2015 SOUTH GATE EDUCATIONAL CENTER MASTER PLAN SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT REPORT

PREPARED FOR

THE LOS ANGELES COMMUNITY COLLEGE DISTRICT

PREPARED BY

TERRY A. HAYES ASSOCIATES INC

MAY 2016

2015 SOUTH GATE EDUCATIONAL CENTER MASTER PLAN

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Prepared for

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1.0 INTRODUCTION

This chapter provides an overview of the Supplemental Draft Environmental Impact Report (EIR) for the 2015 South Gate Educational Center Master Plan (proposed project), a discussion of the background of the proposed project, the focus and intended use of this Supplemental Draft EIR, a description of the organization of the Supplemental Draft EIR, and the public review process.

Subsequent to the release of the Notice of Preparation (NOP) prepared for the proposed project and the certification of the EIRs prepared for the previous Master Plans, which are discussed below, the name of the proposed satellite campus has changed from the "Firestone Education Center" to the "South Gate Educational Center".

1.1 BACKGROUND

In December 2009, the Los Angeles Community College District (LACCD) certified a Program Environmental Impact Report (EIR), which allowed LACCD to acquire a site to relocate and expand the existing South Gate Educational Center (SGEC), a satellite campus of East Los Angeles College (ELAC). The site is located at 2525 Firestone Boulevard on the northwest corner of the Firestone Boulevard/ Santa Fe Avenue intersection in the City of South Gate within the County of Los Angeles. The existing SGEC is located at 2340 Firestone Boulevard.

Following certification of the Program EIR, a Master Plan was developed for a new SGEC and Subsequent Draft and Final EIRs were prepared in December 2010 and August 2011, respectively. The 2011 Master Plan had planned for a two-phase project that would ultimately serve up to 12,000 students. However, the 2011 Master Plan and the Subsequent EIR were never approved or certified and the programming for the new SGEC was reduced to accommodate 9,000 students. A new Master Plan and Subsequent EIR were then prepared. The 2013 Master Plan and Subsequent EIR were approved and certified on May 7, 2014.

Changes to the 2013 Master Plan are now being proposed, and these changes are the focus of this Supplemental EIR. The primary difference between the 2013 Master Plan and the proposed project is that Buildings 1 and 3 are now being proposed for demolition, and a parking structure is no longer being proposed to be constructed on-site. In lieu of constructing a parking structure, additional surface parking would be provided on-site.

1.2 AUTHORIZATION AND FOCUS

This Supplemental Draft EIR has been prepared in accordance with the California Environmental Quality Act (CEQA) Guidelines. Pursuant to CEQA Guidelines Section 15162(a), a Supplemental EIR may be required if there are: 1) substantial changes to the project; 2) there are substantial changes in the project's circumstances; or 3) new information that would not have been known at the time the EIR was certified becomes available.

A supplement to the EIR need contain only the information necessary to make the previous EIR adequate for the project as revised and may be circulated by itself without re-circulating the previous Draft or Final EIR. When an agency decides whether to approve the project, the decision-making body shall consider the previous EIR as revised by the supplemental EIR. The following environmental topic areas have been addressed in this Supplemental Draft EIR:

- Aesthetics
- Air Quality
- Cultural Resources
- Hazards and Hazardous Materials
- Noise and Vibration
- Land Use and Planning
- Transportation and Traffic

1.3 PROJECT APPLICANT AND LEAD AGENCY

In accordance with CEQA Guidelines Sections 15351 and 15367, the LACCD is the Applicant and the Lead Agency. CEQA Guidelines Section 15351 defines the Applicant as the person who proposes to carry out a project which needs a lease, permit, license, certificate, or other entitlement for use or financial assistance from one or more public agencies when that person applies for the governmental approval or assistance. CEQA Guidelines Section 15367 defines the Lead Agency as the public agency which has the principal responsibility for carrying out or approving the project.

1.4 RESPONSIBLE AGENCY

In accordance with CEQA Guidelines Section 15381, the City of South Gate has been identified as a Responsible Agency with regard to changes to City-maintained infrastructure, such as roads and utilities. Other agencies that may have a role in project approvals include, but are not limited to, the City of Los Angeles, County of Los Angeles, Los Angeles County Fire Department (LACFD), California Department of Transportation (Caltrans), Department of Toxic Substances Control, Los Angeles Regional Water Quality Control Board, the South Coast Air Quality Management District (SCAQMD), and the California Office of Historic Preservation (OHP).

1.5 INTENDED USE OF THIS SUPPLEMENTAL DRAFT EIR

The intended use of this Supplemental Draft EIR, which was prepared at the direction and under the supervision of the LACCD as the Lead Agency for the proposed project, is to inform the public of the potential significant environmental effects of a project and to assist the LACCD in making decisions regarding the approval of the proposed project. This Supplemental Draft EIR is designed to be considered with the Subsequent EIR that was then prepared for the 2013 Master Plan and certified by the LACCD Board of Trustees on May 7, 2014.

1.6 SUPPLEMENTAL DRAFT EIR ORGANIZATION

1.0 INTRODUCTION. This chapter contains an overview of the purpose and focus of the Supplemental Draft EIR, a discussion of the intended use of this Supplemental Draft EIR, a description of the organization of the Supplemental Draft EIR, and a discussion of the public review process and potential areas of controversy.

2.0 SUMMARY. This chapter provides a summary of the proposed project, its potential environmental effects and mitigation measures, and a summary of the alternatives to the proposed project evaluated in this Supplemental Draft EIR.

3.0 PROJECT DESCRIPTION. This chapter describes the project background, location, existing conditions, project objectives, and a description of the proposed project.

4.0 ENVIRONMENTAL IMPACTS. This chapter contains the environmental setting, project analyses, mitigation measures, and conclusions regarding the level of significance after mitigation for each of the environmental issues identified above.

5.0. OTHER CEQA DISCUSSIONS. This chapter provides a discussion of the (1) significant environmental effects of the proposed project, (2) significant environmental effects that cannot be avoided if the proposed project is implemented, (3) significant irreversible environmental changes that would result from implementation of the proposed project, and (4) growth-inducing impacts of the proposed project.

6.0 PERSONS AND SOURCES CONSULTED. This chapter lists all of the persons, public agencies, and organizations that were consulted or contributed, and all the references and sources used in the preparation of this Supplemental Draft EIR.

1.7 PUBLIC REVIEW AND COMMENTS

A Notice of Preparation (NOP) for this Supplemental Draft EIR was issued on June 26, 2015 for a 30-day public review period. The purpose of NOP was to initiate early consultation and provide the opportunity for comment from public agencies, stakeholders, organizations, and interested individuals to express their concerns about the proposed project, and acquire information and make recommendations on issues to be addressed in the Supplemental Draft EIR. A total of four comment letters were received. Information, data, and observations resulting from these letters are included throughout this Supplemental Draft EIR where relevant. The NOP and copies of each comment letter received are included in Appendix A of this Supplemental Draft EIR.

In accordance with CEQA Guidelines Sections 15087 and 15105, this Supplemental Draft EIR is being circulated for a 45-day public review period. Responsible and trustee agencies and the public are invited to comment in writing on the information contained in this document. Persons and agencies commenting are encouraged to provide information that they believe is missing from the Supplemental Draft EIR and to identify where the information can be obtained. All comments received concerning the Supplemental Draft EIR will be responded to in writing and incorporated into a Supplemental Final EIR.

Comment letters should be sent to:

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Los Angeles, CA 90017
Fax: (213) 891-2145
E-mail: THall@email.laccd.edu

1.8 AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

Potential areas of controversy and issues to be resolved by the decision-makers may include environmental concerns expressed in the NOP comment letters. Based on the NOP comment letters issues known to be of concern include potential air quality and hazardous materials impacts. Refer to Appendix A for copies of the NOP comment letters. Other areas of concern include environmental issues areas where significant and unavoidable impacts have been identified in this Supplemental Draft EIR. These areas include impacts related to cultural resources, noise and transportation and traffic.

2.0 SUMMARY

This chapter provides an overview of the Supplemental Draft Environmental Impact Report (EIR) for the 2015 South Gate Educational Center Master Plan (proposed project), its potential environmental effects and mitigation measures, and a summary of the alternatives to the proposed project evaluated.

Subsequent to the release of the Notice of Preparation (NOP) prepared for the proposed project and certification of the Environmental Impact Reports (EIRs) prepared for the previous Master Plans and, which are discussed below, the name the proposed satellite campus has changed from the “Firestone Education Center” to the “South Gate Educational Center”.

2.1 INTRODUCTION

East Los Angeles College (ELAC), one of nine colleges within the Los Angeles Community College District (LACCD), established the South Gate Education Center (SGEC) as a satellite campus in 1997 to better serve a growing student population that resides in the southern portion of the ELAC's service district. The SGEC is located approximately seven miles southeast of ELAC at 2340 Firestone Boulevard in the City of South Gate. Presently, the SGEC occupies a 51,000-square-foot building and includes 17 classrooms, a computer lab, a bookstore, a library, and offers a variety of career and academic courses. Due to rapid student growth and a lack of adequate facilities and curriculum offerings, the SGEC has become deficient in meeting the community’s current and future needs. Deficiencies include inadequate parking and the need for many students to commute to the ELAC campus to supplement their coursework.

The passage of Bond Measure AA in 2003 provided funding to LACCD for the purchase and development of a new satellite campus site to meet the demand for greater educational access and opportunities for the communities currently served by the SGEC. In December 2009, LACCD certified a Program EIR, which allowed LACCD to acquire the project site with the intent of relocating and expanding the SGEC. Following certification of this Program EIR, a Master Plan was developed for a new SGEC, and Subsequent Draft and Final EIRs were prepared in December 2010 and August 2011, respectively. However, the 2011 Master Plan and the Subsequent EIR were never approved or certified. The 2011 Master Plan had planned for a two-phase project that would ultimately serve up to 12,000 students. LACCD subsequently analyzed capacity load ratios to ensure the new SGEC was appropriate in concept, scale, and budget. As a result, the programming was reduced to accommodate 9,000 students and the Master Plan was updated, accordingly. A Subsequent EIR was then prepared for the 2013 Master Plan which was approved and certified on May 7, 2014. Changes to the 2013 Master Plan are now being proposed, and these changes are the focus of this Supplemental EIR.

2.2 SUMMARY OF THE PROPOSED PROJECT

The primary difference between the 2013 Master Plan and the proposed project is that Buildings 1 and 3 are now being proposed for demolition, and a parking structure is no longer being proposed to be constructed on-site. In lieu of constructing a parking structure, additional surface parking would be provided on-site. Consistent with the 2013 Master Plan, the proposed project consists of the construction and operation of a new LACCD satellite campus to replace the existing SGEC, provide for expanded and improved educational facilities, and accommodate up to 9,000 students. The timeframe for this level of enrollment is uncertain; however, based on LACCD projections, it is assumed that the enrollment capacity of 9,000 students would be met in 2031.[1] The new SGEC would offer academic programs parallel to those available at the main

[1]Depending on a number of factors including the economy, State funding and growth restrictions, and availability of educational facilities elsewhere, the date when this level of enrollment could occur may be delayed.

ELAC campus and allow students to complete their degree and transfer requirements at one convenient location.

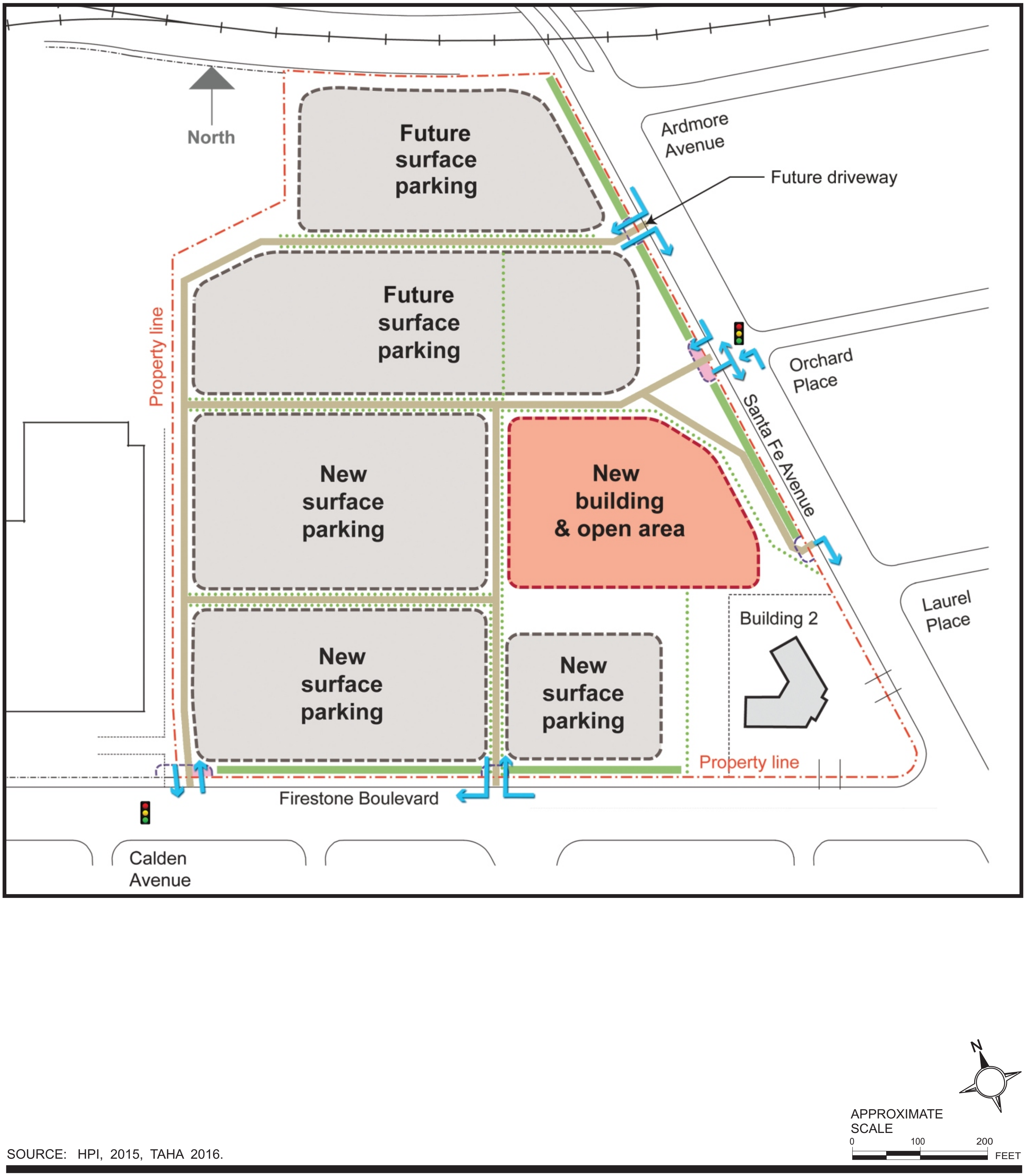
Implementation of the proposed project would include the demolition of Buildings 1, 3, 4 and the bridge that connects Building 1 to Building 2. Building 2 would remain on-site, but it would not be used for the delivery of college educational curriculum, and there are no plans to occupy Building 2 at this time. Following demolition, a new approximately 100,000-gross-square-foot building and a new surface parking lot would be constructed. The project site would also be improved with landscaping, an open space area, and other outdoor amenities to accommodate existing and projected student enrollment. The Conceptual Site Plan presented in **Figure 2-1** provides framework for the development of the new SGEC campus and is for illustrative purposes only. The final design would result from the collaboration of ELAC and a Design Architect selected to carry the proposed project forward. The final design plans would identify the footprint, orientation, design of the proposed building, and off-site improvements.

2.3 SIGNIFICANT AND UNAVOIDABLE IMPACTS

CEQA Guidelines Section 15382 defines a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of the physical conditions within an area affected by the project, including land, air, water, flora, fauna, ambient noise, and objects of historic or aesthetic significance." In accordance with CEQA Guidelines Section 15093, to approve a project with significant and unavoidable impacts, the lead agency must adopt a Statement of Overriding Considerations indicating that the benefits of approving the proposed project outweigh the negative environmental consequences.

