0.0931	0.0000	94.7078	94.7078	0.0232	0.0000	95.1945
<b>Total</b>	<b>0.2169</b>	<b>1.2846</b>	<b>1.3602</b>	<b>1.0700e-003</b>		<b>0.0931</b>	<b>0.0931</b>		<b>0.0931</b>	<b>0.0931</b>	<b>0.0000</b>	<b>94.7078</b>	<b>94.7078</b>	<b>0.0232</b>	<b>0.0000</b>	<b>95.1945</b>

### 3.4 Building Construction - 2018

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0209	0.1485	0.2990	4.6000e-004	0.0126	2.2600e-003	0.0148	3.5900e-003	2.0700e-003	5.6600e-003	0.0000	40.0634	40.0634	3.0000e-004	0.0000	40.0698
Worker	0.0255	0.0309	0.3226	8.4000e-004	0.0705	5.1000e-004	0.0710	0.0188	4.7000e-004	0.0192	0.0000	58.1499	58.1499	2.8200e-003	0.0000	58.2092
<b>Total</b>	<b>0.0464</b>	<b>0.1794</b>	<b>0.6216</b>	<b>1.3000e-003</b>	<b>0.0831</b>	<b>2.7700e-003</b>	<b>0.0858</b>	<b>0.0223</b>	<b>2.5400e-003</b>	<b>0.0249</b>	<b>0.0000</b>	<b>98.2133</b>	<b>98.2133</b>	<b>3.1200e-003</b>	<b>0.0000</b>	<b>98.2790</b>

### 3.5 Architectural Coating - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0676					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	0.0357	0.2349	0.2008	3.2000e-004		0.0186	0.0186		0.0186	0.0186	0.0000	27.4475	27.4475	2.9000e-003	0.0000	27.5083
<b>Total</b>	<b>1.1033</b>	<b>0.2349</b>	<b>0.2008</b>	<b>3.2000e-004</b>		<b>0.0186</b>	<b>0.0186</b>		<b>0.0186</b>	<b>0.0186</b>	<b>0.0000</b>	<b>27.4475</b>	<b>27.4475</b>	<b>2.9000e-003</b>	<b>0.0000</b>	<b>27.5083</b>

### 3.5 Architectural Coating - 2017

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0154	0.0184	0.1930	4.5000e-004	0.0379	2.8000e-004	0.0382	0.0101	2.6000e-004	0.0103	0.0000	32.4835	32.4835	1.6500e-003	0.0000	32.5182	
<b>Total</b>	<b>0.0154</b>	<b>0.0184</b>	<b>0.1930</b>	<b>4.5000e-004</b>	<b>0.0379</b>	<b>2.8000e-004</b>	<b>0.0382</b>	<b>0.0101</b>	<b>2.6000e-004</b>	<b>0.0103</b>	<b>0.0000</b>	<b>32.4835</b>	<b>32.4835</b>	<b>1.6500e-003</b>	<b>0.0000</b>	<b>32.5182</b>	

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0676					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0634	0.3482	0.3674	3.2000e-004		0.0294	0.0294		0.0294	0.0294	0.0000	27.4475	27.4475	2.9000e-003	0.0000	27.5083
<b>Total</b>	<b>1.1309</b>	<b>0.3482</b>	<b>0.3674</b>	<b>3.2000e-004</b>		<b>0.0294</b>	<b>0.0294</b>		<b>0.0294</b>	<b>0.0294</b>	<b>0.0000</b>	<b>27.4475</b>	<b>27.4475</b>	<b>2.9000e-003</b>	<b>0.0000</b>	<b>27.5083</b>

### 3.5 Architectural Coating - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0154	0.0184	0.1930	4.5000e-004	0.0379	2.8000e-004	0.0382	0.0101	2.6000e-004	0.0103	0.0000	32.4835	32.4835	1.6500e-003	0.0000	32.5182
<b>Total</b>	<b>0.0154</b>	<b>0.0184</b>	<b>0.1930</b>	<b>4.5000e-004</b>	<b>0.0379</b>	<b>2.8000e-004</b>	<b>0.0382</b>	<b>0.0101</b>	<b>2.6000e-004</b>	<b>0.0103</b>	<b>0.0000</b>	<b>32.4835</b>	<b>32.4835</b>	<b>1.6500e-003</b>	<b>0.0000</b>	<b>32.5182</b>

### 3.5 Architectural Coating - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4469					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0134	0.0903	0.0834	1.3000e-004		6.7700e-003	6.7700e-003		6.7700e-003	6.7700e-003	0.0000	11.4897	11.4897	1.0900e-003	0.0000	11.5126
<b>Total</b>	<b>0.4603</b>	<b>0.0903</b>	<b>0.0834</b>	<b>1.3000e-004</b>		<b>6.7700e-003</b>	<b>6.7700e-003</b>		<b>6.7700e-003</b>	<b>6.7700e-003</b>	<b>0.0000</b>	<b>11.4897</b>	<b>11.4897</b>	<b>1.0900e-003</b>	<b>0.0000</b>	<b>11.5126</b>

### 3.5 Architectural Coating - 2018

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7300e-003	6.9400e-003	0.0726	1.9000e-004	0.0159	1.1000e-004	0.0160	4.2200e-003	1.1000e-004	4.3300e-003	0.0000	13.0837	13.0837	6.4000e-004	0.0000	13.0971	
<b>Total</b>	<b>5.7300e-003</b>	<b>6.9400e-003</b>	<b>0.0726</b>	<b>1.9000e-004</b>	<b>0.0159</b>	<b>1.1000e-004</b>	<b>0.0160</b>	<b>4.2200e-003</b>	<b>1.1000e-004</b>	<b>4.3300e-003</b>	<b>0.0000</b>	<b>13.0837</b>	<b>13.0837</b>	<b>6.4000e-004</b>	<b>0.0000</b>	<b>13.0971</b>	

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4469					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0265	0.1458	0.1538	1.3000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	11.4897	11.4897	1.0900e-003	0.0000	11.5126
<b>Total</b>	<b>0.4734</b>	<b>0.1458</b>	<b>0.1538</b>	<b>1.3000e-004</b>		<b>0.0123</b>	<b>0.0123</b>		<b>0.0123</b>	<b>0.0123</b>	<b>0.0000</b>	<b>11.4897</b>	<b>11.4897</b>	<b>1.0900e-003</b>	<b>0.0000</b>	<b>11.5126</b>

### 3.5 Architectural Coating - 2018

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7300e-003	6.9400e-003	0.0726	1.9000e-004	0.0159	1.1000e-004	0.0160	4.2200e-003	1.1000e-004	4.3300e-003	0.0000	13.0837	13.0837	6.4000e-004	0.0000	13.0971
<b>Total</b>	<b>5.7300e-003</b>	<b>6.9400e-003</b>	<b>0.0726</b>	<b>1.9000e-004</b>	<b>0.0159</b>	<b>1.1000e-004</b>	<b>0.0160</b>	<b>4.2200e-003</b>	<b>1.1000e-004</b>	<b>4.3300e-003</b>	<b>0.0000</b>	<b>13.0837</b>	<b>13.0837</b>	<b>6.4000e-004</b>	<b>0.0000</b>	<b>13.0971</b>

### 4.0 Operational Detail - Mobile

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#### 4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9810	1.9144	9.2937	0.0196	1.3531	0.0257	1.3788	0.3625	0.0237	0.3862	0.0000	1,443.7408	1,443.7408	0.0599	0.0000	1,444.9983
Unmitigated	1.0504	2.3589	11.0135	0.0252	1.7584	0.0325	1.7908	0.4711	0.0299	0.5010	0.0000	1,857.4225	1,857.4225	0.0752	0.0000	1,859.0021

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,656.00	1,656.00	1656.00	4,249,477	3,270,053
Parking Lot	0.00	0.00	0.00		
Research & Development	219.00	219.00	219.00	474,291	364,976
<b>Total</b>	<b>1,875.00</b>	<b>1,875.00</b>	<b>1,875.00</b>	<b>4,723,768</b>	<b>3,635,029</b>

### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3
Parking Lot	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0
Research & Development	10.00	5.00	6.50	33.00	48.00	19.00	82	15	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.504263	0.068212	0.178684	0.146863	0.044671	0.006294	0.020946	0.016568	0.002299	0.002275	0.006187	0.000564	0.002174

### 5.0 Energy Detail

#### 4.4 Fleet Mix

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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	235.6982	235.6982	0.0143	2.9500e-003	236.9129
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	246.8715	246.8715	0.0149	3.0900e-003	248.1438
NaturalGas Mitigated	8.9900e-003	0.0776	0.0383	4.9000e-004		6.2100e-003	6.2100e-003		6.2100e-003	6.2100e-003	0.0000	89.0127	89.0127	1.7100e-003	1.6300e-003	89.5544
NaturalGas Unmitigated	0.0141	0.1216	0.0593	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5587	139.5587	2.6700e-003	2.5600e-003	140.4080

### 5.2 Energy by Land Use - NaturalGas

#### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	370300	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	19.7606	19.7606	3.8000e-004	3.6000e-004	19.8809	
Apartments Mid Rise	2.24493e+006	0.0121	0.1034	0.0440	6.6000e-004		8.3600e-003	8.3600e-003		8.3600e-003	8.3600e-003	0.0000	119.7981	119.7981	2.3000e-003	2.2000e-003	120.5271	
<b>Total</b>		<b>0.0141</b>	<b>0.1216</b>	<b>0.0593</b>	<b>7.7000e-004</b>		<b>9.7400e-003</b>	<b>9.7400e-003</b>		<b>9.7400e-003</b>	<b>9.7400e-003</b>	<b>0.0000</b>	<b>139.5587</b>	<b>139.5587</b>	<b>2.6800e-003</b>	<b>2.5600e-003</b>	<b>140.4080</b>	

#### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Research & Development	259555	1.4000e-003	0.0127	0.0107	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	13.8508	13.8508	2.7000e-004	2.5000e-004	13.9351
Apartments Mid Rise	1.40848e+006	7.5900e-003	0.0649	0.0276	4.1000e-004		5.2500e-003	5.2500e-003		5.2500e-003	5.2500e-003	0.0000	75.1618	75.1618	1.4400e-003	1.3800e-003	75.6192
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>8.9900e-003</b>	<b>0.0776</b>	<b>0.0383</b>	<b>4.9000e-004</b>		<b>6.2200e-003</b>	<b>6.2200e-003</b>		<b>6.2200e-003</b>	<b>6.2200e-003</b>	<b>0.0000</b>	<b>89.0127</b>	<b>89.0127</b>	<b>1.7100e-003</b>	<b>1.6300e-003</b>	<b>89.5544</b>

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	814138	176.9216	0.0107	2.2200e-003	177.8333
Parking Lot	156288	33.9632	2.0600e-003	4.3000e-004	34.1382
Research & Development	165600	35.9868	2.1800e-003	4.5000e-004	36.1723
<b>Total</b>		<b>246.8715</b>	<b>0.0150</b>	<b>3.1000e-003</b>	<b>248.1438</b>

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	781487	169.8261	0.0103	2.1300e-003	170.7013
Parking Lot	156288	33.9632	2.0600e-003	4.3000e-004	34.1382
Research & Development	146835	31.9089	1.9300e-003	4.0000e-004	32.0734
<b>Total</b>		<b>235.6982</b>	<b>0.0143</b>	<b>2.9600e-003</b>	<b>236.9129</b>

### 6.0 Area Detail

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### 6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.8355	0.0272	2.3426	1.2000e-004		0.0128	0.0128		0.0128	0.0128	0.0000	3.8015	3.8015	3.7900e-003	0.0000	3.8811
Unmitigated	1.8355	0.0272	2.3426	1.2000e-004		0.0128	0.0128		0.0128	0.0128	0.0000	3.8015	3.8015	3.7900e-003	0.0000	3.8811

### 6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1514					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.6114					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0726	0.0272	2.3426	1.2000e-004		0.0128	0.0128		0.0128	0.0128	0.0000	3.8015	3.8015	3.7900e-003	0.0000	3.8811
<b>Total</b>	<b>1.8354</b>	<b>0.0272</b>	<b>2.3426</b>	<b>1.2000e-004</b>		<b>0.0128</b>	<b>0.0128</b>		<b>0.0128</b>	<b>0.0128</b>	<b>0.0000</b>	<b>3.8015</b>	<b>3.8015</b>	<b>3.7900e-003</b>	<b>0.0000</b>	<b>3.8811</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1514					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.6114					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0726	0.0272	2.3426	1.2000e-004		0.0128	0.0128		0.0128	0.0128	0.0000	3.8015	3.8015	3.7900e-003	0.0000	3.8811
<b>Total</b>	<b>1.8354</b>	<b>0.0272</b>	<b>2.3426</b>	<b>1.2000e-004</b>		<b>0.0128</b>	<b>0.0128</b>		<b>0.0128</b>	<b>0.0128</b>	<b>0.0000</b>	<b>3.8015</b>	<b>3.8015</b>	<b>3.7900e-003</b>	<b>0.0000</b>	<b>3.8811</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	27.7663	0.0181	0.0108	31.5034
Unmitigated	35.1527	0.0256	0.0154	40.4681

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	14.6597 / 9.24196	28.0891	0.0192	0.0116	32.0786
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	4.91694 / 0	7.0636	6.3100e-003	3.8500e-003	8.3895
<b>Total</b>		<b>35.1527</b>	<b>0.0256</b>	<b>0.0154</b>	<b>40.4681</b>

## 7.2 Water by Land Use

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	10.2618 / 9.24196	22.5579	0.0136	8.1300e-003	25.3655
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	3.44186 / 0	5.2084	4.4300e-003	2.7000e-003	6.1379
<b>Total</b>		<b>27.7663</b>	<b>0.0181</b>	<b>0.0108</b>	<b>31.5033</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

#### Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	21.1638	1.2508	0.0000	47.4295
Unmitigated	21.1638	1.2508	0.0000	47.4295

## 8.2 Waste by Land Use

### Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	103.5	21.0096	1.2416	0.0000	47.0838
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Research & Development	0.76	0.1543	9.1200e-003	0.0000	0.3457
<b>Total</b>		<b>21.1638</b>	<b>1.2508</b>	<b>0.0000</b>	<b>47.4295</b>

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	103.5	21.0096	1.2416	0.0000	47.0838
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Research & Development	0.76	0.1543	9.1200e-003	0.0000	0.3457
<b>Total</b>		<b>21.1638</b>	<b>1.2508</b>	<b>0.0000</b>	<b>47.4295</b>

## 9.0 Operational Offroad

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

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## The Crossings Student Housing Sacramento County, Mitigation Report

### Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	-0.03	-0.48	-0.43	0.00	-0.63	-0.63	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	-0.57	-0.21	-0.46	0.00	-0.35	-0.43	0.00	0.00	0.00	0.00	0.00	0.00
Grading	-0.40	-0.07	-0.63	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	-1.15	-0.47	-1.10	0.00	-0.36	-0.48	0.00	0.00	0.00	0.00	0.00	0.00

### OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	Tier 1	1	1	No Change	0.00
Cranes	Diesel	Tier 1	1	1	No Change	0.00
Excavators	Diesel	Tier 1	1	1	No Change	0.00
Forklifts	Diesel	Tier 1	3	3	No Change	0.00
Generator Sets	Diesel	Tier 1	1	1	No Change	0.00
Graders	Diesel	Tier 1	1	1	No Change	0.00
Pavers	Diesel	Tier 1	2	2	No Change	0.00
Paving Equipment	Diesel	Tier 1	2	2	No Change	0.00
Rollers	Diesel	Tier 1	2	2	No Change	0.00
Rubber Tired Dozers	Diesel	Tier 1	1	1	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	Tier 1	6	6	No Change	0.00
Welders	Diesel	Tier 1	1	1	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	4.91600E-002	3.25150E-001	2.84260E-001	4.50000E-004	2.54100E-002	2.54100E-002	0.00000E+000	3.89371E+001	3.89371E+001	3.99000E-003	0.00000E+000	3.90209E+001
Cranes	8.33300E-002	9.90840E-001	3.57680E-001	7.50000E-004	4.38700E-002	4.03600E-002	0.00000E+000	6.95837E+001	6.95837E+001	2.14100E-002	0.00000E+000	7.00333E+001
Excavators	4.53000E-003	5.02100E-002	4.27600E-002	7.00000E-005	2.47000E-003	2.27000E-003	0.00000E+000	6.13781E+000	6.13781E+000	1.88000E-003	0.00000E+000	6.17730E+000
Forklifts	9.25700E-002	8.05350E-001	5.66920E-001	7.00000E-004	6.59300E-002	6.06600E-002	0.00000E+000	6.45829E+001	6.45829E+001	1.98700E-002	0.00000E+000	6.50002E+001
Generator Sets	8.43500E-002	6.66760E-001	5.74410E-001	1.00000E-003	4.42700E-002	4.42700E-002	0.00000E+000	8.61941E+001	8.61941E+001	6.78000E-003	0.00000E+000	8.63365E+001
Graders	1.19100E-002	1.20520E-001	6.04800E-002	8.00000E-005	6.77000E-003	6.23000E-003	0.00000E+000	7.23028E+000	7.23028E+000	2.22000E-003	0.00000E+000	7.27680E+000
Pavers	3.60000E-003	4.03100E-002	2.83600E-002	5.00000E-005	1.98000E-003	1.82000E-003	0.00000E+000	4.19132E+000	4.19132E+000	1.28000E-003	0.00000E+000	4.21829E+000
Paving Equipment	2.83000E-003	3.21600E-002	2.53700E-002	4.00000E-005	1.61000E-003	1.48000E-003	0.00000E+000	3.72264E+000	3.72264E+000	1.14000E-003	0.00000E+000	3.74660E+000
Rollers	3.11000E-003	2.90100E-002	1.99100E-002	3.00000E-005	2.10000E-003	1.93000E-003	0.00000E+000	2.43274E+000	2.43274E+000	7.50000E-004	0.00000E+000	2.44839E+000
Rubber Tired Dozers	1.48800E-002	1.64910E-001	1.24260E-001	1.10000E-004	7.66000E-003	7.05000E-003	0.00000E+000	1.03193E+001	1.03193E+001	3.16000E-003	0.00000E+000	1.03857E+001
Tractors/Loaders/Backhoes	1.33370E-001	1.28916E+000	1.04206E+000	1.36000E-003	9.57500E-002	8.80900E-002	0.00000E+000	1.25885E+002	1.25885E+002	3.87200E-002	0.00000E+000	1.26698E+002
Welders	7.40200E-002	2.63110E-001	2.89540E-001	3.90000E-004	1.89200E-002	1.89200E-002	0.00000E+000	2.87037E+001	2.87037E+001	6.03000E-003	0.00000E+000	2.88302E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated tons/yr							Mitigated mt/yr					
Air Compressors	8.98700E-002	4.93930E-001	5.21120E-001	4.50000E-004	4.16900E-002	4.16900E-002	0.00000E+000	3.89371E+001	3.89371E+001	3.99000E-003	0.00000E+000	3.90209E+001
Cranes	5.86100E-002	9.14670E-001	1.06428E+000	7.50000E-004	1.66600E-002	1.66600E-002	0.00000E+000	6.95837E+001	6.95837E+001	2.14100E-002	0.00000E+000	7.00333E+001
Excavators	1.11300E-002	8.87600E-002	9.36400E-002	7.00000E-005	3.72000E-003	3.72000E-003	0.00000E+000	6.13780E+000	6.13780E+000	1.88000E-003	0.00000E+000	6.17729E+000
Forklifts	1.70920E-001	9.39320E-001	9.91020E-001	7.00000E-004	7.92800E-002	7.92800E-002	0.00000E+000	6.45829E+001	6.45829E+001	1.98700E-002	0.00000E+000	6.50001E+001
Generator Sets	1.98950E-001	1.09341E+000	1.15360E+000	1.00000E-003	9.22900E-002	9.22900E-002	0.00000E+000	8.61940E+001	8.61940E+001	6.78000E-003	0.00000E+000	8.63364E+001
Graders	1.29000E-002	1.02860E-001	1.08520E-001	8.00000E-005	4.31000E-003	4.31000E-003	0.00000E+000	7.23027E+000	7.23027E+000	2.22000E-003	0.00000E+000	7.27679E+000
Pavers	7.59000E-003	6.05600E-002	6.38900E-002	5.00000E-005	2.54000E-003	2.54000E-003	0.00000E+000	4.19132E+000	4.19132E+000	1.28000E-003	0.00000E+000	4.21829E+000
Paving Equipment	6.77000E-003	5.39800E-002	5.69500E-002	4.00000E-005	2.26000E-003	2.26000E-003	0.00000E+000	3.72264E+000	3.72264E+000	1.14000E-003	0.00000E+000	3.74659E+000
Rollers	6.38000E-003	3.50700E-002	3.70000E-002	3.00000E-005	2.96000E-003	2.96000E-003	0.00000E+000	2.43274E+000	2.43274E+000	7.50000E-004	0.00000E+000	2.44839E+000
Rubber Tired Dozers	8.55000E-003	1.33350E-001	1.55160E-001	1.10000E-004	2.43000E-003	2.43000E-003	0.00000E+000	1.03193E+001	1.03193E+001	3.16000E-003	0.00000E+000	1.03857E+001
Tractors/Loaders/Balckhoes	3.29790E-001	1.81244E+000	1.91220E+000	1.36000E-003	1.52980E-001	1.52980E-001	0.00000E+000	1.25884E+002	1.25884E+002	3.87200E-002	0.00000E+000	1.26698E+002
Welders	9.68800E-002	2.92850E-001	2.28270E-001	3.90000E-004	2.67200E-002	2.67200E-002	0.00000E+000	2.87036E+001	2.87036E+001	6.03000E-003	0.00000E+000	2.88302E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	-8.28112E-001	-5.19083E-001	-8.33251E-001	0.00000E+000	-6.40693E-001	-6.40693E-001	0.00000E+000	1.28412E-006	1.28412E-006	0.00000E+000	0.00000E+000	1.02509E-006
Cranes	2.96652E-001	7.68742E-002	-1.97551E+000	0.00000E+000	6.20242E-001	5.87215E-001	0.00000E+000	1.14969E-006	1.14969E-006	0.00000E+000	0.00000E+000	1.14231E-006
Excavators	-1.45695E+000	-7.67775E-001	-1.18990E+000	0.00000E+000	-5.06073E-001	-6.38767E-001	0.00000E+000	1.62925E-006	1.62925E-006	0.00000E+000	0.00000E+000	1.61883E-006
Forklifts	-8.46387E-001	-1.66350E-001	-7.48077E-001	0.00000E+000	-2.02487E-001	-3.06957E-001	0.00000E+000	1.23872E-006	1.23872E-006	0.00000E+000	0.00000E+000	1.23077E-006
Generator Sets	-1.35862E+000	-6.39885E-001	-1.00832E+000	0.00000E+000	-1.08471E+000	-1.08471E+000	0.00000E+000	1.27619E-006	1.27619E-006	0.00000E+000	0.00000E+000	1.15826E-006
Graders	-8.31234E-002	1.46532E-001	-7.94312E-001	0.00000E+000	3.63368E-001	3.08186E-001	0.00000E+000	1.38307E-006	1.38307E-006	0.00000E+000	0.00000E+000	1.37423E-006
Pavers	-1.10833E+000	-5.02357E-001	-1.25282E+000	0.00000E+000	-2.82828E-001	-3.95604E-001	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Paving Equipment	-1.39223E+000	-6.78483E-001	-1.24478E+000	0.00000E+000	-4.03727E-001	-5.27027E-001	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	2.66909E-006
Rollers	-1.05145E+000	-2.08893E-001	-8.58363E-001	0.00000E+000	-4.09524E-001	-5.33679E-001	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	4.25403E-001	1.91377E-001	-2.48672E-001	0.00000E+000	6.82768E-001	6.55319E-001	0.00000E+000	1.93811E-006	1.93811E-006	0.00000E+000	0.00000E+000	9.62861E-007
Tractors/Loaders/Balckhoes	-1.47274E+000	-4.05908E-001	-8.35019E-001	0.00000E+000	-5.97702E-001	-7.36633E-001	0.00000E+000	1.19157E-006	1.19157E-006	0.00000E+000	0.00000E+000	1.18392E-006
Welders	-3.08835E-001	-1.13033E-001	2.11612E-001	0.00000E+000	-4.12262E-001	-4.12262E-001	0.00000E+000	1.39355E-006	1.39355E-006	0.00000E+000	0.00000E+000	1.04058E-006

**Fugitive Dust Mitigation**

Yes/No Mitigation Measure Mitigation Input Mitigation Input Mitigation Input

No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		

Yes	Clean Paved Road	% PM Reduction	0.00			
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Phase	Source	Unmitigated		Mitigated		Percent Reduction	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.05	0.01	0.05	0.01	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.32	0.09	0.32	0.09	0.00	0.00
Grading	Fugitive Dust	0.08	0.04	0.04	0.02	0.55	0.55
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00

**Operational Percent Reduction Summary**

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.53	4.53	4.55	4.52	4.53
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	6.60	18.84	15.62	22.25	20.91	20.92	0.00	22.27	22.27	20.39	0.00	22.27
Natural Gas	36.29	36.16	35.36	36.36	36.14	36.14	0.00	36.22	36.22	36.19	36.33	36.22
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	30.00	18.81	21.01	29.28	29.77	22.15
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Operational Mobile Mitigation**

Project Setting: Urban

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
Yes	Land Use	Increase Density	0.17	26.50	0.00	
Yes	Land Use	Increase Diversity	0.11	0.34		
No	Land Use	Improve Walkability Design	0.00	0.00		
Yes	Land Use	Improve Destination Accessibility	0.19	0.50		
Yes	Land Use	Increase Transit Accessibility	0.11	0.40		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.21			

Yes	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site	
No	Neighborhood Enhancements	Provide Traffic Calming Measures	0.00		
No	Neighborhood Enhancements	Implement NEV Network	0.01		
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.02		
Yes	Parking Policy Pricing	Limit Parking Supply	0.00	0.00	
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00	
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00	
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00		
No	Transit Improvements	Provide BRT System	0.00	0.00	
No	Transit Improvements	Expand Transit Network	0.00	0.00	
No	Transit Improvements	Increase Transit Frequency	0.00		0.00
	Transit Improvements	Transit Improvements Subtotal	0.00		
		Land Use and Site Enhancement Subtotal	0.23		
No	Commute	Implement Trip Reduction Program			
No	Commute	Transit Subsidy			
No	Commute	Implement Employee Parking "Cash Out"	7.70		
No	Commute	Workplace Parking Charge		0.00	
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00		
No	Commute	Market Commute Trip Reduction Option	0.00		
No	Commute	Employee Vanpool/Shuttle	0.00		2.00
No	Commute	Provide Ride Sharing Program	15.00		
	Commute	Commute Subtotal	0.00		

No	School Trip	Implement School Bus Program	0.00		
		Total VMT Reduction	0.23		

### Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
Yes	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	150.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

### Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	45.00	
No	Install High Efficiency Lighting	0.00	
No	On-site Renewable	0.00	0.00

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

### Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Apply Water Conservation on Strategy	30.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

### Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

## APPENDIX C

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# FRENCH DRAIN FOOTAGE CALCULATOR

## ONSITE STORM WATER STORAGE VOLUME

- 1. TRENCH BELOW PIPE: 2.00 FT.
- 2. TRENCH WIDTH BEYOND PIPE: 1.00 FT.
- 3. TRENCH HEIGHT ABOVE PIPE: 1.00 FT.
- 4. VOID RATIO OF DRAIN ROCK: 0.40 %
- 5. AVERAGE PERC RATE (WITHIN 48 H 0.0 FT.<sup>3</sup>/FT<sup>2</sup>/ 2 Days
- 6. STORM DRAIN VOLUME TO BE RETAINED  
(BASED ON 1" OF STORAGE) 40,000 FT.<sup>3</sup>
- 7 . SURFACE STORAGE AVAILABLE 0.00 FT.<sup>3</sup>