As disclosed in this Supplemental EIR, and shown in **Table 2-1** at the end of this chapter, the proposed project would create significant and unavoidable impacts associated with:

- **Air Quality (Construction)**. Construction activity would result in a significant and unavoidable short-term regional NO_X impact. Mitigation measures are proposed to address this impact; however, no feasible mitigation measures were identified to reduce the significant impact to a less-than-significant level.
- **Cultural Resources (Historical Resources)**. The project site is part of a California Register-eligible Historic District, and Buildings 1, 2 and 3 are individually eligible for listing in the California Register. Building 4, the pedestrian bridge connecting Buildings 2 and 3, and the concrete wall/wrought iron fence with gate posts contribute to the California Register-eligible South Gate Historic District. The demolition of these historical resources would result in a significant and unavoidable impact. Mitigation measures are proposed to address these impacts; however, no feasible mitigation measures were identified to reduce the significant impact to a less-than-significant level.
- **Noise (Construction)**. Noise generated by construction of the proposed project would exceed the City's 5-dBA significance threshold at residential land uses north and east of the project site resulting in a significant and unavoidable short-term noise impact. Mitigation measures are proposed to address this impact; however, no feasible mitigation measures were identified to reduce the significant impact to a less-than-significant level.
- **Transportation and Traffic (Circulation System and Congestion Management Program [CMP])**. New vehicle trips resulting from the proposed project would create significant and unavoidable impacts related to the circulation system (i.e., intersection operations and CMP). Mitigation measures are proposed to address impacts related to the circulation system; however, no feasible mitigation measures were identified to reduce all of the significant impacts to a less-than-significant level. No feasible mitigation measures were identified to reduce the significant impact related to the CMP (i.e., intersection) to a less-than-significant level.



SOURCE: HPI, 2015, TAHA 2016.

taha 2014-075

2015 South Gate Educational Center Master Plan
Supplemental Draft Environmental Impact Report
LOS ANGELES COMMUNITY COLLEGE DISTRICT

FIGURE 2-1

CONCEPTUAL SITE PLAN

2.4 POTENTIALLY SIGNIFICANT IMPACTS THAT CAN BE MITIGATED TO LESS THAN SIGNIFICANT

Table 2-1, at the end of this chapter, provides a summary of the project-related impacts and their significance after mitigation. Based on the analysis contained in this Supplemental Draft EIR and the previous Subsequent Final EIR prepared for the 2013 Master Plan, the following environmental topic areas were found to result in a less-than-significant impact with mitigation:

- Cultural Resources (Archaeological Resources, Paleontological Resources and Human Remains)
- Hazards and Hazardous Materials (Hazardous Materials, Schools and Emergency Response Plans)
- Public Services (Fire and Police)

2.5 LESS-THAN-SIGNIFICANT OR NO IMPACT

Based on the analysis contained in this Supplemental Draft EIR and the previous Subsequent Final EIR prepared for the 2013 Master Plan, the following environmental topic areas were found to result in a less-than-significant impact or no impact without mitigation:

- Aesthetics
- Air Quality (Localized Emissions, Toxic Air Contaminant Emissions, Odors, Consistency with the Air Quality Management Plan)
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials (Airport Hazards and Wildland Fires)
- Hydrology and Water Quality
- Land Use and Planning (Parking)
- Noise (Vibration)
- Population, Housing and Employment
- Public Services (Parks and Libraries)
- Transportation and Traffic (Vehicle and Pedestrian Site Access and Public Transit, Bicycle, or Pedestrian Facilities)
- Utilities

2.6 SUMMARY OF ALTERNATIVES

CEQA requires that an EIR describe a range of reasonable alternatives to the project or to the location of the project that could feasibly avoid or lessen significant environmental impacts while substantially attaining the basic objectives of the project.[2] An EIR should also evaluate the comparative merits of the alternatives. The range of feasible alternatives is selected and discussed in a manner intended to foster meaningful public participation and informed decision making. Among the factors that may be taken into account when addressing the feasibility of alternatives (CEQA Guidelines Section 15126.6[f][1]) are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the proponent could reasonably acquire, control, or otherwise have access to the alternative site.

[2] *CEQA Guidelines*, California Code of Regulations (CCR), Title 14, Division 6, Chapter 3, Section 15126.6.

The alternatives considered for the proposed project are discussed in the Subsequent EIR that was prepared for the 2013 Master Plan that was approved and certified on May 7, 2014. The Alternatives evaluated in the Subsequent EIR included:

Alternative 1 – No Project Alternative. The No Project Alternative is required by CEQA Guidelines Section 15126.6(e)(2) and assumes that the proposed project would not be implemented. The No Project Alternative allows decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. However, "no project" does not necessarily mean that development on the project site will be prohibited. The No Project Alternative includes "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services" (CEQA Guidelines Section 15126.6[e][2]). In this case, the No Project Alternative assumes the existing SGEC would continue to operate at its current location, and the project site would eventually be re-occupied with industrial uses.

Alternative 2 – Historic Preservation Alternative. The Historic Preservation Alternative assumes that Buildings 1 and 3, which are individually eligible for listing in the California Register would not be demolished. In addition, Building 4, which has been identified as a contributor to a California Register-eligible district, would also not be demolished under Alternative 2. Alternative 2 assumes that Buildings 1, 3 and 4 would be retained and rehabilitated for college programming. Similar to the proposed project Building 2 would also remain on-site, but would not be used for college uses. Alternative 2 would not require the construction of a new building for college uses; however, a parking structure would be constructed on-site to provide parking for students and faculty. Vehicular access to the college campus would be provided exclusively from Firestone Boulevard via the shared driveway with the HON site under Alternative 2. Similar to the proposed project, student enrollment would not exceed 9,000 students under the Historic Preservation Alternative.

TABLE 2-1: SUMMARY OF PROJECT-RELATED IMPACTS AND MITIGATION MEASURES			
Impact Category	**Potentially Significant Impact**	**Mitigation Measures**	**Significance After Mitigation**
AIR QUALITY- CONSTRUCTION			
Regional Emissions	Construction activity would result in an unmitigated regional NO_X and VOC impact. With mitigation, the proposed project would result in a less-than-significant impact related to regional VOC construction emissions. However, NO_X emissions would result in a significant and unavoidable short-term impact during construction activity.	**AQ1** The construction contractor shall use U.S. Environmental Protection Agency Tier 3 emission standards for diesel-powered construction equipment greater than 50 horsepower. **AQ2** The construction contractor shall use electricity from power poles rather than temporary diesel or gasoline generators. **AQ3** The construction contractor shall maintain equipment and vehicle engines in good condition and in proper tune per manufacturers' specifications. **AQ4** The construction contractor shall provide temporary traffic controls, such as a flag person, during all phases of construct to maintain smooth traffic flows. **AQ5** The construction contractor shall schedule construction activities that effect traffic flow on arterial system to off-peak hours. **AQ6** The construction contractor shall utilize super-compliant architectural coatings as defined by the South Coast Air Quality Management District (volatile organic compound standard of less than ten grams per liter).	Significant and Unavoidable
CULTURAL RESOURCES - CONSTRUCTION			
Historical Resources	The project site is part of a California Register-eligible Historic District, and Buildings 1, 2 and 3 are individually eligible for listing in the California Register. Building 4, the pedestrian bridge connecting Buildings 2 and 3, and the concrete wall/wrought iron fence with gate posts contribute to the California Register-eligible South Gate Historic District. The demolition of these historical resources would result in a significant and unavoidable impact. Mitigation measures are proposed to address these impacts; however, no feasible mitigation measures were identified to reduce the significant impact to a less-than-significant level.	**CR1** Impacts resulting from the demolition of Buildings 1, 3, and 4 and a pair of historic gate posts shall be minimized through archival documentation of as-built and as-found condition. Prior to issuance of demolition permits, the lead agency shall ensure that documentation of the buildings and structures proposed for demolition is completed in the form of a Historic American Building Survey (HABS) Level I documentation that shall comply with the Secretary of the Interior's Standards for Architectural and Engineering Documentation (NPS 1990). The documentation shall include large-format photographic recordation, detailed historic narrative report, and compilation of historic research. The documentation shall be completed by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualification Standards for History and/or Architectural History (NPS 1983). The original archival-quality documentation shall be offered as donated material to the new campus library where it would be available for current and future generations. Archival copies of the documentation also would be submitted to the South Gate's Leland R. Weaver Public Library where it would be available to local researchers. Completion of this mitigation measure shall be monitored and enforced by the LACCD. **CR2** Impacts related to the loss of Buildings 1, 3, and 4, historic gateposts, and the historic district shall be reduced through the development of a retrospective display detailing the history of the historic district, its significance, and its important details and features. This display can be in the form of a physical exhibit and/or kiosk, and can be incorporated into publically-accessible spaces within the new SGEC building. It shall include images and details from the HABS documentation and any collected research pertaining to the historic district. The display content shall be prepared by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualification Standards for History and/or Architectural History (NPS 1983). The display shall be completed within two years of the date of completion of the proposed project. Completion of this mitigation measure shall be monitored and enforced by the LACCD.	Significant and Unavoidable

TABLE 2-1: SUMMARY OF PROJECT-RELATED IMPACTS AND MITIGATION MEASURES

Impact Category	Potentially Significant Impact	Mitigation Measures	Significance After Mitigation
		CR3 Avoidance of impacts to Building 2 shall be accomplished by ensuring that any alterations, including the construction of a new stair system and door on the building's second floor, is completed in conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines of Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (Weeks and Grimmer 1995). The work shall conform to the standards and guidelines for "rehabilitation." Completion of this mitigation measure shall be completed under the direction of a qualified architectural historian and shall be monitored and enforced by the LACCD.	
Archaeological Resources	During ground-disturbing activities, there is a possibility of discovering and potentially impacting archeological resources. Therefore, without mitigation, the proposed project could result in a significant impact related to archaeological resources.	**CR4** If evidence of archaeological resources (artifacts or features) are discovered during construction related earth-moving activities, all ground-disturbing activities (e.g., grading, grubbing, vegetation clearing) within 100 feet of the resource shall be halted and Los Angeles Community College District shall be notified. Los Angeles Community College District shall hire an archaeologist who meets the Secretary of the Interior's professional qualification standards shall be retained to assess the significance of the resource. Impacts to any significant resources shall be mitigated to a less-than-significant level through data recovery or other methods determined adequate by the archaeologist and Los Angeles Community College District and shall be consistent with the Secretary of the Interior's Standards for Archaeological Documentation. Any identified archaeological resources shall be recorded on the appropriate Department of Park and Recreation 523 (A-L) form and filed with the appropriate Information Center.	Less than Significant
Paleontological Resources	During deep excavations (i.e., ten feet deep or greater) there is a possibility of discovering and potentially impacting paleontological resources. Therefore, without mitigation, the proposed project could result in a significant impact related to paleontological resources.	**CR5** All project-related ground disturbances that could potentially impact paleontologically sensitive Quaternary older alluvium shall be monitored by a qualified paleontological monitor on a full-time basis, as this geologic unit is considered to have a high paleontological sensitivity. Since Quaternary older alluvium is estimated to occur at depths of ten feet and greater, all excavations deeper than ten feet will be monitored full-time. Additionally, any excavations that occur in surficial younger (Holocene age) Quaternary alluvial and fluvial deposits and/or topsoil (estimated to occur at less than ten feet in depth) shall be spot-checked on a part-time basis at the discretion of the Qualified Paleontologist to ensure that underlying paleontologically sensitive sediments are not being impacted. **CR6** A Qualified Paleontologist shall be retained to supervise monitoring of construction excavations beyond ten feet in depth and inspect exposed rock units during active excavations within sensitive geologic sediments. The paleontologist shall implement a paleontological monitoring and mitigation plan for the proposed project to reduce impacts to paleontological resources to a less-than-significant level in the event that such resources are encountered. The qualified paleontologist shall have authority to temporarily divert grading away from exposed fossils in order to professionally and efficiently recover the fossil specimens and collect associated data. In the event that fossils are encountered, at each fossil locality, field data forms shall be used to record pertinent geologic data, stratigraphic sections will be measured, and appropriate sediment samples will be collected and submitted for analysis.	Less than Significant

TABLE 2-1: SUMMARY OF PROJECT-RELATED IMPACTS AND MITIGATION MEASURES				
Impact Category	**Potentially Significant Impact**		**Mitigation Measures**	**Significance After Mitigation**
Human Remains	During ground-disturbing activities, there is a possibility of discovering and potentially impacting human remains. Therefore, without mitigation, the proposed project would result in a significant impact related to human remains.	**CR7**	If human remains are discovered during any demolition/construction activities, all ground-disturbing activity within a 100 foot radius of the remains shall be halted immediately, and the Los Angeles County Coroner shall be notified immediately, according to Public Resources Code Section 5097.98 and California Health and Safety Code Section 7050.5. If the human remains are determined to be Native American, the Coroner will notify the Native American Heritage Commission, and the guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains. The Native American Heritage Commission will consult with the Most Likely Descendant, if any. The Most Likely Descendant shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. The Los Angeles Community College District shall be responsible for the approval and implementation of the Most Likely Descendant recommendations as deemed appropriate, prior to resumption of ground-disturbing activities within 100 foot radius of where the remains were discovered.	Less than Significant
HAZARDS & HAZARDOUS MATERIALS - CONSTRUCTION				
Hazardous Materials (Contaminated Soils)	During construction of the proposed project, contaminated soils not previously identified could be encountered, potentially creating a significant hazard. Therefore, without mitigation, construction of the proposed project could result in a significant impact related to contaminated soils.	**HM1**	Should LACCD discover a previously undocumented release or threatened release of any hazardous substances during pre-construction demolition and/or construction, the release shall be addressed by a contingency plan developed and implemented in consultation with the Department of Toxic Substances Control (DTSC). If still in effect, the response can be overseen by the DTSC in accordance with the Voluntary Cleanup Agreement (VCA) between DTSC and LACCD entered into on January 22, 2013.	Less than Significant
Hazardous Materials (Asbestos and Lead-based Paint)	Removal and/or disturbance of ACMs and lead-based paint during the renovation and/or demolition activities could expose construction workers and the public to asbestos and lead-based paint. Therefore, without mitigation measures construction of the proposed project would result in a significant impact related to asbestos and lead-based paint.	**HM2**	Prior to the demolition of Buildings 1, 3 and 4, asbestos containing materials, lead based paint and other identified hazardous materials shall be removed in accordance with the recommendations contained in Hazardous Building Materials surveys conducted for the buildings. Removal would be conducted by a California Occupation Safety and Health Administration (Cal/OSHA)-registered and State-licensed asbestos removal contractor. Abatement operations shall be performed under the direct observation of a California Certified Asbestos Consultant or Certified Site Surveillance Technician. For all abatement activities which involve the removal of at least 100 square feet of hazardous materials, notifications must be made to the South Coast Air Quality Management District and Cal/OSHA, 10 days and 24 hours, respectively, prior to initiation of such activities.	Less than Significant

TABLE 2-1: SUMMARY OF PROJECT-RELATED IMPACTS AND MITIGATION MEASURES

Impact Category	Potentially Significant Impact	Mitigation Measures	Significance After Mitigation
Schools	Disposal and use of hazardous materials during construction of the proposed project would be done in compliance with applicable regulations. In the event that previously unidentified contaminated soils or other hazardous materials are encountered during construction of the proposed project, associated remediation activities, which could include transporting hazardous materials to a permitted facility for treatment and/or disposal, would occur in accordance with federal, State and local regulations. These actions would ensure that the proposed project would not emit hazardous materials, substances, or waste within one quarter mile of an existing or proposed school during construction. Therefore, without mitigation, the proposed project would result in a significant impact related to schools.	Mitigation Measures **HM1** and **HM2**.	Less than Significant
Emergency Response Plans	Construction of the proposed project would require street and sidewalk improvements, and temporary street or lane closures that would occur during construction could interfere with the implementation of the City's emergency response plan. Therefore, without mitigation measures construction of the proposed project could result in a significant impact related to emergency response plans.	Mitigation Measures **PS1** and **PS2**	Less than Significant
NOISE & VIBRATION - CONSTRUCTION			
Noise	Noise generated from construction activity would exceed the noise significance threshold at residential land uses north and east of the proposed project site. Mitigation measures are proposed to address this impact; however, no feasible mitigation measures were identified to reduce the significant impact to a less-than-significant level.	**N1** All construction equipment shall be equipped with muffler devices. **N2** Grading and construction contractors shall use rubber-tired equipment as opposed to tracked equipment. **N3** Construction equipment shall be electric- and hydraulic-powered rather than diesel and pneumatic-powered. **N4** The construction contractor shall locate construction staging areas away from noise-sensitive uses. **N5** Haul routes shall be located on major arterial roads within non-residential areas. **N6** A "noise disturbance coordinator" shall be established. The disturbance coordinator shall be responsible for responding to local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall be required to implement reasonable measures such that the complaint is resolved. All notices that are sent to residential units within 500 feet of the construction site and all signs posted at the construction site shall list the telephone number for the disturbance coordinator.	Significant and Unavoidable