NUMBER OF PIPE	DIAMETER OF PIPE (INCHES)	PIPE VOLUME (FT <sup>3</sup> )	ROCK VOLUME (FT <sup>3</sup> )	TOTAL VOLUME (FT <sup>3</sup> )/FT	TRENCH SURFACE (L.F.)	PERC RATE PER L.F. OF TRENCH (48 HOURS)	LENGTH OF TRENCH BASED ON VOLUME	LENGTH OF TRENCH BASED ON PERC RATE
1	48	12.57	11.77	24.34	20.00	0.00	1643.40	#DIV/0!
1	60	19.64	14.55	34.18	23.00	0.00	1170.24	#DIV/0!
1	72	28.27	17.49	45.76	26.00	0.00	874.04	#DIV/0!
1	84	38.48	20.61	59.09	29.00	0.00	676.92	#DIV/0!
1	96	50.27	23.89	74.16	32.00	0.00	539.38	#DIV/0!
2	48	25.13	20.75	45.88	25.00	0.00	871.85	#DIV/0!
2	60	39.27	25.89	65.16	29.00	0.00	613.85	#DIV/0!
2	72	56.55	31.38	87.93	33.00	0.00	454.91	#DIV/0!
2	84	76.97	37.21	114.18	37.00	0.00	350.32	#DIV/0!
2	96	100.53	43.39	143.92	41.00	0.00	277.93	#DIV/0!
3	48	37.70	29.72	67.42	30.00	0.00	593.30	#DIV/0!
3	60	58.91	37.24	96.14	35.00	0.00	416.05	#DIV/0!
3	72	84.82	45.27	130.09	40.00	0.00	307.47	#DIV/0!
3	84	115.45	53.82	169.27	45.00	0.00	236.31	#DIV/0!
3	96	150.80	62.88	213.68	50.00	0.00	187.20	#DIV/0!
4	48	50.27	38.69	88.96	35.00	0.00	449.64	#DIV/0!
4	60	78.54	48.58	127.12	41.00	0.00	314.65	#DIV/0!
4	72	113.10	59.16	172.26	47.00	0.00	232.21	#DIV/0!
4	84	153.94	70.42	224.36	53.00	0.00	178.28	#DIV/0!
4	96	201.06	82.38	283.44	59.00	0.00	141.12	#DIV/0!

**RESPONSE TO COMMENTS**

This Response to Comments document contains agency comments received during the public review period of The Crossings project (proposed project) Initial Study/Mitigated Negative Declaration (IS/MND).

**BACKGROUND**

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The City of Sacramento Community Development Department, as lead agency, released the IS/MND for public review beginning on June 28, 2016 and ending on July 28, 2016 pursuant to CEQA Guidelines Section 15105. The IS/MND and supporting documents were made available at the public counter of the City of Sacramento Community Development Department located at 300 Richards Boulevard, Third Floor, Sacramento, California 95811. According to CEQA Guidelines Sections 15073 and 15074, the lead agency must consider the comments received during consultation and review periods together with the negative declaration. However, unlike with an Environmental Impact Report, comments received on a negative declaration are not required to be attached to the negative declaration, nor must the lead agency make specific written responses to public agencies. Nonetheless, the lead agency has chosen to provide responses to the comments received during the public review process for the IS/MND.

**LIST OF COMMENTERS**

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The City of Sacramento received five comment letters during the open comment period on the IS/MND for the proposed project. The comment letters were authored by the following representatives of the local agencies noted:

- Letter 1 ..... Robb Armstrong, Sacramento Regional County Sanitation District
- Letter 2 ..... Tanya Sheya, California Department of Fish and Wildlife
- Letter 3 ..... Stephanie Tadlock, Central Valley Regional Water Quality Control Board
- Letter 4 ..... Teri Duarte, Sacramento Metropolitan Air Quality Management District
- Letter 5 ..... Scott Morgan, Office of Planning and Research, State Clearinghouse

**RESPONSE TO COMMENTS**

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The Response to Comments below include responses to the comment letters submitted regarding the proposed project. The letters are numbered and bracketed with assigned comment numbers. The bracketed comment letters are followed by numbered responses corresponding to each bracketed comment. Where revisions to the IS/MND text were made, new text is double underlined and deleted text is ~~struck through~~.

Letter 1



July 5, 2016

Ms. Dana Mahaffey, Associate Planner  
City of Sacramento, Community Development  
Environmental Planning Services  
300 Richards Blvd., 3<sup>rd</sup> Floor  
Sacramento, CA 95811

**Main Office**  
10060 Goethe Road  
Sacramento, CA 95827-3553  
Tel: 916.876.6000  
Fax: 916.876.6160

**Subject: Notice of Availability/Intent to Approve the Draft Mitigated Negative Declaration for The Crossings Project (P15-061)**

Dear Ms. Mahaffey:

**Treatment Plant**  
8521 Laguna Station Road  
Elk Grove, CA 95758-9550  
Tel: 916.875.9000  
Fax: 916.875.9068

1-1

Sacramento Regional County Sanitation District (Regional San) has the following comments regarding the Draft Mitigated Negative Declaration for The Crossings Project.

The proposed project includes the construction of three five-story residential buildings consisting of 225 multi-family units, one two-story 12,500 square-foot clubhouse/leasing office and a single-story 10,000 square-foot building on an approximately 8.5 acre site. The proposed project is located at 2920 Ramona Avenue.

**Board of Directors**  
Representing:  
County of Sacramento  
County of Yolo  
City of Citrus Heights  
City of Elk Grove  
City of Folsom  
City of Rancho Cordova  
City of Sacramento  
City of West Sacramento

1-2

Regional San is not a land-use authority. Projects identified within Regional San planning documents are based on growth projections provided by land-use authorities. Sewer studies will need to be completed to assess the impacts of any project that has the potential to increase flow demands. Onsite and offsite impacts associated with constructing sanitary sewer facilities to provide service to the subject project should be included in the Mitigated Negative Declaration.

1-3

Customers receiving service from Regional San are responsible for rates and fees outlined within the latest Regional San ordinances. Fees for connecting to the sewer system are set up to recover the capital investment of sewer and treatment facilities that serves new customers. The Regional San ordinance is located on the Regional San website at <http://www.srcsd.com/ordinances.php>.

Prabhakar Somavarapu  
District Engineer

Ruben Robles  
Director of Operations

Christoph Dobson  
Director of Policy & Planning

1-4

Local sanitary sewer service for the proposed project site will be provided by the Sacramento Area Sewer District's (SASD) local sewer collection system. Ultimate conveyance to the Sacramento Regional Wastewater Treatment Plant (SRWTP) for treatment and disposal will be provided by Regional San. SASD will respond via separate correspondence.

Karen Stoyanowski  
Director of Internal Services

Joseph Maestretti  
Chief Financial Officer

The SRWTP provides secondary treatment using an activated sludge process. Incoming wastewater flows through mechanical bar screens through a primary sedimentation process. This allows most of the heavy organic solids to settle to the bottom of the tanks. These solids are later delivered to the digesters. Next, oxygen is added to the wastewater to grow naturally occurring microscopic organisms, which consume the organic particles in the wastewater.

Claudia Goss  
Public Affairs Manager

[www.srcsd.com](http://www.srcsd.com)

**Letter 1  
Cont'd**

**1-4  
Cont'd**

Ms. Dana Mahaffey  
May 17, 2016  
Page 2

These organisms eventually settle on the bottom of the secondary clarifiers. Clean water pours off the top of these clarifiers and is chlorinated, removing any pathogens or other harmful organisms that may still exist. Chlorine disinfection occurs while the wastewater travels through a two mile "outfall" pipeline to the Sacramento River, near the town of Freeport, California. Before entering the river, sulfur dioxide is added to neutralize the chlorine. The design of the SRWTP and collection system was balanced to have SRWTP facilities accommodate some of the wet weather flows while minimizing idle SRWTP facilities during dry weather. The SRWTP was designed to accommodate some wet weather flows while the storage basins and interceptors were designed to accommodate the remaining wet weather flows.

A NPDES Discharge Permit was issued to Regional San by the Central Valley Regional Water Quality Control Board (Water Board) in December 2010. In adopting the new Discharge Permit, the Water Board required Regional San to meet significantly more restrictive treatment levels over its current levels. Regional San believed that many of these new conditions go beyond what is reasonable and necessary to protect the environment, and appealed the permit decision to the State Water Resources Control Board (State Board). In December 2012, the State Board issued an Order that effectively upheld the Permit. As a result, Regional San filed litigation in California Superior Court. Regional San and the Water Board agreed to a partial settlement in October 2013 to address several issues and a final settlement on the remaining issues were heard by the Water Board in August 2014. Regional San began the necessary activities, studies and projects to meet the permit conditions. The new treatment facilities to achieve the permit and settlement requirements must be completed by May 2021 for ammonia and nitrate and May 2023 for the pathogen requirements

Regional San currently owns and operates a 5-mgd Water Reclamation (WRF) that has been producing Title 22 tertiary recycled since 2003. The WRF is located within the SRWTP property in Elk Grove. A portion of the recycled water is used by Regional San at the SRWTP and the rest is wholesaled to the Sacramento County Water Agency (SCWA). SCWA retails the recycled water, primarily for landscape irrigation use, to select customers in the City of Elk Grove. It should be noted that Regional San currently does not have any planned facilities that could provide recycled water to the proposed project or its vicinity. Additionally, Regional San is not a water purveyor and any potential use of recycled water in the project area must be coordinated between the key stakeholders, e.g. land use jurisdictions, water purveyors, users, and the recycled water producers.