TABLE 2-1: SUMMARY OF PROJECT-RELATED IMPACTS AND MITIGATION MEASURES			
Impact Category	**Potentially Significant Impact**	**Mitigation Measures**	**Significance After Mitigation**
		N7 Prior to commencement of construction activity, a qualified structural engineer licensed in California shall survey the existing foundation and other structural aspects of Building 2. The survey shall provide a shoring design to protect the identified land uses from potential damage. The qualified structural engineer shall submit a pre-construction survey letter establishing baseline conditions at the historic buildings. These baseline conditions shall be forwarded to the lead agency and to the mitigation monitor prior to issuance of any foundation only or building permit. At the conclusion of vibration causing activities, the qualified structural engineer shall issue a follow-on letter describing damage, if any, to the historic buildings. The letter shall include recommendations for any repair, as may be necessary, in conformance with the Secretary of the Interior Standards. Repairs to shall be undertaken and completed in conformance with all applicable codes including the California Historical Building Code (Part 8 of Title 24) prior to issuance of any temporary or permanent certificate of occupancy for the new building.	
PUBLIC SERVICES – CONSTRUCTION			
Fire	Construction of the proposed project could temporarily reduce Los Angeles County Fire Department emergency response times due to street or lane closures. Therefore, without mitigation measures, construction of the proposed project could result in a significant impact related to fire protection services.	**PS1** Prior to the construction of the proposed project, Los Angeles Community College District shall provide to the Los Angeles County Fire Department all building plans, construction plans, construction schedules, and, if applicable, proposed construction and street or lane closures related to the proposed project for Los Angeles County Fire Department review and approval. **PS2** At least three days in advance of any street or lane closure that may affect Fire and/or Paramedic responses in the area, Los Angeles Community College District shall notify the Los Angeles Sherriff Department, South Gate Police Department, Los Angeles County Fire Department , and Fire Stations 16, 147, and 54.	Less than Significant
Police	Construction of the proposed project could temporarily reduce South Gate Police Department emergency response times due to street or lane closures. Therefore, without mitigation measures, construction of the proposed project would result in a significant impact related to police services.	Mitigation Measure **PS2**.	Less than Significant
TRANSPORTATION & TRAFFIC - OPERATIONS			
Circulation System	Vehicle trips generated by proposed project would result in an increase in v/c ratios at specific study intersections that exceed City of South Gate and County of Los Angeles impact threshold criteria. Mitigation measures are proposed to address these impacts; however, no feasible mitigation measures were identified to reduce all of the significant impacts related to the circulation system to less than significant.	**Intersection No. 9: Santa Fe Avenue/Project Driveway-Orchard Place** **TT1** LACCD shall install a traffic signal and associated roadway restriping and signage at the Santa Fe Avenue/Project Driveway-Orchard Place intersection to provide a northbound left-turn lane and a southbound left-turn lane. **Intersection No. 10: Santa Fe Avenue/Firestone Boulevard** **TT2** LACCD shall install of an exclusive westbound right-turn only lane at the Santa Fe Avenue/Firestone Boulevard Intersection.	Significant and Unavoidable

TABLE 2-1: SUMMARY OF PROJECT-RELATED IMPACTS AND MITIGATION MEASURES

Impact Category	Potentially Significant Impact	Mitigation Measures	Significance After Mitigation
Congestion Management Program (CMP)	Vehicle trips generated by proposed project would increase traffic at CMP Station 143: Alameda Street/Firestone Boulevard such that the CMP impact threshold criteria is exceeded during the weekday PM peak hour. No feasible mitigation measures were identified to reduce the significant impact related to this CMP intersection to less than significant.	No feasible mitigation measures were identified.	Significant and Unavoidable

SOURCE: TAHA, 2015.

3.0 PROJECT DESCRIPTION

This chapter provides a detailed description of the 2015 South Gate Educational Center Master Plan (proposed project) and includes a discussion of the background of the proposed project, the project objectives, and a description of the project site and surrounding area, and the estimated time-line for construction and occupancy of the new South Gate Educational (SGEC).

Subsequent to the release of the Notice of Preparation (NOP) prepared for the proposed project and certification of the Environmental Impact Reports (EIRs) prepared for the previous Master Plans and, which are discussed below, the name the proposed satellite campus has changed from the “Firestone Education Center” to the “South Gate Educational Center”.

3.1 PROJECT BACKGROUND

East Los Angeles College (ELAC), one of nine colleges within the Los Angeles Community College District (LACCD), established the SGEC as a satellite campus in 1997 to better serve a growing student population that resides in the southern portion of the ELAC's service district. ELAC is located at 1301 Avenida Cesar Chavez in the City of Monterey Park and serves an area of approximately 100 square miles within Los Angeles County that includes all or parts of Alhambra, Bell, Bell Gardens, City of Commerce, Cudahy, East Los Angeles, Huntington Park, Los Angeles, Maywood, Montebello, Monterey Park, Rosemead, San Gabriel, South Gate, and Vernon. The existing SGEC is located approximately seven miles southeast of ELAC at 2340 Firestone Boulevard in the City of South Gate. Presently, the SGEC occupies a 51,000-square-foot building and includes 17 classrooms, a computer lab, a bookstore, a library, and offers a variety of career and academic courses.

Due to rapid student growth and a lack of adequate facilities and curriculum offerings, the SGEC has become deficient in meeting the community’s current and future needs. Deficiencies include inadequate parking and the need for many students to commute to the ELAC campus to supplement their coursework. The passage of Bond Measure AA in 2003 provided funding to LACCD for the purchase and development of a new satellite campus site to meet the demand for greater educational access and opportunities for the communities currently served by the SGEC. In December 2009, LACCD certified a Program EIR, which allowed LACCD to acquire the project site with the intent of relocating and expanding the SGEC. Following certification of this Program EIR, a Master Plan was developed for the new SGEC, and Subsequent Draft and Final EIRs were prepared in December 2010 and August 2011, respectively. However, the 2011 Master Plan and the Subsequent EIR were never approved or certified. The 2011 Master Plan had planned for a two-phase project that would ultimately serve up to 12,000 students. LACCD subsequently analyzed capacity load ratios to ensure the new SGEC was appropriate in concept, scale, and budget. As a result, the programming was reduced to accommodate 9,000 students and the Master Plan was updated, accordingly. A Subsequent EIR was then prepared for the 2013 Master Plan which was approved and certified on May 7, 2014. Changes to the Master Plan are now being proposed, and these changes are the focus of this Supplemental EIR.

3.2 PROJECT OBJECTIVES

In accordance with Section 15124 of the CEQA Guidelines, EIRs shall include a statement of objectives of the proposed project. A description of the project’s objectives defines the project’s intent and facilitates the formation of project alternatives. The objectives of the proposed project include:

- Providing a full-service education center to replace the existing SGEC and create a true campus environment for ELAC’s satellite campus;

- Providing greater capacity to adequately serve the existing and future demand for higher education facilities in the southeast Los Angeles County region;
- Developing and implementing plans and procedures to enhance ELAC satellite campus' visibility and reputation for quality;
- Fostering a culture of academic excellence by strengthening the educational programs offered at the ELAC satellite campus that will lead directly to greater student success;
- Creating community-oriented development that successfully serves students and the community; and
- Provide economic benefits to the City of South Gate and its residents.

3.3 PROJECT SITE AND SURROUNDING LAND USES

Project Site

The project site is located at 2525 Firestone Boulevard on the northwest corner of the Firestone Boulevard/ Santa Fe Avenue intersection in the City of South Gate within the County of Los Angeles (**Figure 3-1**). The 18.5-acre project site is bounded on the north by the Union Pacific Railroad (UPRR) right-of-way, on the east by Santa Fe Avenue, on the south by Firestone Boulevard, and on the west by a former furniture manufacturing facility that has since closed and is being used as warehouse storage, referred to as the HON site in this Supplemental Draft EIR.

The project site is currently occupied with four two- to four-story buildings (Buildings 1 through 4). An aerial photograph of project site and surrounding area is presented in **Figure 3-2**.

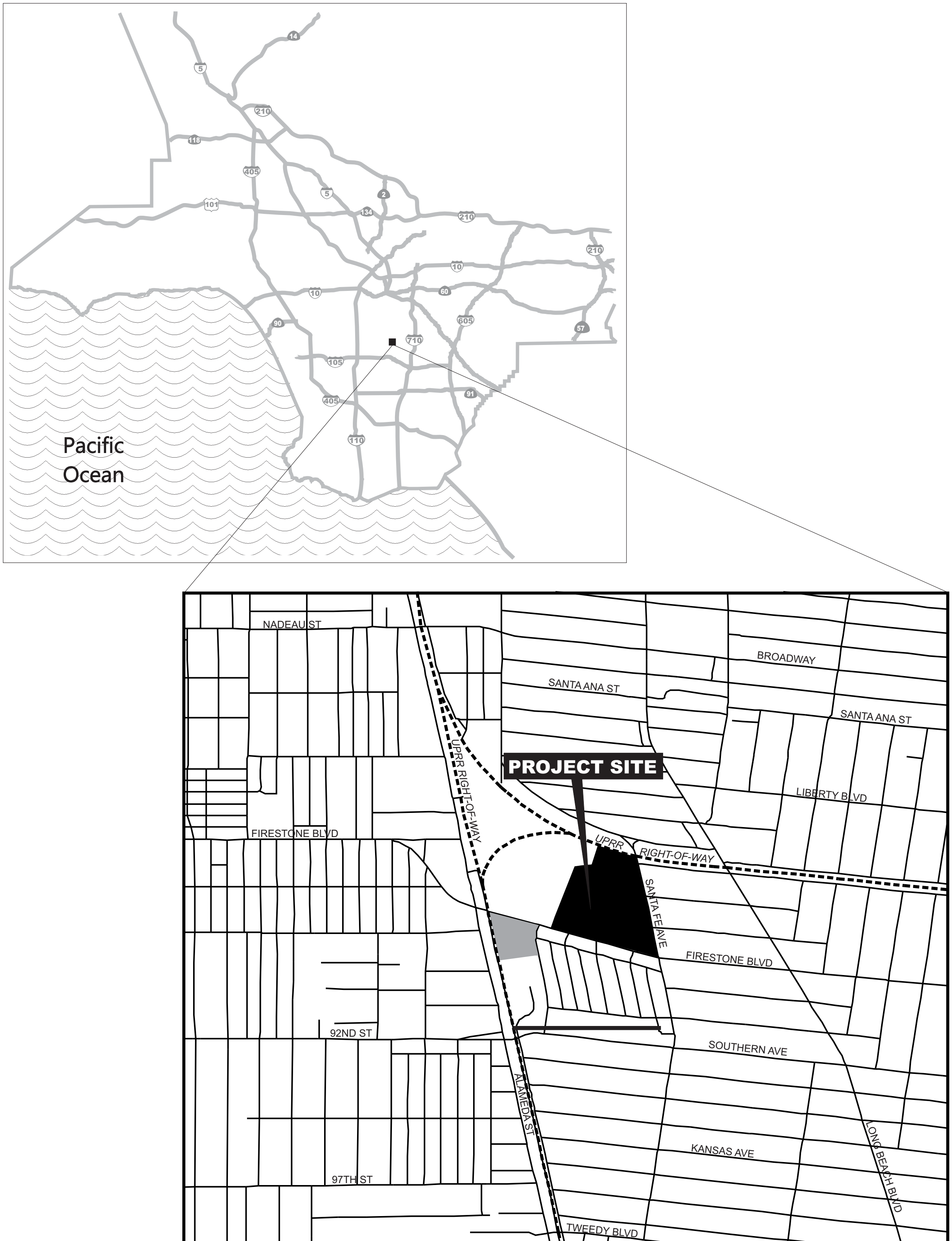
Building 1. Building 1 is located in front of Firestone Boulevard and is the largest building on the project site. This two-story, 455,949-square-foot building, is currently vacant. Loading docks are located on the south, west and east sides of the building, and a truck ramp to the basement is located on the west side of the building.

Building 2. Building 2 is located at the southeast corner of the project site and is oriented towards the Firestone Boulevard/Santa Fe Avenue intersection. This three-story, 25,087-square-foot building, was recently occupied by the Los Angeles Unified School District (LAUSD) South Gate Community Adult School; however, it is currently vacant although a portion of the building is currently being used by LACCD for storage. Building 2 is connected to Building 1 by a bridge on the second floor.

Building 3. Building 3 is located immediately north of Building 1. This four-story, 366,371-square-foot building, is currently vacant. Although structurally independent, Building 3 shares a common wall with Building 1, and there are a few openings that connect both buildings internally. The third and fourth stories partially extend beyond the building's footprint over the roof of Building 1. Loading docks are located along the north, west and east sides of the building.

Building 4. Building 4 is located on the northeast corner of the project site at the Santa Fe Avenue/Ardmore Avenue intersection. This two-story, 220,550-square-foot building, is currently vacant. Building 4 was constructed later than the other buildings on-site, and has a different architectural style than the other three buildings. A passageway on the first floor, a bridge on the third floor, and an extension of Building 4 connects to Building 3.

Primary vehicular access to Buildings 1, 3, and 4 is provided via one driveway on the north side of Firestone Boulevard, east of Calden Avenue. This driveway provides shared vehicular access with the adjacent HON site to the west. An agreement between the owners of both sites provides for shared use of this driveway. Currently, this access driveway is unsignalized and accommodates full access turning movements (i.e., left-turn and right-turn ingress and egress turning movements). In addition to the primary access driveway on Firestone Boulevard, secondary driveways are provided along the west side of Santa Fe Avenue, just south of Orchard Place and opposite Laurel Place. Vehicular access to Building 2 is provided via one driveway along the north side of Firestone Boulevard and one driveway along the west side of Santa Fe Avenue.



LEGEND:

- Project Site
- Existing South Gate Education Center (To be vacated)

N

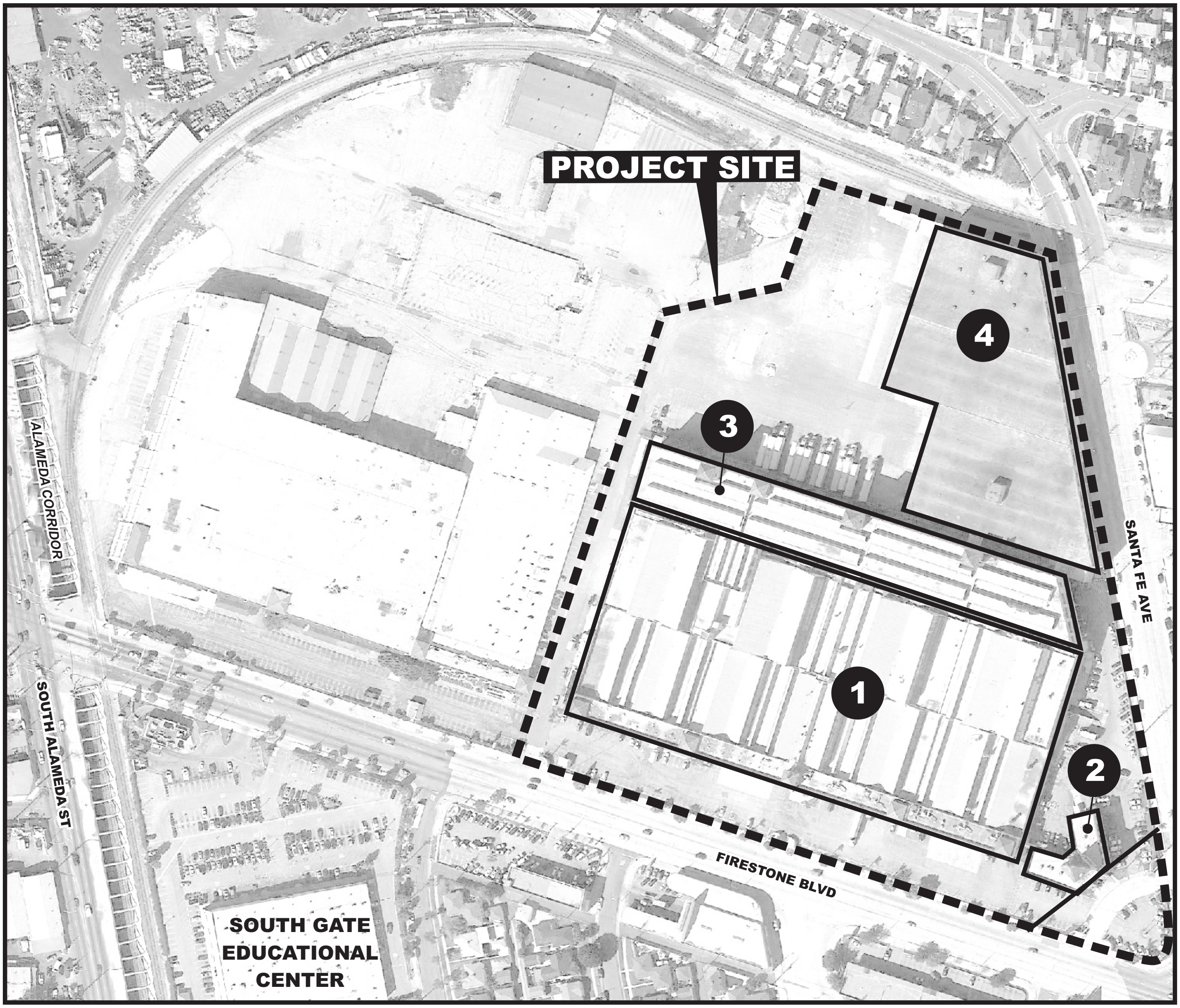
APPROXIMATE SCALE

0 750 1500 FEET

SOURCE: TAHA, 2015.