If you have any questions regarding these comments, please contact me at 916-876-6104.

Sincerely,



Robb Armstrong  
Regional San Development Services & Plan Check

Cc: SASD Development Services, Sarena Moore – Policy & Planning-Long Range Planning

**LETTER 1: ROBB ARMSTRONG, SACRAMENTO REGIONAL COUNTY SANITATION DISTRICT, JULY 5, 2016**

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**Response to Comment 1-1**

The comment is an introductory statement and does not address the adequacy of the IS/MND.

**Response to Comment 1-2**

The comment has been noted. The potential impacts of the proposed project, both on-site and off-site, are addressed throughout the IS/MND. The commenter is directed to page 91 of the IS/MND, within the Utilities and Services Systems section, for a discussion regarding sewer services. The comment does not specifically address the adequacy of the IS/MND.

**Response to Comment 1-3**

Comment noted. Wastewater treatment would be provided by the Sacramento Regional County Sanitation District (SRCSD), and sewer conveyance would be provided by the City of Sacramento via both the Combined Sewer System (CSS) and the Separated Sewer System (SSS). The SSS consists of a network of pipelines that collect wastewater with conveyance into major trunk-sewer lines owned and operated by the County Sanitation District 1 (CSD-1), which then conveys the mixed flow to the Sacramento Regional Wastewater Treatment Plant (SRWTP) in Elk Grove. Each site within the City is responsible for local drainage and would tap into the local street drainage system. The following discussion is included on page 62 of the Hydrology and Water Quality section of the IS/MND:

Section 13.08.145 of the Sacramento City Municipal Code (Mitigation of drainage impacts; design and procedures manual for water, sanitary sewer, storm drainage, and water quality facilities) requires that when a property would contribute drainage to the storm drain system or combined sewer system, all stormwater and surface runoff drainage impacts resulting from the improvement or development must be fully mitigated to ensure that the improvement or development does not affect the function of the storm drain system or combined sewer system, and that an increase in flooding or in water surface elevation that adversely affects individuals, streets, structures, infrastructure, or property does not occur. The City's Sewer Development Fee Fund is used to recover an appropriate share of the capital costs of the City's facilities.

The project proponents would be required to pay an appropriate share of the capital costs into the Combined Sewer Mitigation Fee in order to mitigate demands of increased growth on existing or new CSS facilities. The following discussion on Page 91 in the Utilities and Service Systems section of the IS/MND addresses the proposed project's potential impacts:

The project is consistent with the City of Sacramento 2035 General Plan, the 65th Street Station Area Plan and EIR, and the South 65th Street Plan and EIR. The South 65th Street Plan EIR examined potential impacts to wastewater treatments facilities, water quality, and potential exceedances of the Regional Water Quality Control Board (RWQCB)

requirements at full buildout of the EIR study area. According to the EIR, buildout of the area would not result in exceedance of RWQCB wastewater treatment requirements of the SRWWTP. Therefore, the project would not result in exceedance of RWQCB wastewater treatment requirements of the SRWWTP.

**Response to Comment 1-4**

The comment provides background information regarding the wastewater treatment services available to the project site by the Sacramento County Regional Sanitation District and the Sacramento Area Sewer District. The comment does not specifically address the adequacy of the IS/MND.

## Letter 2

**From:** [Sheva\\_Tanya@Wildlife](mailto:Sheva_Tanya@Wildlife)  
**To:** [Dana Mahaffey](#)  
**Cc:** [Wildlife R2 CEQA](#)  
**Subject:** Mitigated Negative Declaration (MND) for The Crossings project (SCH#2016062065)  
**Date:** Monday, July 11, 2016 3:51:34 PM  
**Attachments:** [image003.png](#)

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Dear Ms. Mahaffey:

The California Department of Fish and Wildlife (Department) has reviewed the Mitigated Negative Declaration (MND) for The Crossings project (project).

2-1

As a trustee for California's fish and wildlife resources, the Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Fish & G. Code, § 1802). The Department may also act as a Responsible Agency (Cal. Code Regs., § 21069) for a project where it has discretionary approval power under the California Endangered Species Act (Fish & G. Code, § 2050 et seq.) and the Lake and Streambed Alteration Program (Fish & G. Code, § 1600 et seq.). The Department also administers the Native Plant Protection Act, Natural Community Conservation Program, and other provisions of the Fish and Game Code that afford protection to California's fish and wildlife resources.

The project site is located within the eastern portion of the City of Sacramento's 65<sup>th</sup> Street Station Area Plan at 2920 Ramona Avenue. The project site is on approximately 8.5 acres and includes the construction of a three 5-story residential building, one 2-story 12,500-square foot clubhouse/leasing office, and a single-story 10,000-square foot building.

2-2

The Department is primarily concerned with the document's mitigation measure for burrowing owl (*Athene cucularia*) and offers the following comments and recommendations for this project in our role as a trustee and responsible agency pursuant to the California Environmental Quality Act (CEQA).

As stated in the MND, the project area contains suitable habitat for burrowing owl and mitigation measure 3-1 states that pre-construction surveys shall be conducted prior to any site disturbance activities. The mitigation measure also states that if occupied burrows are found, the project contractor shall implement standard "passive relocation" measures to exclude burrowing owls from burrows that need to be disturbed, consistent with the Department guidelines. The Department recommends that the MND follow the 2012 Staff Report for Burrowing Owl Mitigation; particularly with regards to non-disturbance buffers and compensatory mitigation. Exclusion in and of itself is not a take avoidance, minimization or mitigation method. Eviction of burrowing owls is a potentially significant impact under CEQA. The Department recommends that exclusion and burrow closure is employed only where there are adjacent natural burrows and non-impacted, sufficient habitat for burrowing owls to occupy with permanent protection mechanisms in place. Burrowing owls should not be excluded from burrows unless or until: 1) a Burrowing Owl Exclusion Plan is developed and approved by the Department, 2) Permanent loss of occupied burrows and habitat is mitigated in accordance with the guidelines, 3) site monitoring is conducted, prior to, during, and after exclusion, and 4) Excluded burrowing owls are documented using artificial or natural burrows on an adjoining

**Letter 3  
Cont'd.**

2-2  
Cont'd

mitigation site.

2-3

In addition, the Department recommends that all measures to protect nesting birds be performance-based. While some birds may tolerate disturbance caused by construction activities, other birds may have a different disturbance threshold and "take" (FGC §2081 and §3503.5) could occur if the temporary disturbance buffers are not designed to reduce stress to that individual pair. The Department recommends conducting pre-construction surveys for nesting raptors or migratory birds and the inclusion of performance-based protection measures for avoiding all nests protected under the MBTA and FGC §3503.5. A 160-foot exclusion buffer may be sufficient; however, that buffer may need to be increased based on the birds' tolerance level to the disturbance. An example of a performance-based protection measure is provided:

Should construction activities cause the nesting migratory bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then increase the exclusionary buffer such that activities are far enough from the nest to stop this agitated behavior by the raptor. The exclusionary buffer should remain in place until the chicks have fledged or as otherwise determined by a qualified biologist.

2-4

The proposed project will have an impact to fish and/or wildlife habitat and should be evaluated in such a manner to reduce its impacts to biological resources. Assessment of fees under Public Resources Code §21089 and as defined by FGC §711.4 is necessary. Fees are payable by the project applicant upon filing of the Notice of Determination by the lead agency.

2-5

Pursuant to Public Resources Code §21092 and §21092.2, the Department requests written notification of proposed actions and pending decisions regarding the proposed project. Written notifications shall be directed to: California Department of Fish and Wildlife North Central Region, 1701 Nimbus Road, Rancho Cordova, CA 95670.

2-6

Thank you for considering our concerns for the proposed project and providing the opportunity to comment on the MND. I am available for consultation regarding biological resources and strategies to minimize impacts. If you have questions please contact me by e-mail at [Tanya.Sheya@wildlife.ca.gov](mailto:Tanya.Sheya@wildlife.ca.gov) or by phone at (916) 958-2953.

**Tanya Sheya**  
Environmental Scientist



[North Central Region | Habitat Conservation](#)  
1701 Nimbus Road | Rancho Cordova, CA 95670  
Phone 916.358.2953 | Fax 916.358.2912  
[Tanya.Sheya@wildlife.ca.gov](mailto:Tanya.Sheya@wildlife.ca.gov)

Every Californian should conserve water. Find out how at:

**LETTER 2: TANYA SHEYA, CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE, JULY 11, 2016**

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**Response to Comment 2-1**

The comment is an introductory statement and does not address the adequacy of the IS/MND.