FIGURE 3-1

REGIONAL LOCATION



LEGEND:

Existing Buildings

Project Site

N

APPROXIMATE SCALE

0 125 250 FEET

SOURCE: Google Earth and TAHA, 2016.

FIGURE 3-2

PROJECT SITE

Surrounding Land Uses

The project area is influenced by heavy vehicular traffic, freight railroad lines, and the Alameda Corridor. Most structures in the project area are at least 25 years old, with the exception of parcels that have been recently redeveloped as chain commercial businesses. The surrounding land uses, which are discussed below and shown in **Figure 3-2** above, include commercial, industrial, and residential uses.

North. A single- and multi-family residential neighborhood is located immediately north of the adjacent Union Pacific Railroad (UPRR) right-of-way. These residential uses extend north for approximately two miles to Slauson Avenue. The residences immediately north of the UPRR right-of-way are oriented towards Independence Avenue.

East. There are three city blocks located immediately east of the project site along Santa Fe Avenue between Firestone Boulevard and the UPRR right-of-way. The block immediately south of the UPRR right-of-way between Ardmore Avenue and Orchard Place contains one of the most noticeable visual features in the project area, an approximately 130-foot water tower located at the southeast corner of the Santa Fe Avenue/Ardmore Avenue intersection. The block between Orchard Place and Laurel Place consists of commercial businesses including a discount store, a restaurant, and other similar commercial uses. The block between Laurel Place and Firestone Boulevard includes a commercial strip mall at the northeast corner of the Santa Fe Avenue/Firestone Boulevard intersection. This a commercial strip mall that includes a discount store, a fast food restaurant, a beauty salon, coin laundry, a dentist's office, and a surface parking area. Extending further east beyond the commercial strip mall are multi-family residences, additional commercial uses and motels. A gas station is located southeast of the project site at the southeast corner of the Santa Fe Avenue/Firestone Boulevard intersection.

South. There are four city blocks located immediately south of the project site along Santa Fe Avenue from Santa Fe Avenue to the Alameda Corridor.[1] The first block, between Tope and Santa Fe Avenues, contains a commercial strip mall that includes a donut shop, coin laundry facility, and cleaners. The three blocks east of the first block contain automotive-related commercial uses, including a repair shop, an automotive sound shop, a car wash, an automotive window tinting and detailing shop, a used car dealership, and an engine/transmission repair shop. Further south of these commercial uses is a single-family residential neighborhood. The SGEC is also located southwest of the project site, just east of the Alameda Corridor and west of the single-family residential neighborhood.

West. A 64-foot wide shared driveway separates the project site from the HON site immediately west of the project site. The HON site consists of five one- to two-story buildings and surface parking. A large metal storage building has also been recently located in the northeast corner of the surface parking lot. The HON site was most recently utilized as a furniture manufacturing facility; however, this facility has since closed and the HON site is being used as warehouse storage and for manufacturing building windows. Further west, across Alameda Street and the Alameda Corridor between Firestone Boulevard and 85th Street are commercial uses, including a McDonald's drive-thru restaurant and several industrial auto-related businesses. Residential uses are located beyond these commercial uses. Heavy industrial uses are located adjacent to the northwest corner of the HON site, east of the Alameda Corridor and south of the UPRR tracks.

[1] The Alameda Corridor is a 20-mile-long rail cargo expressway linking the ports of Long Beach and Los Angeles to the transcontinental rail network east of downtown Los Angeles. It is a series of bridges, underpasses, overpasses and street improvements that separate freight trains from street traffic.

The project site and the adjacent HON site buildings were once occupied by the Firestone Tire and Rubber Plant. These buildings were evaluated for historic significance as part of the previous environmental analysis conducted for the proposed project. The two sites were found eligible for listing in the California Register of Historical Resources (California Register) as a Historic District. The Historic District includes all four buildings on the project site and two buildings on the HON site. The pedestrian bridge connecting Buildings 1 and 2, the gateposts, guardhouses and wall, which surround both properties along Firestone Boulevard and Santa Fe Avenue, were also found to be contributing elements to the Historic District.

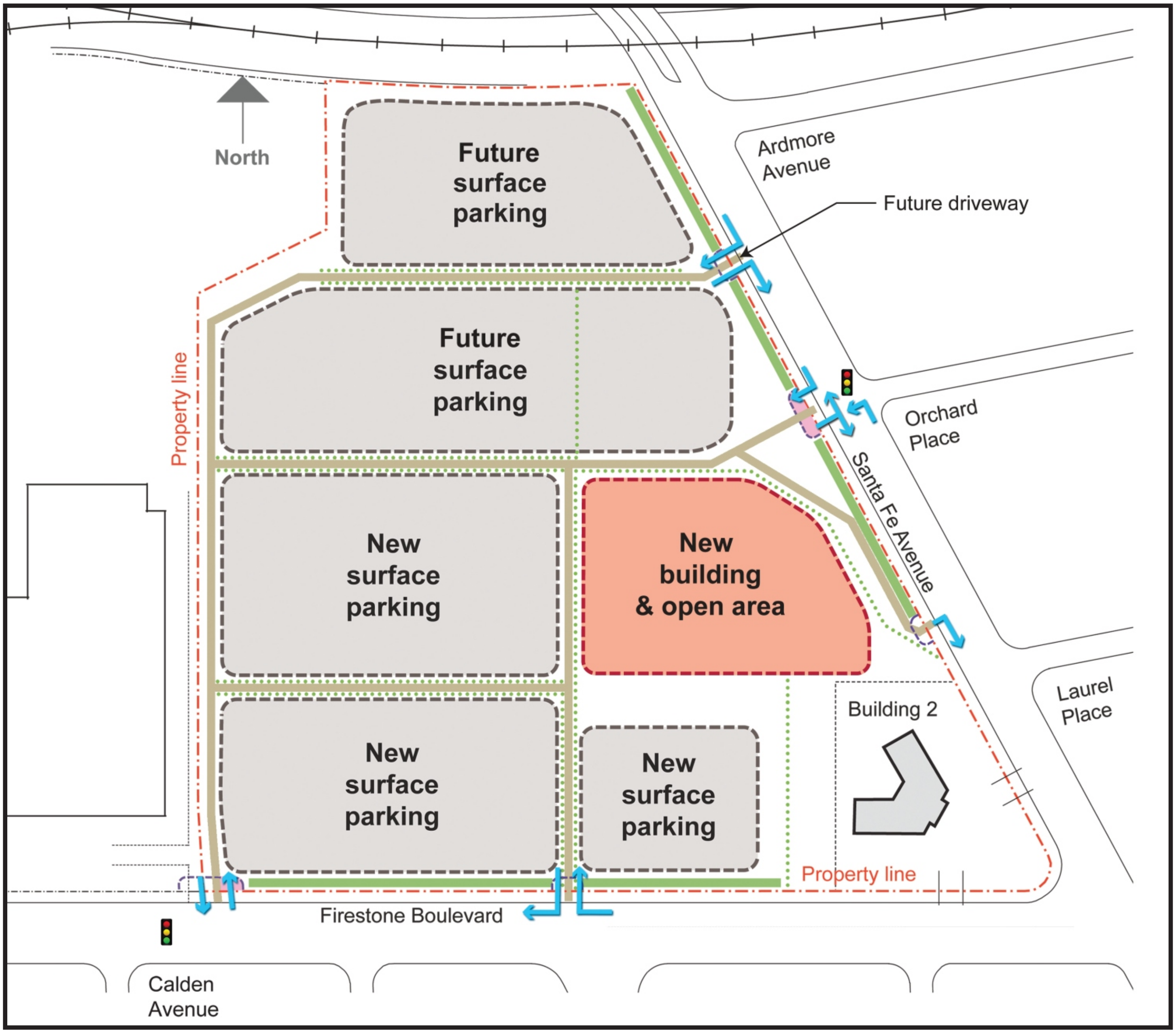
3.4 PROJECT DESCRIPTION

Consistent with the previous 2013 Master Plan, the proposed project consists of the construction and operation of a new LACCD satellite campus to replace the existing SGEC, provide for expanded and improved educational facilities, and accommodate up to 9,000 students. The timeframe for this level of enrollment is uncertain; however, based on LACCD projections, it is assumed that the enrollment capacity of 9,000 students would be met in 2031.[2] The new SGEC would offer academic programs parallel to those available at the main ELAC campus and allow students to complete their degree and transfer requirements at one convenient location.

The primary difference between the 2013 Master Plan and the proposed project is that Buildings 1 and 3 are now being proposed for demolition, and a parking structure is no longer being proposed to be constructed on-site. In lieu of constructing a parking structure, additional surface parking would be provided on-site. Specifically, implementation of the proposed project would include the demolition of Buildings 1, 3, 4 and the bridge that connects Building 1 to Building 2. Building 2 would remain on-site, but it would not be used for the delivery of college educational curriculum, and there are no plans to occupy Building 2 at this time. Following demolition, a new approximately 100,000-gross-square-foot building and a 1,350-space surface parking lot would be constructed. Initially, 700 surface parking spaces would be provided in the southern portion of the project site. When student enrollment reaches a level that dictates the need for additional parking, the northern portion of the site would be improved with an additional 650 parking spaces. Until then, the northern portion of the project site would be improved with decompressed granite and be fenced off from the rest of the campus. The project site would also be improved with landscaping, an open space area, and other outdoor amenities. The Conceptual Site Plan as **Figure 3-3** provides framework for the development of the new SGEC and is for illustrative purposes only. The final design would result from the collaboration of ELAC and a Design Architect selected to carry the proposed project forward. The final design plans would identify the footprint, orientation, design of the proposed building, and off-site improvements.

SGEC Building. The proposed SGEC building would be approximately 100,000 gross square feet and three stories or approximately 50 feet tall. The building would contain all necessary classrooms, labs, offices, and support facilities for students to complete their degree and transfer requirements in one location. The programming for the SGEC building has been developed through intensive interaction and collaboration with ELAC administration and user groups to accommodate a reasonable level of growth with a focus on spaces that serve multiple uses and reduce redundancy. The SGEC building would provide needed science labs and would expand the space available for Career Technical Education, Liberal Arts and Sciences programs. The number of classrooms would increase from 17 at the exiting SGEC to 32 at the new SGEC. The new SGEC building's administrative and student services offices would be located on the ground floor near the main entry. Classrooms, labs and other student support spaces would be on the upper floors.

[2]Depending on a number of factors including the economy, State funding and growth restrictions, and availability of educational facilities elsewhere, the date when this level of enrollment could occur may be delayed.



SOURCE: HPI, 2015, TAHA 2016.

FIGURE 3-3

CONCEPTUAL SITE PLAN

Vehicle Circulation. As shown in the Conceptual Site Plan, vehicular access to the project site would be provided via five driveways. A right-turn in/right-turn out only driveway is proposed on Santa Fe Avenue, north of Orchard Place; however, this driveway would not be constructed until the northern portion of the project site would be used for surface parking. A driveway accommodating full access is also proposed opposite Orchard Place, essentially forming the fourth leg of the Santa Fe Avenue/Orchard Place intersection. This intersection is proposed to be signalized. A right-turn out (egress) only driveway is proposed on Santa Fe Avenue, south of Orchard Place, and a right-turn in/right-turn out only driveway is proposed on Firestone Boulevard, opposite Firestone Plaza. The Firestone Boulevard West Driveway is the existing shared driveway with the adjacent HON site and full access would be maintained in order to continue to accommodate ingress and egress movements for both the project site and the HON site. LACCD would share the cost such that this project driveway would be integrated into the future traffic signal at the adjacent Calden Avenue/Firestone Boulevard intersection (in the interim conditions).

As a condition of approval for the nearby Calden Court Apartments project, a traffic signal will be installed at the Calden Avenue/Firestone Boulevard intersection. The signal at the Firestone Boulevard driveway would operate in conjunction with the Calden Avenue/Firestone Boulevard traffic signal (i.e., in an offset configuration). All vehicular turning movements would continue to be allowed at the Firestone Boulevard driveway.

If the adjacent HON site is redeveloped, it is assumed that the HON site Applicant would be required to tie into the Calden Avenue/Firestone Boulevard traffic signal and construct the fourth leg of the intersection (in the area directly egress from Calden Avenue which is under HON ownership). Under this condition, the existing Firestone Boulevard driveway would likely be closed and the north leg of the signalized Calden Avenue/Firestone Boulevard intersection would facilitate vehicular access for both the redeveloped HON site and the project site. However, these improvements are not required for the proposed project, and would only be implemented if and when the HON property is redeveloped.

Pedestrian Circulation. Most students would drive to the SGEC or take a shuttle from the ELAC campus. There would be few walk-ins from the surrounding neighborhood, and pedestrian traffic would come mostly from bus stops at the Firestone Boulevard/Santa Fe Avenue intersection. Most students would walk along Santa Fe Avenue to access the campus. Crosswalks at the newly signalized campus entry would make it easier for students to reach food and retail on the east side of Santa Fe Avenue.

Landscaping and Open Space. In addition to the new SGEC building, open spaces and landscaping are proposed to enhance the character of the campus. On the eastern and southern borders of the project site, new landscape buffers would be created. A central landscaped open space area would also be developed at adjacent to the SGEC building as a place for students to gather. This area could include active and passive recreation space, amenities for performances and ceremonies, public art, and greenery and shade. The Design Architect would be encouraged to incorporate distinctive sustainable lighting, signage, site furniture, and other amenities to further enhance the campus environment.

Sustainability Features. The LACCD Board of Trustees mandates the use of sustainable building practices for its campuses, and all new buildings that are funded with Measure J Bond monies are required to be "green" buildings and built to the requirements of Leadership in Energy and Environmental Design (LEED™) certification standards. LEED™ is a national rating system developed by the United States Green Buildings Council (USGBC) to provide a benchmark for the design, construction, and operation of green buildings. In accordance with LACCD directives, the SGEC would be designed and constructed using the USGBC LEED rating system. As part of achieving this LEED™ certification, the proposed project includes design strategies related to water efficiency, energy, innovation, indoor air quality, materials and resources, and site design. Design strategies include, but are not limited to, low flow water efficiency plumbing fixtures, high performance building envelope, green cleaning program, signage green education program, the usage of low volatile organic compounds in building materials, outdoor air delivery monitoring, the usage of recycled building content (e.g., building materials and fly-ash concrete mixture), sustainable wood, and maximizing infiltration on-site.

3.5 CONSTRUCTION SCHEDULE AND PHASING

Construction activities are anticipated to begin in January 2017, and occupancy of the SGEC is planned for the summer of 2021. Construction activities would occur in three phases:

Phase 1 would include the demolition of Buildings 1, 3, and 4 and the bridge connecting Buildings 1 and 2. Following the demolition of the bridge, the point of connection on Building 2 would be repaired with a new code compliant exterior stair system which would include handrails, guardrails, stairs, and landings as well as a new 2nd floor door into Building 2. Phase 1 would also include the removal of all hardscape and site grading. Asphalt and concrete may be crushed on-site and used as backfill material mixture. Approximately 3,400 loads of construction debris are anticipated to be hauled off-site (load = 10 cubic yards). In addition, approximately 95,000 cubic yards of soil would be imported to the site to fill the basement area of Building 1. Phase 1 construction activities are anticipated to take approximately 12 months to complete.

Phase 2 would include the construction of off-site improvements, including but not limited to, the construction of new walkways along Santa Fe Avenue, new site driveways, new traffic signals on Santa Fe Avenue and Firestone Boulevard, street restriping and other traffic-related improvements. Phase 2 is anticipated to begin in December of 2017and take approximately nine months to complete. To better protect the new construction, some improvements such as the sidewalk and driveways along Santa Fe Avenue would not begin until July of 2020 and would occur at the same time as some of the Phase 3 construction activities.

Phase 3 would include the construction of the underground utility infrastructure, a new surface parking lot, a new approximately 100,000-square-foot building and various other on-site campus amenities. Phase 3 construction activities are anticipated begin in August of 2018 and take approximately 30 months to complete.