**Response to Comment 2-2**

In response to the recommendation that burrowing owl mitigation should be consistent with the California Department of Fish and Wildlife's 2012 staff report that addresses burrowing owl mitigation, Mitigation Measure 3-1 on page 44 of the Biological Resources section of the IS/MND has been re-numbered Mitigation Measure 3-1(a) and 3-1(b) and the mitigation is hereby revised as follows:

~~3-1 — Prior to construction, the project contractor shall initiate preconstruction surveys of the project site to determine if burrowing owls are present during the non-nesting season prior to any construction during the breeding season. The results of the preconstruction surveys shall then be submitted to the City for review. If burrowing owls are not present, further mitigation is not required. If occupied burrows are found during the non-breeding season, the project contractor shall implement standard "passive relocation" measures to exclude burrowing owls from burrows that need to be disturbed, consistent with CDFW guidelines. If breeding owls are found on site during the nesting season, the project contractor shall establish a no-disturbance buffer around nesting burrows until the nesting is completed. The buffer distance and verification of completion of nesting will be determined by a qualified biologist with experience working with burrowing owls and construction activities. If it is not feasible to avoid removal of nesting burrows, the project contractor shall consult with the CDFW to determine if any options for active nest relocation are feasible.~~

3-1(a) Preconstruction Surveys: The project applicant shall implement the following measure to avoid or minimize impacts to western burrowing owl:

- Within 14 days prior to any ground disturbing activities for each phase of construction, the project applicant shall retain a qualified biologist to conduct a preconstruction survey of the site, any off-site improvement areas, and all publicly accessible potential burrowing owl habitat within 500 feet of the project construction footprint. The survey shall be performed in accordance with the applicable sections of the March 7, 2012 (or subsequent applicable), CDFW Staff Report on Burrowing Owl Mitigation. The qualified biologist shall be familiar with burrowing owl identification, behavior, and biology, and shall meet the minimum qualifications described in the 2012 CDFW Staff Report. If the survey does not identify any nesting burrowing owls on the site, further mitigation is not required for that phase unless activity ceases for a period in excess of 14 days in which case the survey requirements and obligations shall be repeated.

- If active burrowing owl dens are found within the survey area in an area where disturbance would occur, the project applicant shall implement measures at least equal to the 2012 (or subsequent applicable) CDFW Staff Report, as determined by the qualified biologist.
- During the breeding season (February 1 through August 31), the following measures will be implemented:
  - Disturbance-free buffers will be established around the active burrow. During the peak of the breeding season, between April 1 and August 15, a minimum of a 500-foot buffer will be maintained. Between August 16 and March 31, a minimum of a 150-foot buffer will be maintained. The qualified biologist (as defined above) will determine, in consultation with the City of Sacramento Planning Division and CDFW, if the buffer should be increased or decreased based on site conditions, breeding status, and non-project-related disturbance at the time of construction.
  - Monitoring of the active burrow will be conducted by the qualified biologist during construction on a weekly basis to verify that no disturbance is occurring.
  - After the qualified biologist determines that the young have fledged and are foraging independently, or that breeding attempts were not successful, the owls may be excluded in accordance with the non-breeding season measures below. Daily monitoring will be conducted for one week prior to exclusion to verify the status of owls at the burrow.
- During the non-breeding season (September 1 to January 31), owls occupying burrows that cannot be avoided will be passively excluded consistent with Appendix E of the 2012 CDFW Staff Report:
  - Within 24 hours prior to installation of one-way doors, a survey will be conducted to verify the status of burrowing owls on the site.
  - Passive exclusion will be conducted using one-way doors on all burrows suitable for burrowing owl occupation.
  - One-way doors shall be left in place a minimum of 48 hours to ensure burrowing owls have left the burrow before excavation.
  - While the one-way doors are in place, the qualified biologist will visit the site twice daily to monitor for evidence that owls are inside and are unable to escape. If owls are trapped, the device shall be reset and another 48-hour period shall begin.
  - After a minimum of 48 hours, the one-way doors will be removed and the burrows will be excavated using hand tools to prevent reoccupation. The use of a pipe is recommended to stabilize the burrow to prevent collapsing until the entire burrow has been excavated and it can be determined that no owls reside inside the burrow.
  - After the owls have been excluded, the excavated burrow locations will be surveyed a minimum of three times over two weeks to

detect burrowing owls if they return. The site will be managed to prevent reoccupation of burrowing owls (e.g., disking, grading, manually collapsing burrows) until development is complete.

- If burrowing owls are found outside the project site during preconstruction surveys, the qualified biologist shall evaluate the potential for disturbance. Passive exclusion of burrowing owls shall be avoided to the maximum extent feasible where no ground disturbance will occur. In cases where ground disturbance occurs within the no-disturbance buffer of an occupied burrow, the qualified biologist shall determine in consultation with the City of Sacramento Planning Division and CDFW whether reduced buffers, additional monitoring, or passive exclusion is appropriate.

3-1(b) Compensatory Mitigation, if Active Owl Dens are Present: If active burrowing owl dens are present and the project would impact active dens, the project applicant shall implement the following:

- If active owl burrows are present and the project would impact active burrows, the project applicant shall provide compensatory mitigation for the permanent loss of burrowing owl habitat at least equal to the 2012 (or subsequent applicable), CDFW Staff Report. Such mitigation shall include the permanent protection of land, which is deemed to be suitable burrowing owl habitat through a conservation easement deeded to a non-profit conservation organization or public agency with a conservation mission, or the purchase of burrowing owl conservation bank credits from a CDFW-approved burrowing owl conservation bank. In determining the location and amount of acreage required for permanent protection, the project applicant, in conjunction with the City of Sacramento Planning Division, shall seek lands that include the same types of vegetation communities and fossorial mammal populations found in the lost foraging habitat, with a preference given to lands that are adjacent to, or reasonably proximate to, the lost foraging lands. Such lands shall provide for nesting, foraging, and dispersal comparable to, or better than, the lost foraging land. The minimum amount of acreage for preservation shall be 6.5 acres per nesting pair or unpaired resident bird. Additional lands may be required as determined pursuant to the then current standards/best practices for mitigation acreage as determined by the City of Sacramento Planning Division in consultation with CDFW.

The above revision is intended to provide mitigation measures for potential impacts to burrowing owl consistent with the California Department of Fish and Wildlife's 2012 staff report that addresses burrowing owl mitigation, especially in regard to non-disturbance buffers and compensatory mitigation. The change updates and enhances the existing mitigation and, therefore, does not alter the analysis or conclusions of the IS/MND.

### Response to Comment 2-3

In response to the recommendation that the IS/MND include performance-based mitigation measures for potential impacts to nesting raptors and/or migratory birds, Mitigation Measure 3-2 on pages 44 and 45 of the Biological Resources section of the IS/MND is hereby revised as follows.

- 3-2 *If project construction plans require ground disturbance that represents potential nesting habitat for migratory birds or other raptors including Swainson's hawk, the project contractor shall initiate such activity between September 1st and January 31st, outside the bird nesting season, to the extent feasible. If tree removal must occur during the avian breeding season (February 1st to August 31st), a qualified biologist shall conduct a survey for ground-nesting birds. The survey shall be conducted 14 days prior to the commencement of construction and include all potential ground-nesting sites and trees and shrubs within 75 feet of the entire project site. The findings of the survey shall be submitted to the City of Sacramento Community Development Department. If nesting passerines or raptors are identified during the survey within 75 feet of the project site, a 75-foot buffer around the ground nest or nest tree shall be fenced with orange construction fencing. If the ground nest or nest tree is located off the project site, then the buffer shall be demarcated as per above. The size of the buffer may be altered if a qualified biologist conducts behavioral observations and determines the nesting passerines are well acclimated to disturbance. If acclimation has occurred, the biologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to the nesting birds. If construction activities cause the nesting bird(s) to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the exclusionary buffer shall be increased, as determined by the qualified biologist, such that activities are far enough from the nest to stop the agitated behavior. Construction or earth-moving activity shall not occur within the established buffer until a qualified biologist has determined that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones, which typically occurs by July 15th. However, the date may be earlier or later, and would have to be determined by a qualified biologist. If a qualified biologist is not hired to watch the nesting passerines, then the buffers shall be maintained in place through the month of August and work within the buffer may commence September 1<sup>st</sup>.*

The above revision is intended to provide performance-based mitigation measures for potential impacts to nesting raptors and/or migratory birds. The change is for clarification purposes only and does not alter the analysis or conclusions of the IS/MND.

### Response to Comment 2-4

Comment noted. The project applicant would pay any applicable California Department of Fish and Wildlife fees upon filing of the Notice of Determination for the proposed project.

### Response to Comment 2-5

Comment noted. Written notification of proposed actions and pending decisions regarding the project will be provided to the California Department of Fish and Wildlife.

**Response to Comment 2-6**

The comment is a concluding statement and does not address the adequacy of the IS/MND.



Letter 3



Central Valley Regional Water Quality Control Board

20 July 2016

Dana Mahaffey  
City of Sacramento  
300 Richards Boulevard, Third Floor  
Sacramento, CA 95811

CERTIFIED MAIL  
91 7199 9991 7035 8422 2584

**COMMENTS TO REQUEST FOR REVIEW FOR THE MITIGATED NEGATIVE  
DECLARATION, THE CROSSING PROJECT, SCH# 2016062065, SACRAMENTO COUNTY**

3-1

Pursuant to the State Clearinghouse's 28 June 2016 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Mitigated Negative Declaration* for the Crossing Project, located in Sacramento County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

**I. Regulatory Setting**

**Basin Plan**

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

3-2

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the

KARL E. LONGLEY SCD, P.E., CHAIR | PAMELA C. CREEDON P.E., BCEE, EXECUTIVE OFFICER

11020 Sun Center Drive #200, Rancho Cordova, CA 95670 | www.waterboards.ca.gov/centralvalley



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Cont'd

USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues.

For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:  
[http://www.waterboards.ca.gov/centralvalley/water\\_issues/basin\\_plans/](http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/).

**Antidegradation Considerations**

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Policy is available on page IV-15.01 at:  
[http://www.waterboards.ca.gov/centralvalleywater\\_issues/basin\\_plans/sacsjr.pdf](http://www.waterboards.ca.gov/centralvalleywater_issues/basin_plans/sacsjr.pdf)

In part it states:

3-3

*Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.*

*This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.*

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

3-4

**II. Permitting Requirements**

**Construction Storm Water General Permit**

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

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Cont'd

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:  
[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/constpermits.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml).

3-5

**Phase I and II Municipal Separate Storm Sewer System (MS4) Permits<sup>1</sup>**

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:  
[http://www.waterboards.ca.gov/centralvalley/water\\_issues/storm\\_water/municipal\\_permits/](http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/).

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:  
[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/phase\\_ii\\_municipal.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml)

3-6

**Industrial Storm Water General Permit**

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:  
[http://www.waterboards.ca.gov/centralvalley/water\\_issues/storm\\_water/industrial\\_general\\_permits/index.shtml](http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml).

3-7

**Clean Water Act Section 404 Permit**

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

<sup>1</sup> Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

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Cont'd

20 July 2016

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Cont'd

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

3-8

**Clean Water Act Section 401 Permit – Water Quality Certification**

If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

3-9

**Waste Discharge Requirements – Discharges to Waters of the State**

If USACOE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:  
[http://www.waterboards.ca.gov/centralvalley/help/business\\_help/permit2.shtml](http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml).

3-10

**Dewatering Permit**

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Risk General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver) R5-2013-0145. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Risk General Order and the application process, visit the Central Valley Water Board website at:

[http://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/water\\_quality/2003/wqo/wqo2003-0003.pdf](http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf)

For more information regarding the Low Risk Waiver and the application process, visit the Central Valley Water Board website at:

[http://www.waterboards.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/waivers/r5-2013-0145\\_res.pdf](http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2013-0145_res.pdf)

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**Letter 3  
Cont'd**

20 July 2016

3-11

**Regulatory Compliance for Commercially Irrigated Agriculture**

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program. There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: [http://www.waterboards.ca.gov/centralvalley/water\\_issues/irrigated\\_lands/app\\_approval/index.shtml](http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/app_approval/index.shtml); or contact water board staff at (916) 464-4611 or via email at [IrrLands@waterboards.ca.gov](mailto:IrrLands@waterboards.ca.gov).
2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100.** Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently \$1,084 + \$6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at [IrrLands@waterboards.ca.gov](mailto:IrrLands@waterboards.ca.gov).

3-12

**Low or Limited Threat General NPDES Permit**

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Dewatering and Other Low Threat Discharges to Surface Waters* (Low Threat General Order) or the General Order for *Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water* (Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:  
[http://www.waterboards.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/general\\_orders/r5-2013-0074.pdf](http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf)

**Letter 3**

**Cont'd**

20 July 2016

The Crossing Project  
Sacramento County

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**3-12**  
**Cont'd**

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:  
[http://www.waterboards.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/general\\_orders/r5-2013-0073.pdf](http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf)

**NPDES Permit**

**3-13**

If the proposed project discharges waste that could affect the quality of the waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit.

For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at:  
[http://www.waterboards.ca.gov/centralvalley/help/business\\_help/permit3.shtml](http://www.waterboards.ca.gov/centralvalley/help/business_help/permit3.shtml)

**3-14**

If you have questions regarding these comments, please contact me at (916) 464-4644 or [Stephanie.Tadlock@waterboards.ca.gov](mailto:Stephanie.Tadlock@waterboards.ca.gov).



Stephanie Tadlock  
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

**LETTER 3: STEPHANIE TADLOCK, CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD, JULY 20, 2016**

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**Response to Comment 3-1**

The comment is an introductory statement and does not address the adequacy of the IS/MND.

**Response to Comment 3-2**

The comment provides general background information regarding basin plans. The comment does not address the adequacy of the IS/MND.

**Response to Comment 3-3**

The comment briefly discusses antidegradation considerations related to wastewater discharges to high quality waters. As discussed on page 64 of the Hydrology and Water Quality section of the IS/MND:

The proposed project includes covering the majority of the site in impervious services. On-site storm water runoff would be collected through a series of drain inlets and underground drain piping. In addition to the on-site improvements, the proposed project would include portions of the Ramona Avenue Extension along the project frontage including new curb, gutter, and sidewalk. A new storm drain main would extend and replace the existing line within Ramona Avenue with new inlets placed to collect drainage in the new curb and gutter. All new drainage improvements would convey flows to existing offsite infrastructure ultimately to Sump 43 and discharged to Morrison Creek.

Stormwater from the proposed project site would be collected and detained on-site prior to release to storm drainage infrastructure within the Ramona Avenue Extension. Runoff from the site would be then conveyed through existing infrastructure to the City's Drainage Basin 43. Collected runoff from on-site impervious services would be detained on-site an in-pipe detention system, which not only detains peak flows during rain events, but also serves as an infiltration basin for stormwater treatment. The City Department of Utilities would review the Improvement Plans for the proposed project prior to approval to ensure that adequate water quality control facilities are incorporated. It should be noted that the project would comply with Section 13.08.145, Mitigation of drainage impacts; design and procedures manual for water, sanitary sewer, storm drainage, and water quality facilities, of the City of Sacramento Municipal Code, which requires the following: "When property that contributes drainage to the storm drain system or combined sewer system is improved or developed, all stormwater and surface runoff drainage impacts resulting from the improvement or development shall be fully mitigated to ensure that the improvement or development does not affect the function of the storm drain system or combined sewer system, and that there is no increase in flooding or in water surface elevation that adversely affects individuals, streets, structures, infrastructure, or property."

Stormwater retention calculations have been prepared for the proposed project and are included as Appendix C of this IS/MND. The calculations demonstrate multiple options for the project to provide adequate stormwater detention and drainage. The final drainage

report and plans will be required to be approved by the Department of Utilities prior to approval of the Improvement Plans for the project.

The proposed project design would provide for containment of all runoff water associated with the site; therefore, discharge of runoff to surface waters or groundwater would not result from the proposed project and the project would not discharge wastewater to high quality waters.

### **Response to Comment 3-4**

The following discussion on Page 63 of the Hydrology and Water Quality section of the IS/MND addresses the project's compliance with the Construction Storm Water General Permit, as follows:

Construction activities associated with the proposed project would create the potential to degrade water quality from increased sedimentation during storm events. Disturbance of site soils would increase the potential for erosion from storm water. The State Water Resources Control Board (SWRCB) adopted a statewide general National Pollutant Discharge Elimination System (NPDES) permit for storm water discharges associated with construction activity. Dischargers whose projects disturb one or more acres of soil are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation.

The City's SQIP contains a Construction Element that guides in implementation of the NPDES Permit for Storm Water Discharges Associated with Construction Activity. This General Construction Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP should contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list BMPs the discharger will use to protect stormwater runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutant to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP. Compliance with City requirements to protect storm water inlets would require the developer to implement BMPs such as the use of straw bales, sandbags, gravel traps, and filters; erosion control measures such as vegetation and physical stabilization; and sediment control measure such as fences, dams, barriers, berms, traps, and basins. City staff inspects and enforces the erosion, sediment and pollution control requirements in accordance with City codes (Grading, Erosion and Sediment Control ordinance).

The proposed project would be subject to the General Construction Permit's SWPPP requirements. City staff inspection would further ensure that the proposed project implements all necessary BMPs and, as a result, the proposed project would not result in any impacts related to stormwater discharge from construction activities.

### **Response to Comment 3-5**

The comment provides a brief summary of Phase I and II Municipal Separate Storm Sewer System (MS4) Permits. As described on page 61 of the IS/MND, within the Hydrology and Water Quality section, the City's Stormwater Quality Improvement Plan (SQIP) outlines the priorities, key elements, strategies, and evaluation methods of the City's Stormwater Management Program. The SQIP was prepared as part of the Sacramento County area-wide NPDES MS4 Permit. In addition, the Sacramento City Code Section 13.08.145 requires that when a property contributes drainage to the storm drain system or to the City Combined Sewer System (CSS), all stormwater and surface runoff drainage impacts resulting from the improvement or development must be fully mitigated to ensure that the improvement or development does not affect the function of the storm drain system or CSS.

As discussed on Page 63 of the Hydrology and Water Quality section of the IS/MND, conformance with City regulations and permit requirements, along with implementation of BMPs, would ensure that the proposed project would result in a less-than-significant impact related to stormwater absorption rates, discharges, flows, and water quality. In addition, as discussed in Response to Comment 3-4, the proposed project would comply with all City regulations and permit requirements, which would ensure the proposed project's compliance with applicable MS4 Permits.

### **Response to Comment 3-6**

The comment is noted; however, the proposed project does not include industrial uses.

### **Response to Comment 3-7**

The comment provides a brief summary of the Clean Water Act Section 404 Permit. The following discussion on Page 41 of the Biological Resources section of the IS/MND addresses potential wetlands on the proposed project site:

The Folsom Boulevard Widening/Ramona Avenue Extension EIR identified seasonal wetlands adjacent to the project site. The potential wetlands are hydrologically isolated, and are not connected to any other waters of the U.S. Therefore, the water features would not be regulated by the United States Army Corps of Engineers (USACE) and would not require Section 404 permitting.

Thus, the project would result in a less-than-significant impact on any federally-protected wetlands as defined by Section 404 of the Clean Water Act. In addition, the project would not require surface water drainage realignment.

### **Response to Comment 3-8**

See Response to Comment 3-7.

**Response to Comment 3-9**

See Response to Comment 3-7.