3.6 DISCRETIONARY ACTIONS AND APPROVALS

Approvals required for development of the proposed project include, but are not limited to, the following:

- Master Plan Approval from LACCD Board of Trustees;
- Demolition permit from the City of South Gate;
- Building occupancy and other permits from Division of State Architect (DSA); and
- Miscellaneous permits and approvals as necessary from State and/or local agencies to implement the proposed project and necessary mitigation measures.

4.0 ENVIRONMENTAL IMPACTS

This chapter evaluates the environmental impacts that could result from the implementation of the 2015 South Gate Educational Center Master Plan (proposed project). The potential impacts are analyzed for the following environmental issues: aesthetics, air quality, cultural resources, geology and soils, hazards and hazardous materials, land use and planning, noise and vibration, and transportation and traffic. Discussion is focused on the identification of changes that may be considered to be environmentally significant (a substantial, or potentially substantial, adverse change in the environment) relative to the existing environmental conditions. Analysis of each environmental issue is organized to include the following subsections:

EXISTING SETTING – A description of existing conditions that precede implementation of the proposed project.

REGULATORY FRAMEWORK – An identification of applicable federal, State and local regulations.

THRESHOLDS OF SIGNIFICANCE – The criteria by which the project components are measured to determine if the proposed project would cause a substantial or potentially substantial adverse change in the existing environmental conditions.

IMPACTS – An analysis of the beneficial and adverse effects of the proposed project, including, where appropriate, assessments of the significance of potential adverse impacts relative to established thresholds (relative to existing conditions per CEQA).

CUMULATIVE IMPACTS – Cumulative impacts are the changes in the environment that result from the incremental impact of the proposed project and other nearby projects. Cumulative impact analysis provides a reasonable forecast of future environmental conditions and gauges the effects of a series of projects.

MITIGATION MEASURES – Wherever significant adverse impacts relative to existing conditions are identified in the Impacts subsection, appropriate and reasonable measures are recommended to avoid or minimize impacts to the extent feasible.

SIGNIFICANCE OF IMPACTS AFTER MITIGATION – A discussion of whether a significant and unavoidable impact would be reduced to a less-than-significant level or to no impact after mitigation under CEQA or remain significant and unavoidable.

4.1 AESTHETICS

This section provides an overview of the visual changes associated with the 2015 South Gate Educational Master Plan (proposed project) and evaluates potential construction and operational impacts related to aesthetics. Topics addressed include visual character, scenic resources, views and vistas, light and glare, and shade and shadows.

EXISTING SETTING

Visual Character

Visual character can be defined as the overall impression formed by the relationship between visual elements of the built environment. Elements contributing to this impression include:

- The nature and quality of buildings;
- The visibility of scenic resources;
- The compatibility between uses and activities;
- The quality of the streetscape, including roadways, sidewalks, plazas, parks and street furniture; and
- The nature and quality of private property landscaping visible to the general public.

In general, the evaluation of visual character is determined by the degree of contrast that could potentially result between a proposed project and the existing built environment. Contrast is assessed by considering the consistency of the following features of a proposed project with those of the existing built environment:

- Scale: Refers to the general intensity of development comprised of the height and set-back of buildings;
- Massing: Refers to the volume and arrangement of buildings; and
- Open Space: Refers to setback of buildings and amount of pedestrian and recreational spaces.

The 18.5-acre project site is located at the northwest corner of the Firestone Boulevard/Santa Fe Avenue intersection in the City of South Gate. The project site is bounded on the north by the Union Pacific Railroad (UPRR) right-of-way, on the east by Santa Fe Avenue, on the south by Firestone Boulevard, and on the west by a former furniture manufacturing facility that has since closed and is being used as warehouse storage (HON site). As discussed in Section 4.3 Cultural Resources, the project site and the adjacent HON site were once occupied by the former Firestone Tire and Rubber Plant and are part of the South Gate Historic District, which is eligible for listing in the California Register of Historical Resources (California Register). The South Gate Historic District includes all four buildings on the project site and two buildings on the HON site.

The project site is currently developed with four buildings two- to four-stories tall and surface parking areas. There is minimal landscaping on the site with the exception of a few trees and shrubs scattered throughout the project site along the perimeter of buildings and at the Firestone Boulevard/Santa Fe Avenue intersection. The four buildings were constructed between the 1920s and 1950s. Buildings 1, 2, and 3 were constructed in 1928, and Building 4 was constructed in 1951. Although constructed at different times, the architectural elements of the buildings exhibit similar characteristics in scale, massing, and building materials. Each building exhibits smooth exterior building surfaces with beige tones. Rooftop styles vary from flat roof to pitched, some of which are asymmetrical.

As shown in **Figure 4.1-1**, Building 1 is a two-story industrial-type building of substantial mass and scale along most of the Firestone Boulevard frontage. The eastern end of the building extends to Santa Fe Avenue. Loading docks are located on the south, west and east sides of the building. A truck ramp to the basement is located on the east side of the building. Building 1 is setback approximately 90 feet from Firestone Boulevard and creates a “walled” appearance due to the continuity of the façade and lack of pedestrian entrances.

View of the south-facing façade of Building 1 from Firestone Boulevard.

View of Building 2 on the southeast corner of the project site at the Firestone Boulevard/Santa Fe Avenue intersection.

SOURCE: TAHA, 2016.

FIGURE 4.1-1

VIEWS OF BUILDINGS 1 AND 2

Building 2 is a three-story building located on the southeast corner of the project site at the Firestone Boulevard/Santa Fe Avenue intersection. Unlike the adjacent buildings on the project site and in the project area, Building 2 is oriented towards the Firestone Boulevard/Santa Fe Avenue intersection. Building 2 exhibits similar architectural characteristics as Buildings 1, 3, and 4. However, Building 2 also features several ornamental elements such as the clock tower and glass entryway.

A pedestrian bridge connects the west side of Building 2 to Building 1. Building 2 is setback from the Firestone Boulevard/Santa Fe Avenue intersection by a surface parking lot. A low wall with fencing extends along the perimeter of the parking lot at the sidewalk. Several palm trees are planted along this wall. **Figure 4.1-1** shows the orientation of Building 2 and its ornamental elements that make it visually distinct from the other three buildings on-site.

Building 3, adjacent to Building 1 on the north, is a four-story building with a length equal to Building 1. Building 3 shares a common wall with Building 1; however, Building 3 is structurally independent and only a few openings connect both buildings internally. The third and fourth stories partially extend beyond the building's footprint over the roof of Building 1. Loading docks are located along the north, west and east side of the building. **Figure 4.1-2** illustrates Building 3's relationship to Building 1 and Santa Fe Avenue.

Building 4 fronts Santa Fe Avenue and is a two-story industrial-type building located on the northeast corner of the project site at the Santa Fe/Ardmore Avenues intersection. A passageway on the first floor, a bridge on the third floor, and an extension of Building 4 connects to Building 3. Although Building 4 was constructed later than Buildings 1, 2, and 3, it exhibits similar surface characteristics to the other buildings, including smooth exterior building surfaces and beige tones. Similar to Building 1, **Figure 4.1-2** shows that, Building 4 also creates a "walled" appearance due to the continuity of the façade and lack of pedestrian entrances and window openings. The UPRR right-of-way abuts Building 4 to the north. Fences separate the UPRR from the project site to the south and from the residences to the north. As shown in **Figure 4.1-3**, the UPRR right-of-way functions as a transition zone between the project site and the residential area to the north with fences on both sides.

The area surrounding the project site is developed with a mix of uses including commercial, industrial, and residential uses. The visual character of the project area is influenced by vehicular traffic, freight railroad lines, and older residential structures. Most buildings in the project area are at least 25 years old, with the exception of parcels that have been recently redeveloped as chain commercial businesses. The overall area is auto-oriented with wide roads and multiple surface parking lots in the midst of industrial and commercial properties. The main roads, Firestone Boulevard and Santa Fe Avenue, have two traffic lanes in each direction along with a left-hand turn lane in the middle of the street. Strip mall commercial centers or industrial uses fronting Firestone Boulevard are setback by associated surface parking lots. One-story commercial storefronts line Santa Fe Avenue. Street trees are prevalent in the residential areas, and Firestone Boulevard is lined with many street trees. Santa Fe Avenue, on the other hand, is largely devoid of trees and landscaping. The commercial/industrial and residential areas in the immediate vicinity of the project site is described in more detail below.

North. North of the UPRR right-of-way, Santa Fe Avenue transitions into the single- and multi-family residential neighborhood of Walnut Park. The residencies on Santa Fe Avenue are one to two stories with setback lengths varying from 10 to 25 feet. These residential setbacks are typically front yard areas. The backyards of the residences along the south side of Santa Fe Avenue border the UPRR right-of-way. Wooden and concrete fences separate the residences from the UPRR right-of-way. Also north of the UPRR right-of-way is a large industrial use situated between Alameda Street to the west and residences to the east.

East. Santa Fe Avenue is primarily residential in character except for the commercial uses located directly east of the project site along Santa Fe Avenue. On the northeast corner of the Santa Fe Avenue/Firestone Boulevard intersection is a commercial strip mall that includes a discount store, restaurant, beauty salon, coin laundry, a dentist's office, and surface parking area.

View of the east-facing façade of Building 3 from Santa Fe Avenue.

View of the east-facing façade of Building 4 from Santa Fe Avenue.

SOURCE: TAHA, 2016.

FIGURE 4.1-2

VIEWS OF BUILDINGS 3 AND 4

View of the Union Pacific Railroad right-of-way and residences located north of the project site.

SOURCE: TAHA, 2016.

FIGURE 4.1-3

VIEW OF THE UNION PACIFIC RAILROAD TRACKS

South of Firestone Boulevard, Santa Fe Avenue includes multi- and single-family residences. One of the most prominent visual features in the project area is an approximately 130-feet tall water tower located at the southeast corner the Santa Fe/Ardmore Avenues intersection, just south of the UPRR tracks (**Figure 4.1-4**).

South. Firestone Boulevard is the major east-west, commercial/industrial corridor in the City of South Gate. Commercial uses, including auto-related and restaurant/fast food related establishments, dominate this street in the project area (**Figure 4.1-5**). South of the project site, along Firestone Boulevard, are the following businesses: gas station, donut shop, coin laundry facility, auto repair shop, auto sound shop, car wash, auto window tinting and detailing shop, used car dealership, and engine/transmission repair shop. All of the commercial and dining establishments along this street are of the typical commercial strip mall scale and massing (one to two stories with surface parking in front). Setbacks vary along Firestone Boulevard from zero to approximately 90 feet.

West. A 64-foot wide driveway is shared by the project site and the HON site immediately west of the project site. The HON site consists of three closely-spaced industrial-type buildings, and two small steel buildings, surface parking, and loading areas. The existing buildings on the HON site were constructed in the early 1940s to mid-1950s. The two largest buildings, located in the southern portion of the site exhibit smooth exterior building surfaces with beige tones and flat rooftop styles. The remaining buildings exhibit steel façades with rooftop styles varying from A-frame to round. A large metal storage building has also been recently located in the northeast corner of the surface parking lot.

As previously mentioned and discussed in detail in Section 4.3 Cultural Resources, the buildings on both the HON site and the project site once comprised the former Firestone Tire and Rubber Plant, and are part of the South Gate Historic District, which is eligible for listing in the California Register. The South Gate Historic District includes all four buildings on the project site and two buildings on the HON site.

To the west of Alameda Street and the Alameda Corridor, between Firestone Boulevard and 85th Street, are commercial uses. These commercial businesses include a McDonald’s drive-thru restaurant and several industrial automotive-related businesses. Residential uses are located further west of these commercial uses. A large, heavy industrial use is located adjacent to the northwest of the HON site, east of the Alameda Corridor and south of the UPRR right-of-way.

Scenic Resources

Scenic resources can include natural and urban features. Natural features may include, but are not limited to, open space, native or ornamental vegetation/landscaping, topographic or geologic features, and natural water sources. Urban features that may contribute to a valued aesthetic character or image include: structures of architectural or historic significance or visual prominence; public plazas, art or gardens; consistent design elements (such as setbacks, massing, height, and signage) along a street or district; pedestrian amenities; landscaped medians or park areas, etc.

There are no designated scenic resources in the City of South Gate, and the nearest officially designated state scenic highway is State Route 2 (Angeles Crest Highway), located approximately 15 miles north of the project site. However, as described above and in Section 4.3 Cultural Resources, there are several historic resources on the project site, and the site is part of a Historic District which is eligible for listing in the California Register. Building 4, the pedestrian bridge connecting Buildings 1 and 2, the gateposts, and the wall, which surround both properties, are considered contributing elements to the South Gate Historic District.

View from Orchard Place of the 130-foot tall water tower located at the Santa Fe/Ardmore Avenues intersection.

SOURCE: TAHA, 2016.

FIGURE 4.1-4

VIEW OF THE WATER TOWER

View of commercial businesses along the south side of Firestone Boulevard, looking east.

SOURCE: TAHA, 2016.

FIGURE 4.1-5

VIEW OF COMMERCIAL BUSINESSES
ALONG FIRESTONE BOULEVARD

While Buildings 1, 2, and 3 are all individually eligible for listing in the California Register, Building 4 is not. Building 4 retains the same color and exterior cladding as the other buildings; however, it was built later than and in a different style than Buildings 1, 2, and 3. Another prominent visual feature in the project area is an approximately 130-foot water tower located at the southeast corner of the Santa Fe Avenue/Ardmore Avenue intersection (**Figure 4.1-4**). While not a City-designated scenic resource, this water tower is a significant visual feature adjacent to the project site across Santa Fe Avenue that is visible from a number of vantage points in the surrounding area.

Views and Vistas

Scenic views refer to the visibility of a focal point or panoramic view. In general, the availability of views is closely tied to topography and distances from visual features and resources. The project site is a major visual feature in the project area due to the distinctive architecture of Building 2, the dominant presence of Building 1 and the high visibility of the Buildings 1 and 2 from Firestone Boulevard, a major arterial roadway in the City of South Gate. Views of the project site are primarily available from the Firestone Boulevard and Santa Fe Avenue.

Channelized views of the San Gabriel Mountains are also available in the vicinity of the project site. The foothills of the San Gabriel Mountains begin approximately 15 miles to the north of the project site and comprise a north-facing view for pedestrians and motorists along north-south streets. Typically, the articulation of the mountains is not clearly discernible from the project site due to the height and density of development, presence of smog, and distance to the mountains. Any buildings exceeding one-story in height block views of the mountains to the north. Existing foreground views are primarily of commercial and industrial land uses of one to four stories in height. Due to the high density of urban development and the project site's location in a flat portion of the Los Angeles Basin, views within vicinity of the project site are generally limited to the immediate area.

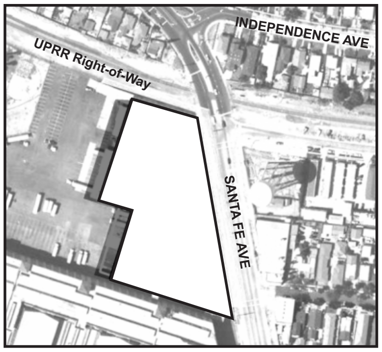
Views from the project site include the commercial businesses on Firestone Boulevard and Santa Fe Avenue, the UPRR right-of-way, and the approximately 130-foot tall water tower. This water tower is a prominent landmark at the Santa Fe/Ardmore Avenues intersection that can be seen looking north and south from Santa Fe Avenue and west from Orchard Place.

Light and Glare

Glare or perceived brightness is characterized as a diffused light, which is generated or reflected from a surface, often causing a nuisance to the viewer. The project site is located in a dense urban area with a high level of ambient light due to street lighting, vehicle headlights and security lighting. The project site itself has its own wayfinding and security lighting. Each street bordering the project site is lined with approximately 30-foot tall street lights. The majority of the buildings in the project area are comprised of non-reflective materials, such as concrete and plaster. Light sensitive receptors in the project area are limited to residences to the north and east of the project site.

Shade and Shadow

Shadows are cast in a clockwise direction from the west/northwest to the east/northeast from approximately 7:00 a.m. to 4:00 p.m., or later depending on the time of the year. Generally, the shortest shadows are cast during the Summer Solstice and grow increasingly longer until the Winter Solstice. During the Winter Solstice, the sun appears lower in the sky and shadows are at their maximum coverage lengths. Shadow-sensitive uses generally include routinely useable outdoor spaces associated with residential, recreational, or institutional land uses; commercial uses, such as pedestrian-oriented outdoor spaces or restaurants with outdoor dining areas; nurseries; and existing solar collectors/panels. Shadow sensitive uses in the vicinity of the project site include usable outdoor spaces associated with the residential uses located to the north and northeast of the project site. **Figures 4.1-6** through **4.1-8** show the existing shadows cast by Building 4. As shown, late afternoon shadows during the spring, fall and winter from Building 4 are cast onto the residences to the north and northeast of the project site.



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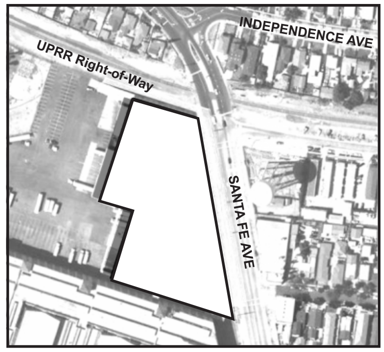

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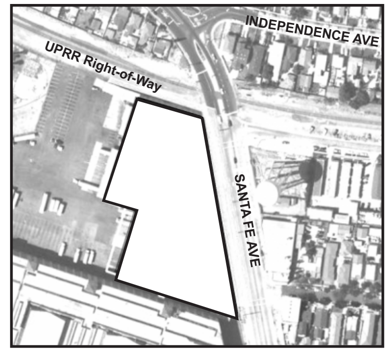

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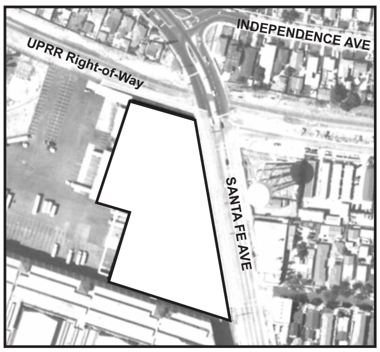

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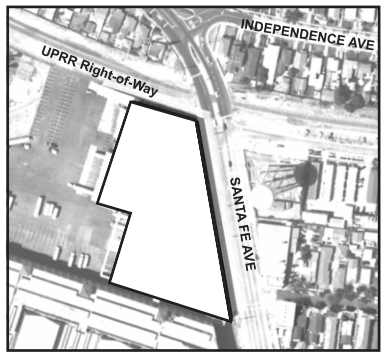

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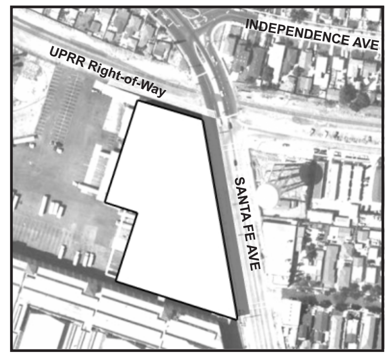

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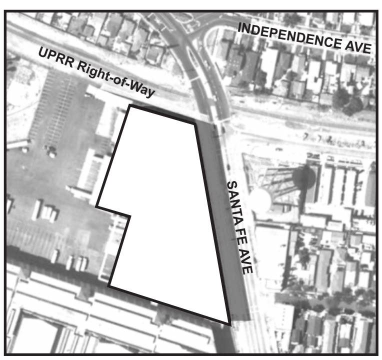

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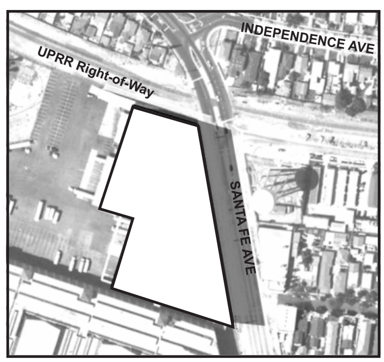

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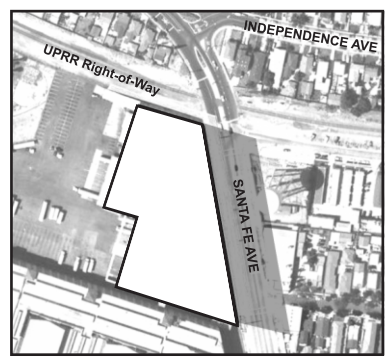


5:00 p.m.

LEGEND:

Existing Building 4

Approx. Scale

N

0 200 400 Feet

SOURCE: Google Earth and TAHA, 2016.

taha

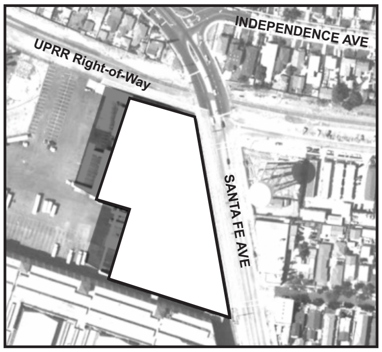
taha 2014-075

2015 South Gate Educational Center Master Plan
Supplemental Draft Environmental Impact Report

LOS ANGELES COMMUNITY COLLEGE DISTRICT

FIGURE 4.1-6

EXISTING BUILDING 4
SUMMER SOLSTICE SHADOWS



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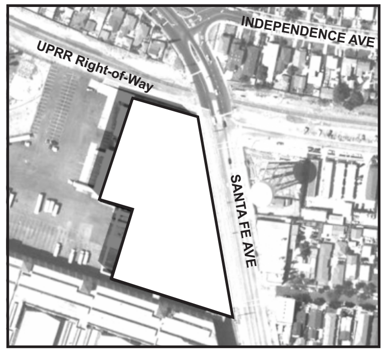

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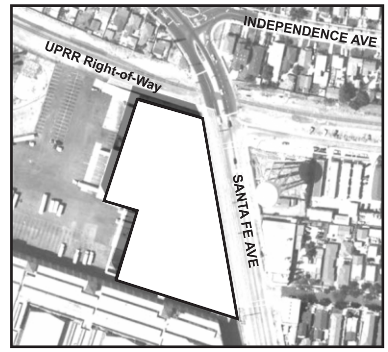

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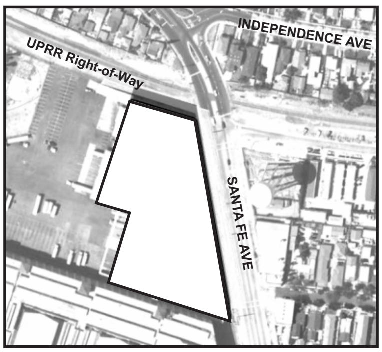

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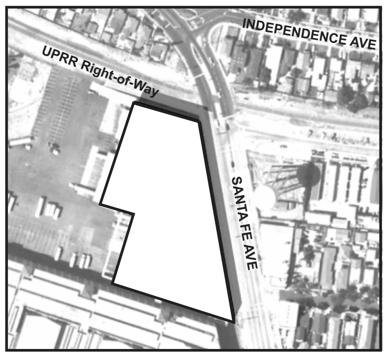

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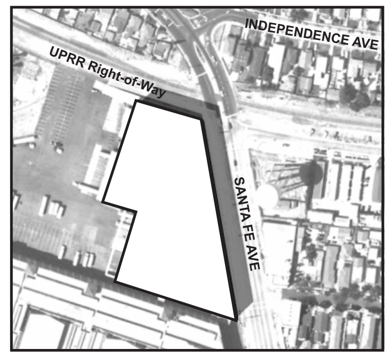

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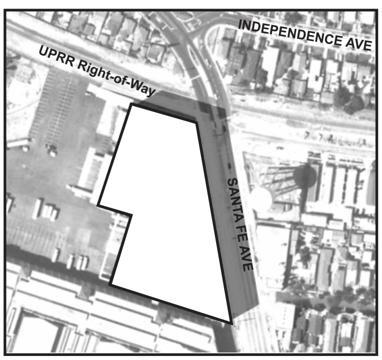

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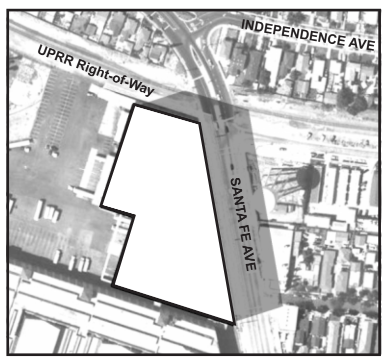

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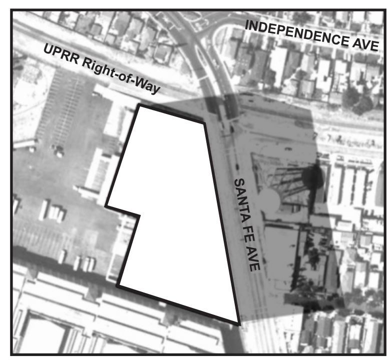


5:00 p.m.

LEGEND:

Existing Building 4

APPROX. SCALE

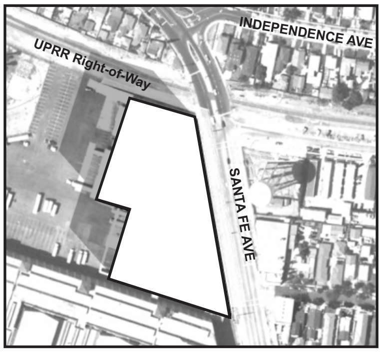
N

0 200 400 FEET

SOURCE: Google Earth and TAHA, 2016.

FIGURE 4.1-7

EXISTING BUILDING 4
SPRING/FALL EQUINOX SHADOWS



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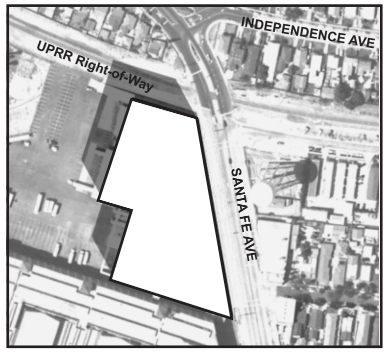

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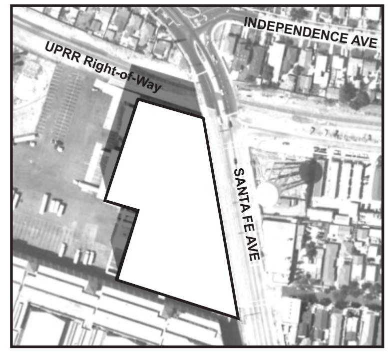
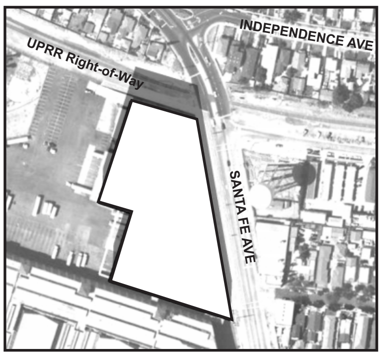
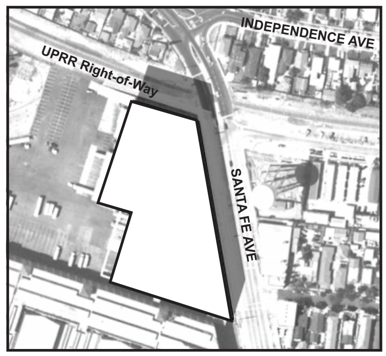


11:00 a.m.



12:00 p.m.



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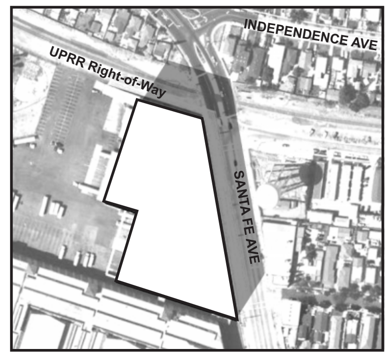

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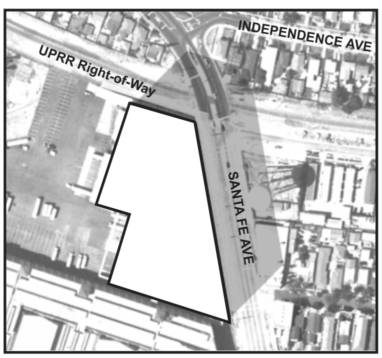


3:00 p.m.

LEGEND:

Project Site

APPROX. SCALE

N

0 200 400 FEET

SOURCE: TAHA, 2016.

FIGURE 4.1-8

EXISTING BUILDING 4
WINTER SOLSTICE SHADOWS

REGULATORY FRAMEWORK

Federal

There are no federal regulations related to aesthetics that apply to the proposed project.

State

California Scenic Highway Program. The California Scenic Highway Program is a mechanism used by the California Department of Transportation (Caltrans) to classify highways meeting specific criteria as "scenic" throughout California. The purpose of the program is to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. According to Caltrans, "a highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view." There are no designated scenic highways located in the City of South Gate.

Local

City of South Gate General Plan Community Design Element (Community Design Element). The Community Design Element provides policy guidance to protect and improve the visual character and quality of the City of South Gate. The project site is identified in the Community Design Element as being located within Subarea 1 of the South Gate College District (SGCD). While California Government Code Section 53094 includes provisions for school districts to exempt classroom facilities from local zoning regulations, applicable objectives and policies of the City's General Plan related to aesthetics are listed in **Table 4.1-1**.

TABLE 4.1-1: APPLICABLE GENERAL PLAN OBJECTIVES AND POLICIES RELATED TO AESTHETICS

Objective/Policy	Objective/Policy Description
COMMUNITY DESIGN ELEMENT	
Objective CD 2.5	Ensure that public and institutional uses, such as government and administrative offices, recreation facilities, senior and youth centers and educational uses adequately support existing and future populations.
Policy P.4	Public buildings and sites will be designed to be compatible in scale, mass, and character with the vision for the specific Neighborhood, District, or Corridor.
Objective CD 3.2	Minimize the impact of parking on the pedestrian environment and residential neighborhoods.
Policy P.1	Parking lots for new buildings should be located behind or on the side of buildings to reduce their visual impact.
Policy P.2	Large parking lots should be sited to avoid potential impacts to adjacent residential areas or buffered from the residential uses.
Policy P.3	Parking lots for new buildings that front a sidewalk should include landscaping between the parking lot and the sidewalk.
Policy P.4	Where parking lots front the street, the City will work with existing property owners to add landscaping between the parking lot and the street.
Policy P.5	Parking lots should be landscaped to create an attractive pedestrian environment and reduce the impact of heat islands.
Objective CD 6.1	Create a series of distinct Districts throughout the City, each with its own character, identity and mix of uses.
Policy P.7	Iconic, high quality urban design and architecture should be pursued with new projects in all the Districts in order to improve the aesthetics of the City.
Objective CD 6.2	Design landscaping, buildings, and sites to enhance the pedestrian environment and enhance the urban character of the City's Districts.
Policy P.1	New development in Districts will be designed and developed to achieve a high level of quality and distinctive character and architecture.
Policy P.2	Publicly-accessible parks and open space will be required in new projects of 5 acres or more in any District.
Policy P.3	With the possible exception of some manufacturing and distribution uses, new buildings and substantial remodels in Districts will be sited and designed to enhance pedestrian activity along sidewalks, including but not limited to: • Providing maximum window exposure and minimizing "blank wall" exposure to the sidewalk and street. • Integrating sidewalks, plazas and other amenities that contribute to pedestrian-oriented activities. • Incorporating uses in the first floor along the street frontage that stimulate pedestrian activity.

TABLE 4.1-1: APPLICABLE GENERAL PLAN OBJECTIVES AND POLICIES RELATED TO AESTHETICS

Objective/Policy	Objective/Policy Description
COMMUNITY DESIGN ELEMENT	
	• Siting the linear frontage of the building along or near the front property line and near the sidewalk to maintain a no-setback or minimal-setback building that runs along the sidewalk or property line in a “building wall” design, which is more pleasant and accessible for pedestrians. • Incorporating landscaping that visually distinguishes the site or structure. • Incorporating building articulation of the façade and the use of multiple building volumes and planes. • Using rooflines and height variations to break up the massing and provide visual interest. • Providing distinct treatment of building entrances. • Limiting the street wall height to no more than 50 feet. Floors above 50 feet should be set back from the street wall to preserve light and air.
Policy P.4	Buildings adjacent to lower scale residential development should step down toward the residential uses or provide other buffering techniques.
Policy P.5	The City and private developments in Districts will plant street trees that create an attractive pedestrian environment. Street trees should be planted at regular intervals and should provide shade and protection for pedestrians.
Objective CD 8.1	Ensure high quality architecture and urban design throughout the City.
Policy P.1	The City will encourage innovative and quality architecture in the City with all new public and private projects.
Policy P.2	New buildings will be constructed to create attractive, pedestrian-friendly places.
Policy P.3	High-quality and long-lasting building materials will be required on all new non-residential and multi-family housing projects.
Policy P.4	New non-residential and multi-family buildings will be designed with attractive and inviting frontage on all public streets.
Objective CD 8.3	Improve the visual quality of Corridors and Districts.
Policy P.2	To the extent feasible, utilities should be undergrounded along Corridors and in Districts during highway repair or widening projects, streetscape improvement projects, construction of new development projects or as funds become available.
Policy P.3	Public art and other design features should be used to enliven the public realm.
Objective CD 9.1	Identify and preserve cultural and historic resources.
Policy P.1	Historic or culturally significant buildings and other resources in South Gate should be preserved and enhanced to contribute to the character of the community.
SGCD Policy P.9	To the extent feasible, the existing Firestone Tire factory building should be adaptively reused and the building façade preserved.