**Response to Comment 3-10**

Dewatering is not anticipated to be required as a result of construction of the proposed project. However, should groundwater be encountered during construction and dewatering become necessary, the applicant would obtain the proper NPDES permit for dewatering activities.

**Response to Comment 3-11**

The comment briefly discusses requirements for discharges associated with commercially-irrigated agricultural land. The comment does not address the adequacy of the IS/MND, as the proposed project would not involve any commercially-irrigated agricultural land.

**Response to Comment 3-12**

See Response to Comment 3-10.

**Response to Comment 3-13**

See Response to Comment 3-4.

**Response to Comment 3-14**

The comment is a concluding statement and does not address the adequacy of the IS/MND.



Larry Greene  
AIR POLLUTION CONTROL OFFICER

July 22, 2016

SENT VIA E-MAIL ONLY

**Letter 4**

Dana Mahaffey  
City of Sacramento  
Community Development Department  
Environmental Planning Services  
300 Richards Blvd., 3<sup>rd</sup> Floor  
Sacramento, CA 95811

**RE: The Crossings Initial Study / Mitigated Negative Declaration (P15-061)**

Dear Ms. Mahaffey:

4-1

Thank you for providing The Crossings Mitigated Negative Declaration (MND) to the Sacramento Metropolitan Air Quality Management District (SMAQMD) for review. The proposed project includes the construction of a 225-unit student housing project on an 8-acre site and is intended to provide housing opportunities for California State University, Sacramento (CSUS) students. SMAQMD staff comments on the project follow.

*Constructions Emissions*

4-2

The Air Quality Section, Answers to Checklist Questions, bullet #2 on page 31 indicates that "All construction equipment would comply with U.S. Environmental Protection Agency Tier 1 engine standards or better." Please clarify if this will be a condition of approval, or a mitigation measure.

*Operational Emissions*

4-3

In the discussion of standards of significance in the air quality analysis section, on page 29, bullet #4 refers to thresholds of significance for PM10. The SMAQMD Thresholds of Significance were updated in May 2015. This discussion should be updated to reflect the most current PM thresholds.

*Non-CEQA Operational Comments*

4-4

Per the City of Sacramento's General Plan, the SMAQMD recommends the City include requirements for the installation of electrical vehicle charging stations<sup>1</sup>.

While the SMAQMD commends the effort to build student housing within walking and biking distance to CSUS, the center of the university is a mile and a half from the project, a distance that is greater than many people would be willing to walk. The SMAQMD recommends the project operate a low-emission,

777 12th Street, 3rd Floor ■ Sacramento, CA 95814-1908  
916/874-4800 ■ 916/874-4899 fax  
www.airquality.org

Ms. Dana Mahaffey  
The Crossings IS/MND  
July 22, 2016  
Page 2

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cont'd.

high-frequency shuttle to CSUS or make arrangements to participate in the university's existing off-campus shuttle service.

This project is targeted at college students, and as a way to reduce student loan debt and to reduce driving, the SMAQMD encourages unbundled parking that is paid for by residents separately from the lease costs of the apartments. Residents sign leases for their apartments, and then choose whether or not to sign leases for parking spaces. A system that charges residents separately to lease parking spaces would levy the cost of parking spaces only to those who use them, and would offer significant housing cost savings to those who choose to live car-free. A tangible reduction in rent costs may encourage some students to join a car-sharing service, utilize transit, or combine walking, biking and transit use.

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*General*

4-5

All projects are subject to SMAQMD rules in effect at the time of construction. A complete listing of current rules is available at [www.airquality.org](http://www.airquality.org) or by calling (916) 874-4800. Specific rules that relate to construction activities are attached.

4-6

If you have questions or would like to discuss these recommendations, please contact me at [tduarte@airquality.org](mailto:tduarte@airquality.org) or 916-874-4816.

Sincerely,



Teri Duarte, MPH  
Planner/Analyst

Attachment

Cc: Paul Philley  
Garrett Norman

<sup>1</sup>City of Sacramento 2035 General Plan Mobility Goal 1.5.5 Support Zero- and Low-Emission Vehicle Adoption  
<https://www.cityofsacramento.org/~media/Corporate/Files/CDD/Planning/General%20Plan%20Update/2035%20>

**LETTER 4: TERI DUARTE, SACRAMENTO METROPOLITAN AIR QUALITY CONTROL DISTRICT, JULY 22, 2016**

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**Response to Comment 4-1**

The comment is an introductory statement and does not address the adequacy of the IS/MND.

**Response to Comment 4-2**

In modeling the potential air quality emissions of the proposed project, the inherent assumptions of CalEEMod were updated with project-specific information to the maximum extent possible. As noted by the commenter, this included the incorporation of Tier 1 engine standards, as the applicant had indicated that the minimum standard for non-road diesel engine-powered construction equipment used in project construction would meet USEPA Tier 1 standards. However, given the phasing timeline of relevant USEPA and CARB regulations, and the proposed construction commencement date of January 2017, construction of the proposed project would most likely exceed Tier 1 standards for some pieces of equipment. Indeed, CalEEMod’s inherent construction equipment assumptions assume that construction fleet vehicles operating in 2017 (or later) would exceed the Tier 1 standard. Therefore, by assuming that construction activity would use Tier 1 vehicles only, the air quality modeling provides a conservative analysis, because many pieces of construction equipment would most likely exceed the Tier 1 standard and produce fewer emissions than would be assumed by relying on a Tier 1 fleet. To verify the use of Tier 1 engines as a conservative approach to construction modeling, an additional CalEEMod modeling run was completed for the proposed project using inherent assumptions for construction fleets in 2017. The results of the subsequent modeling are presented in Table 1.

<b>Table 1</b>		
<b>Construction Emissions with Tier 1 Engines Only and Current Standard Fleet</b>		
<b>Pollutant</b>	<b>Minimum Tier 1</b>	<b>Current Standard Fleet</b>
NO <sub>x</sub>	40.70	36.04
ROG	17.58	15.00
PM <sub>10</sub>	5.19	5.03
PM <sub>2.5</sub>	3.42	3.41
<i>Source: CalEEMod, August 2016.</i>		

As shown in Table 1, using current assumptions included in CalEEMod results in lower emissions of NO<sub>x</sub>, ROG, and PM<sub>10</sub> emissions. Because a standard current fleet of non-road diesel engine-powered construction equipment would exceed Tier 1 emissions standards, compliance with Tier 1 engine standards need not be included as a condition of approval or a mitigation measure for the proposed project. Instead, the compliance with Tier 1 engine standards can be considered a worst-case assumption for estimating the proposed project emissions.

**Response to Comment 4-3**

The ‘Standards of Significance’ section on page 29 of the IS/MND has been hereby revised as follows:

## Standards of Significance

For purposes of this Initial Study, air quality impacts may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of 2035 General Plan policies:

- Construction emissions of NO<sub>x</sub> above 85 pounds per day;
- Operational emissions of NO<sub>x</sub> or ROG above 65 pounds per day;
- Violation of any air quality standard or contribute substantially to an existing or projected air quality violation;
- Any increase in PM<sub>10</sub> concentrations, unless all feasible Best Available Control Technology (BACT) and Best Management Practices (BMPs) have been applied, then increases above 80 pounds per day or 14.6 tons per year; equal to or greater than five percent of the State ambient air quality standard (i.e., 50 micrograms/cubic meter for 24 hours) in areas where there is evidence of existing or projected violations of this standard. However, if project emissions of NO<sub>x</sub> and ROG are below the emission thresholds given above, then the project would not result in violations of the PM<sub>10</sub> ambient air quality standards;
- CO concentrations that exceed the 1-hour State ambient air quality standard (i.e., 20.0 ppm) or the 8-hour State ambient standard (i.e., 9.0 ppm); or
- Exposure of sensitive receptors to substantial pollutant concentrations.

The above revision is intended to reflect the Sacramento Metropolitan Air Quality Control District's updated thresholds of significance for PM<sub>10</sub> emissions. The updated threshold of significance was used during preparation of the air quality analysis for the proposed project; therefore, the revision is for clarification purposes only and does not alter the analysis or conclusions of the IS/MND.

### Response to Comment 4-4

Comment noted. As indicated in the comment letter, this comment does not address the adequacy of the IS/MND, but the comment will be forwarded to the decisionmakers for consideration.

### Response to Comment 4-5

Comment noted. The proposed project would comply with all SMAQMD rules in effect at the time of project construction.

### Response to Comment 4-6

The comment is a concluding statement and does not address the adequacy of the IS/MND.



Edmund G. Brown Jr.  
Governor

STATE OF CALIFORNIA  
Governor's Office of Planning and Research  
State Clearinghouse and Planning Unit



Ken Alex  
Director

July 28, 2016

**Letter 5**

Dana Mahaffey  
City of Sacramento  
300 Richards Blvd, Third Floor  
Sacramento, CA 95811

Subject: The Crossings  
SCH#: 2016062065

Dear Dana Mahaffey:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on July 27, 2016, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan  
Director, State Clearinghouse

Enclosures  
cc: Resources Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044  
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

5-1

**LETTER 5: SCOTT MORGAN, OFFICE OF PLANNING AND RESEARCH, STATE  
CLEARINGHOUSE, JULY 28, 2016**

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**Response to Comment 5-1**

Comment noted. The comment acknowledges that the IS/MND for the proposed project complies with the State Clearinghouse review requirements for environmental documents, pursuant to CEQA. The comment does not address the adequacy of the IS/MND.