SOURCE: City of South Gate, *South Gate General Plan 2035.*

City of South Gate Municipal Code (SGMC), Title 11 Comprehensive Zoning Code. Title 11 of the SGMC known as the Comprehensive Zoning Code includes provisions that regulate, and restrict land uses, the height and bulk of buildings, and the area of yards and other open spaces. The Comprehensive Zoning Code includes design standards that seek to regulate the physical alteration of streets, intersections, alleys, pedestrian walkways, and landscaping. However, California Government Code Section 53094 includes provisions for school districts to exempt classroom facilities from local zoning regulations.

THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the State CEQA Guidelines, the proposed project would have a significant impact related to aesthetics if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; and/or
- Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

Thresholds related to project shadow impacts upon the environment are not included in Appendix G of the State CEQA Guidelines. However, for the purposes of this Supplemental Draft EIR the following threshold will be used to evaluate project impacts related to shadows:

- A project impact would be considered significant if shadow-sensitive uses would be shaded by project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time between late October and early April, or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time between early April and late October.

IMPACTS

CONSTRUCTION

Construction activities, although temporary in nature, generally cause a contrast to, and disruption in, the general order and aesthetic character of an area and may cause a visually unappealing quality in the surrounding area. During construction, the visual appearance of the project site would be altered due to the demolition of the Buildings 1, 3, and 4. Demolition and construction activities would be visible to pedestrians, motorists, and residents on adjacent streets. The altered visual conditions associated with the construction activities would be temporary, but could degrade the visual character and quality of the area. To limit the visibility of these activities, temporary construction fencing would be placed along the periphery of the project site. Therefore, impacts related to aesthetics during construction would be less than significant.

OPERATIONS

Visual Character

In general, evaluation of visual character is determined by the degree of contrast that could potentially result between the proposed project and the existing built environment. Contrast is assessed by considering the consistency of the following features of a proposed project with those of the existing built environment. The proposed project would alter, but not degrade, the visual character of the existing environment. Implementation of the proposed project would result in the demolition of Buildings 1, 3 and 4. Buildings 1, 2 and 3 were determined to be eligible for individual listing on the California Register, and Building 4 is considered a historic resource, because it contributes to the California Register-eligible South Gate Historic District. However, Building 4 was determined not to be eligible for individual listing on the California Register. Building 2 which is eligible for individual listing on the California Register would remain under the proposed project and would continue to be a dominant visual feature on the project site. While design of the proposed SGEC building has not been finalized, the design would follow specific design criteria. The design criteria calls for the architecture of the SGEC building to be of high quality, sustainable, and enduring with the character of an educational institution that would be attractive and inspirational for its students, faculty, and staff, and a symbol of renewal and revitalization for the community at large. **Figure 4-1.9** demonstrates the type of architecture that would inspire the SGEC building design.

With regard to building height, the proposed SGEC building at 50 feet tall (three stories) would be consistent with existing building heights to be demolished, which range from two- to four-stories. The street edge of the project site along Firestone Boulevard and Santa Fe Avenue would be landscaped, which would improve the quality of the visual character in the community and provide a connection to the surrounding neighborhood. Therefore, impacts related to visual character would be less than significant.

SOURCE: Berliner and Associates and TAHA, 2013.

FIGURE 4.1-9

DESIGN INSPIRATION FOR FEC
BUILDING ARCHITECTURE

Scenic Resources

The project site is part of a South Gate Historic District eligible for listing on the California Register. Therefore, the demolition of Buildings 1, 3 and 4 would result in the removal and alteration of historic resources. However, as discussed above, there are no designated scenic resources in the City of South Gate, and the nearest officially designated state scenic highway is State Route 2 (Angeles Crest Highway), located approximately 15 miles north of the project site. Furthermore, in addition to the new SGEC building and surface parking lot that would be constructed on-site, open spaces and landscaping is proposed to enhance the character of the project site. New landscape buffers would also be created on the eastern and southern borders of the project site. Therefore, impacts related to scenic resources would be less than significant.

Views and Vistas

As discussed above, the demolition of Buildings 1, 3 and 4 would result in the removal and alteration of historic resources. Views of Buildings 1 and 2 and the water tower are significant visual features in the project area. Views of these structures are available from Firestone Boulevard, Santa Fe Avenue and other vantage points surrounding the project site. The proposed project would not block views of Buildings 2 or the approximately 130-foot tall water tower. In addition, while the proposed project would introduce new visual features to the project site, altering views of the project site primarily from Firestone Boulevard and Santa Fe Avenue, the proposed project would not adversely affect views as views of significant visual features would continue to be available and new open spaces and landscaping are proposed to enhance the character of the project site. Therefore, impacts related to views and vistas would be less than significant.

Light and Glare

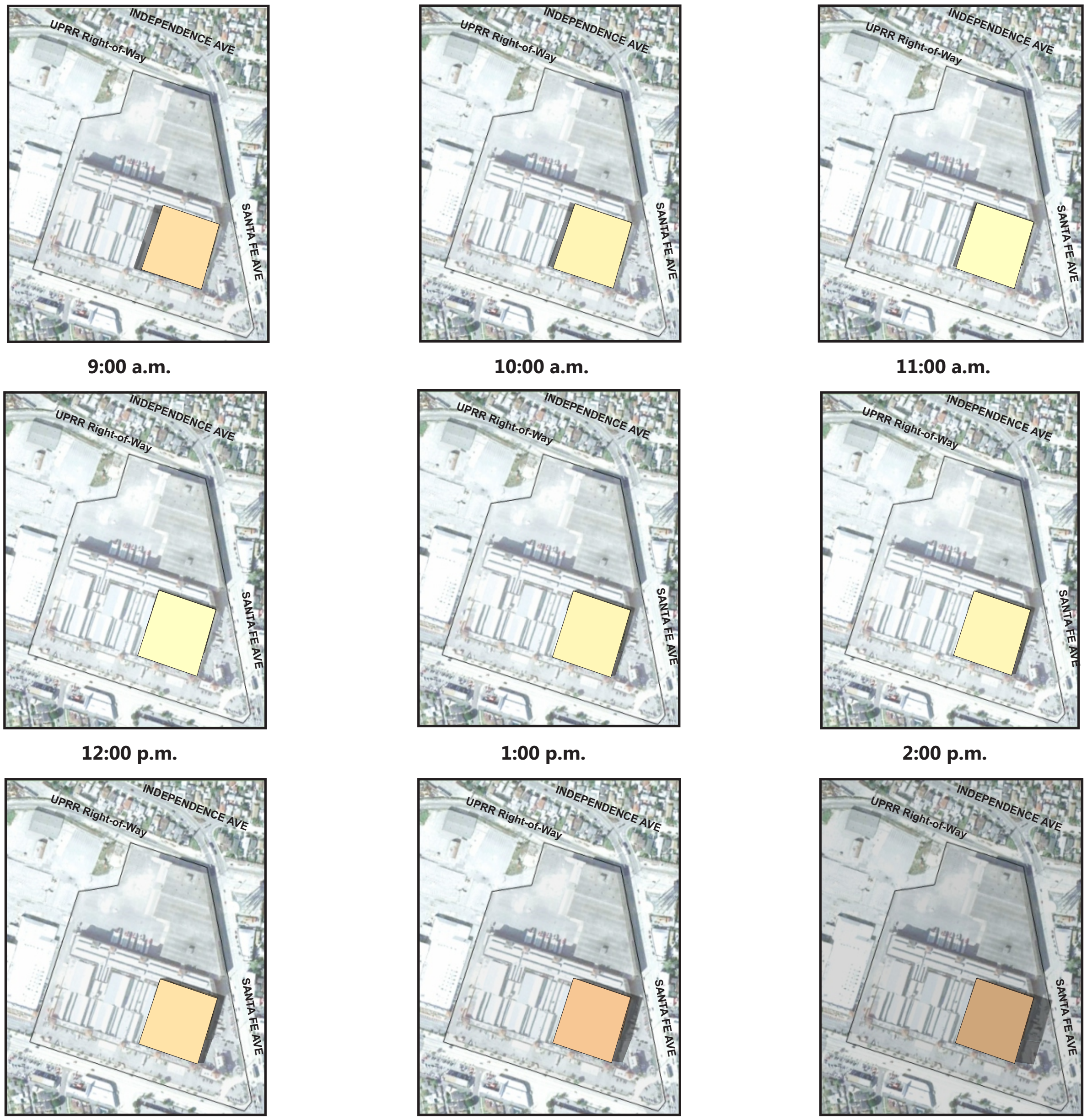
Light impacts are typically associated with the use of artificial light during the evening and nighttime hours, car headlights, and the potential for spillover lighting onto adjacent residential properties. The proposed project would operate into the evening hours with nighttime classes in the SGEC building, adding further illumination to the site. However, lighting for the new campus would include directional lighting techniques and low wattage bulbs that direct light downwards and minimizes light spillover to adjacent residential uses. Therefore, impacts related to light and glare would be less than significant.

Shade and Shadow

Shadow impacts are considered to be significant when they cover shadow-sensitive uses for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. between late October and early April. They are also considered significant if they cover shadow-sensitive uses for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. between early April and late October. As described above, shadow sensitive uses in the vicinity of the project site include usable outdoor spaces associated with the residential uses located to the north and northeast of the project site. The proposed project includes the construction of a 50-foot tall SGEC building. **Figures 4.1-10** through **4.1-12** illustrate the shadows that would be cast from the new SGEC building. As shown, no project-related shadows would be cast onto any shadow-sensitive uses during the summer, spring and fall or winter months. Therefore, impacts related to shade and shadows would be less than significant.

CUMULATIVE IMPACTS

Implementation of the proposed project in combination with the related projects would result in the infill of a densely developed urban area. While many of the related projects, including the proposed project, would be visible from public and private properties, the vast majority of the related projects are too distant from each other to have a combined aesthetic effect. Likewise, shadow impacts associated with individual buildings are isolated in nature and do not contribute to additive effects. Review and approval of each of the related project's plans by their respective jurisdictions would ensure that the related projects do not degrade the character of the surrounding area and are designed in accordance with adopted plans and regulations related to aesthetics. Therefore, impacts related to aesthetics would not be cumulatively considerable.



9:00 a.m. | 10:00 a.m. | 11:00 a.m.

12:00 p.m. | 1:00 p.m. | 2:00 p.m.

3:00 p.m. | 4:00 p.m. | 5:00 p.m.

LEGEND:

Project Site

New Building

SOURCE: Google Earth and TAHA, 2015.

APPROX. SCALE

0 275 550 FEET

N

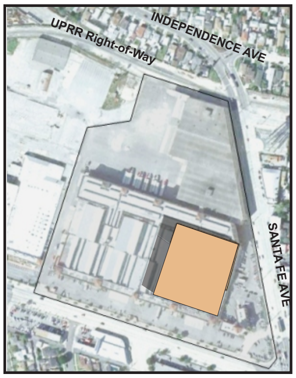
taha 2014-075

2015 South Gate Educational Center Master Plan
Supplemental Draft Environmental Impact Report

LOS ANGELES COMMUNITY COLLEGE DISTRICT

FIGURE 4.1-10

NEW BUILDING
SUMMER SOLSTICE SHADOWS



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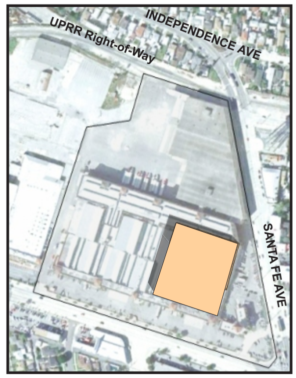

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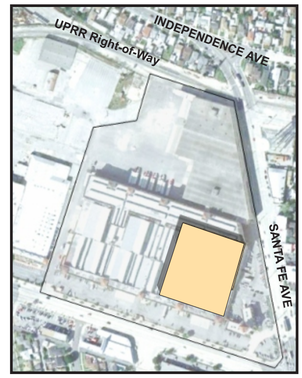

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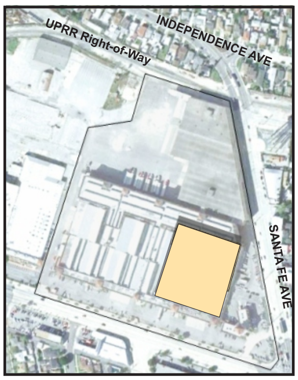

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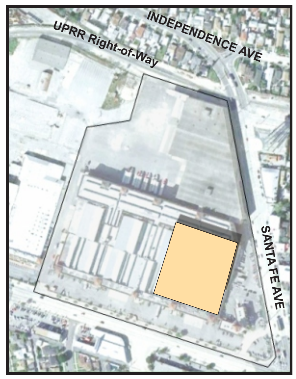

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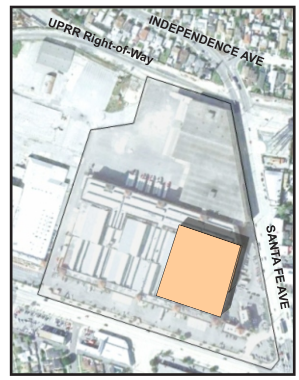

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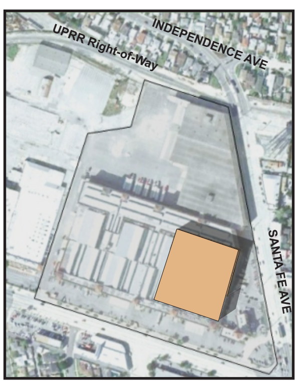

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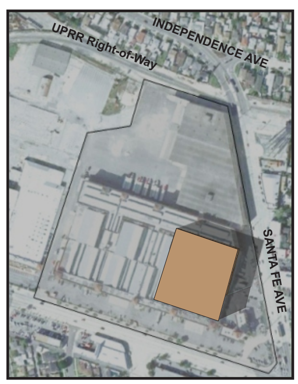

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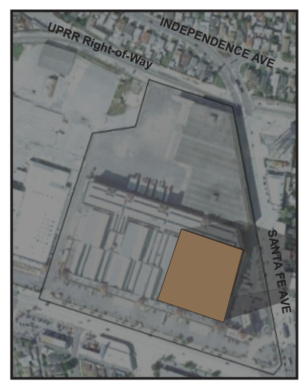


5:00 p.m.

LEGEND:

- Project Site
- New Building

APPROX. SCALE

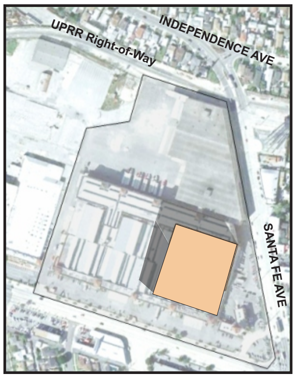
0 275 550 FEET

N

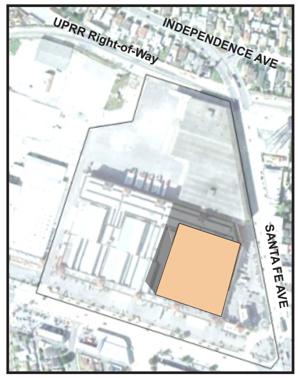
SOURCE: Google Earth and TAHA, 2016.

FIGURE 4.1-11

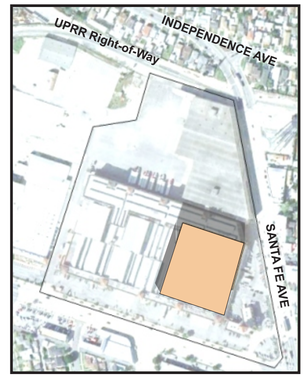
NEW BUILDING
SPRING/FALL EQUINOX SHADOWS



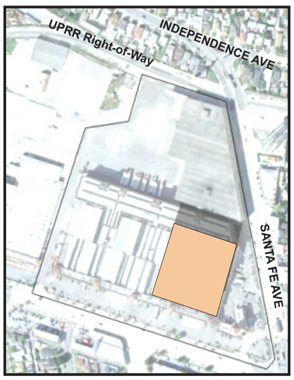
9:00 a.m.



10:00 a.m.



11:00 a.m.



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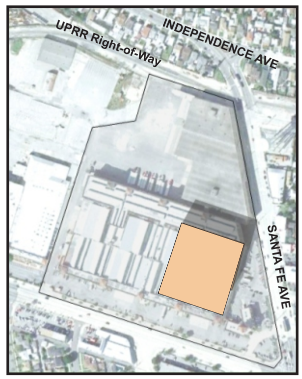

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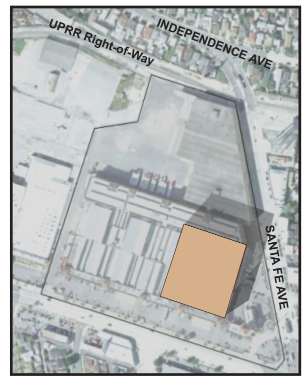

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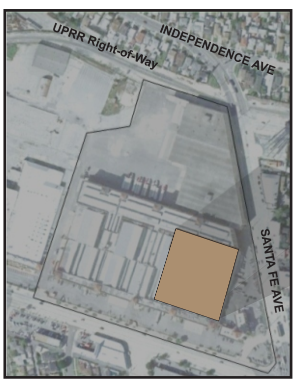


3:00 p.m.

LEGEND:

Project Site

New Building

APPROX. SCALE

N

0 275 550 FEET

SOURCE: Google Earth and TAHA, 2015.

FIGURE 4.1-12

NEW BUILDING
WINTER SOLSTICE SHADOWS

MITIGATION MEASURES

CONSTRUCTION

Impacts related to aesthetics would be less than significant. No mitigation measures are required.

OPERATIONS

Impacts related to visual character, scenic resources, views and vistas, light and glare, and shade and shadows would be less than significant. No mitigation measures are required.

SIGNIFICANCE OF IMPACTS AFTER MITIGATION

CONSTRUCTION

Impacts related to aesthetics would be less than significant.

OPERATIONS

Impacts related to visual character, scenic resources, views and vistas, light and glare, and shade and shadows were determined to be less than significant without mitigation.

4.2 AIR QUALITY

This section provides an overview of existing air quality conditions and evaluates the potential short-term (construction-related) and long-term (operational) air quality impacts associated with the 2015 South Gate Educational Center Master Plan (proposed project). Supporting data and calculations, including California Emissions Estimator Model (CalEEMod) output files, are presented in Appendix B. This analysis focuses on air pollution from two perspectives: daily emissions and pollutant concentrations. "Emissions" refer to the quantity of pollutants released into the air, measured in pounds per day (ppd). "Concentrations" refer to the amount of pollutant material per volumetric unit of air, measured in parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$). The following defines the pollutants discussed in this analysis:

Pollutants and Effects

The federal and State governments have established ambient air quality standards for outdoor concentrations of six common pollutants, called criteria pollutants, to protect public health. The criteria pollutant standards have been set at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Criteria pollutants include carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), particulate matter ten microns or less in diameter (PM_{10}), and lead (Pb). These pollutants are discussed below.

Carbon Monoxide (CO). CO is a colorless and odorless gas formed by the incomplete combustion of fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft and trains. In urban areas such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly, so ambient CO concentrations generally follows the spacial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions, primarily wind speed, topography and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February. Inversion is an atmospheric condition in which a layer of warm air traps cooler air near the surface of the earth, preventing the normal rising of surface air. The highest levels of CO typically occur during the colder months of the year when inversion conditions are more frequent. In terms of health, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can be dizziness, fatigue, and impairment of central nervous system functions.

Ozone (O_3). O_3 a colorless gas that is formed in the atmosphere when reactive organic gases (ROG), which includes volatile organic compounds (VOC) and nitrogen oxides (NO_X) react in the presence of ultraviolet sunlight. O_3 is not a primary pollutant; it is a secondary pollutant formed by complex interactions of two pollutants directly emitted into the atmosphere. The primary sources of ROG and NO_X, components of O_3, are automobile exhaust and industrial sources. Meteorology and terrain play major roles in O_3 formation. Ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures and cloudless skies. The greatest source of smog-producing gases is the automobile. Short-term exposure (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue and some immunological changes.

Nitrogen Dioxide (NO_2). NO_2, like O_3, is not directly emitted into the atmosphere but is formed by an atmospheric chemical reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as NO_X and are major contributors to O_3 formation. NO_2 also contributes to the formation of PM_{10}. High concentrations of NO_2 can cause breathing difficulties and result in a brownish-red cast to the atmosphere with reduced visibility. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase of bronchitis in children (2 and 3 years old) has also been observed at concentrations below 0.3 ppm.

Sulfur Dioxide (SO_2). SO_2 is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Main sources of SO_2 are coal and oil used in power plants and industries. Generally, the highest levels of SO_2 are found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels. SO_2 is an irritant gas that attacks the throat and lungs. It can cause acute respiratory symptoms and diminished ventilatory function in children. SO_2 can also yellow plant leaves and erode iron and steel. Sulfur oxides (SO_X) refer to any of several compounds of sulfur and oxygen, the most important of which is SO_2.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter also forms when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Fine particulate matter that is less than 2.5 microns in diameter, or $PM_{2.5}$, is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as SO_2, NO_X, and VOC. Respirable particulate matter that is less than 10 microns in diameter, or PM_{10}, is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances, such as lead, sulfates, and nitrates can cause lung damage directly. These substances can be absorbed into the blood stream and cause damage elsewhere in the body. These substances can transport absorbed gases, such as chlorides or ammonium, into the lungs and cause injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.

Ultrafine PM emissions form during engine combustion and in the atmosphere, immediately after leaving the tail-pipe as emitted gases condense and rapidly dilute and cool. Internal combustion engines have been identified as significant sources of ultrafine PM. A significant proportion of diesel emission particles have diameters smaller than 100 nanometer (nm) or 0.1 micrometer (µm). Particles emitted from gasoline-powered engines are generally less than 80 nm (0.08 µm) in diameter. Particles from compressed natural gas (CNG) fueled engines are smaller than from diesel emissions, with majority between 20 nm and 60 nm (0.02 µm – 0.06 µm).

Numerous studies have associated particulate matter levels with adverse health effects, including increased mortality, hospital admissions, and respiratory disease symptoms. Results from several studies and postulated health effects mechanisms suggest that the ultrafine portion of PM may be important in determining the toxicity of ambient particulates.

For a given mass concentration, ultrafine particulates have much higher numbers and surface areas compared to larger particles. Particles can act as carriers for other agents, such as trace metals and organic compounds which can collect on the particles surfaces; the ultrafine particles with larger surface area may transport more of such toxic agents into the lungs than larger particles. In laboratory toxicity studies, a greater inflammatory and oxidative stress response has been elicited from ultrafine particles compared to larger particles at comparable mass doses. Oxidative stress is a term to describe cell, tissue or organ damage caused by reactive oxygen species. After inhalation, ultrafine particles may penetrate rapidly into lung tissue; and some portions may be translocated to other organs of the body. Additionally, ultrafine particles have been found to penetrate cells and subcellular organelles. In cell cultures exposed to ambient particles, ultrafine particles have been found in mitochondria where they induced structural damage.

Lead (Pb). Pb in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturers of batteries, paint, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95 percent. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities have become lead-emission sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth.

Toxic Air Contaminants (TACs). TACs are generally defined as those contaminants that are known or suspected to cause serious health problems, but do not have a corresponding ambient air quality standard. TACs are also defined as an air pollutant that may increase a person's risk of developing cancer and/or other serious health effects; however, the emission of a toxic chemical does not automatically create a health hazard. Other factors, such as the amount of the chemical; its toxicity, and how it is released into the air, the weather, and the terrain, all influence whether the emission could be hazardous to human health. TACs are emitted by a variety of industrial processes such as petroleum refining, electric utility and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust and may exist as PM_{10} and $PM_{2.5}$ (e.g., diesel particulate matter) or as vapors (gases). TACs include metals, other particles, gases absorbed by particles, and certain vapors from fuels and other sources.

The emission of toxic substances into the air can be damaging to human health and to the environment. Human exposure to these pollutants at sufficient concentrations and durations can result in cancer, poisoning, and rapid onset of sickness, such as nausea or difficulty in breathing. Other less measurable effects include immunological, neurological, reproductive, developmental, and respiratory problems. Pollutants deposited onto soil or into lakes and streams affect ecological systems and eventually human health through consumption of contaminated food. The carcinogenic potential of TACs is a particular public health concern because many scientists currently believe that there is no "safe" level of exposure to carcinogens. Any exposure to a carcinogen poses some risk of contracting cancer.

EXISTING SETTING

Air Pollution Climatology

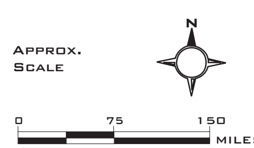
The project site is located within the Los Angeles County portion of the South Coast Air Basin (Basin), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The 6,745-square-mile Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. It is bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino and San Jacinto Mountains to the north and east; and the San Diego County line to the south (**Figure 4.2-1**). Ambient pollution concentrations recorded in Los Angeles County are among the highest in the 4 counties comprising the Basin.

LEGEND:

South Coast Air Basin

State of California

SOURCE: California Air Resources Board, State and Local Air Monitoring Network Plan, October 1998.



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LOS ANGELES COMMUNITY COLLEGE DISTRICT

FIGURE 4.2-1

SOUTH COAST AIR BASIN

The Basin is in an area of high air pollution potential due to its climate and topography. The general region lies in the semi-permanent high pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The Basin experiences warm summers, mild winters, infrequent rainfalls, light winds, and moderate humidity. This usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The Basin is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the west and high mountains around the rest of its perimeter. The mountains and hills within the area contribute to the variation of rainfall, temperature, and winds throughout the region.

The Basin experiences frequent temperature inversions. Temperature typically decreases with height. However, under inversion conditions, temperature increases as altitude increases, thereby preventing air close to the ground from mixing with the air above it. As a result, air pollutants are trapped near the ground. During the summer, air quality problems are created due to the interaction between the ocean surface and the lower layer of the atmosphere. This interaction creates a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward. Additionally, hydrocarbons and NO_2 react under strong sunlight, creating smog.

Light, daytime winds, predominantly from the west, further aggravate the condition by driving air pollutants inland, toward the mountains. During the fall and winter, air quality problems are created due to CO and NO_2 emissions. CO concentrations are generally worse in the morning and late evening (around 10:00 p.m.). In morning, CO levels are relatively high due to cold temperatures and the large number of cars traveling. High CO levels during the late evenings are a result of stagnant atmospheric conditions trapping CO in the area. Since CO emissions are produced almost entirely from automobiles, the highest CO concentrations in the Basin are associated with heavy traffic. NO_2 concentrations are also generally higher during fall and winter days.

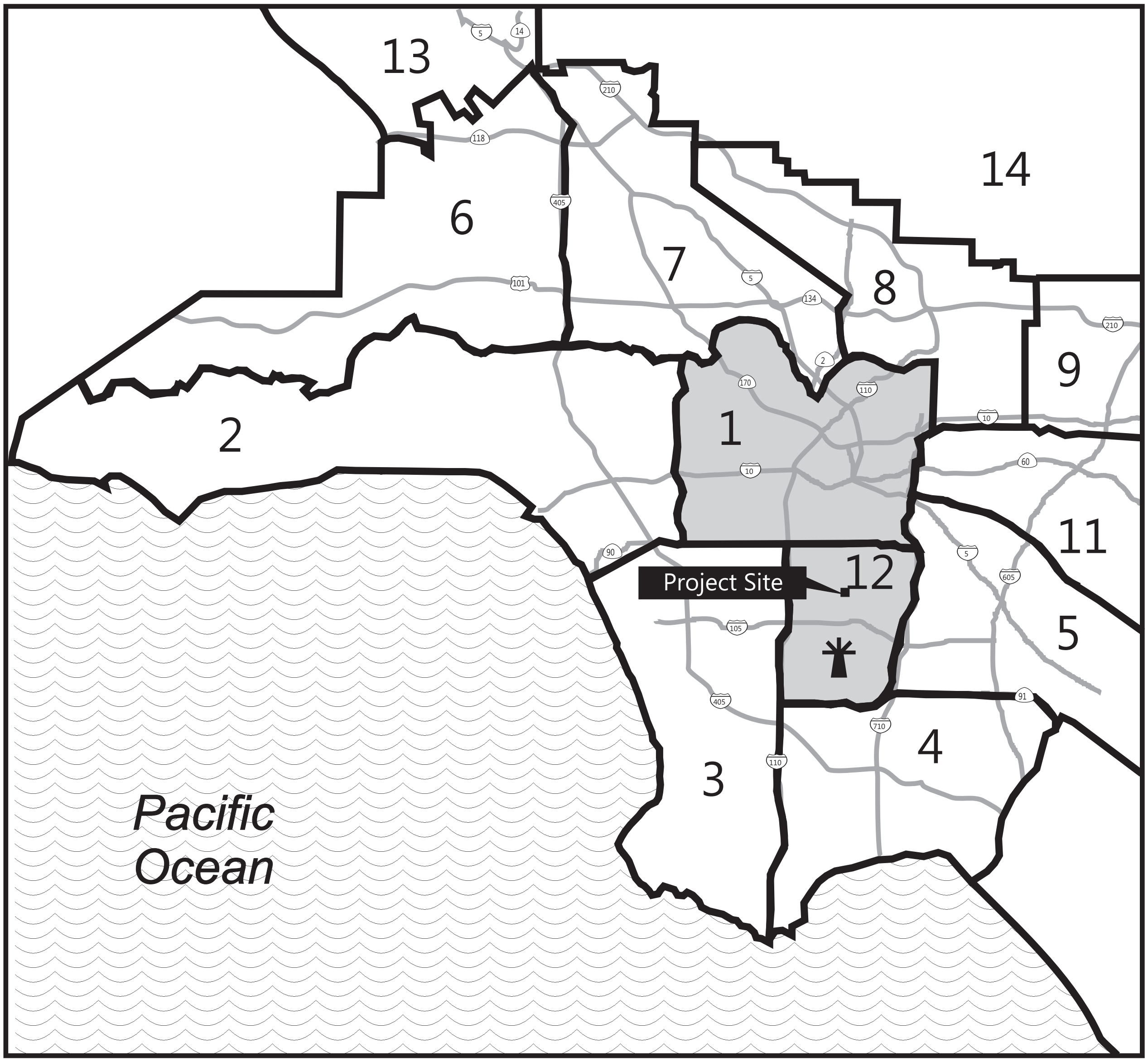
Local Climate

The mountains and hills within the Basin contribute to the variation of rainfall, temperature, and winds throughout the region. Within the project site and its vicinity, the average wind speed, as recorded at the Downtown Los Angeles Wind Monitoring Station, is approximately five miles per hour, with calm winds occurring approximately eight percent of the time. Wind in the vicinity of the project site predominately blows from the southwest.

The annual average temperature in the vicinity of the project is 65 degrees Fahrenheit (°F) with an average winter temperature of approximately 55.8 °F and an average summer temperature of approximately 74.0 °F.[1] Total precipitation in the project area averages approximately 15 inches annually. Precipitation occurs mostly during the winter and relatively infrequently during the summer. Precipitation averages approximately nine inches during the winter, approximately four inches during the spring, approximately two inches during the fall, and less than one inch during the summer.[2]

The SCAQMD maintains a network of air quality monitoring stations located throughout the Basin and has divided the Basin into air monitoring areas. The project site is located within Source Receptor Area 12 – South Central Los Angeles, which is served by the Compton – 700 North Bullis Road Monitoring Station located at 700 North Bullis Road, Compton and located approximately five miles northwest of the project site (**Figure 4.2-2**). Historical data from the Compton – 700 North Bullis Road Monitoring Station were used to characterize existing conditions in the vicinity of the project. Criteria pollutants monitored at the Compton – 700 North Bullis Road Monitoring Station include O_3, $PM_{2.5}$, CO, and NO_2. Air quality statistics for PM_{10} and SO_2 were collected from the North Long Beach Monitoring Station located at 3468 North Long Beach Boulevard, Long Beach. The North Long Beach Monitoring Station is located approximately 14 miles to the southeast of the project site.

[1] Western Regional Climate Center, Historical Climate Information website, *http://www.wrcc.dri.edu*, accessed July 16, 2015.
[2] *Ibid*.



LEGEND: Compton Monitoring Station

Air Monitoring Areas in Los Angeles County:

1. Central Los Angeles
2. Northwest Coastal
3. Southwest Coastal
4. South Coastal
5. Southeast Los Angeles County
6. West San Fernando Valley
7. East San Fernando Valley
8. West San Gabriel Valley
9. East San Gabriel Valley
10. Pomona/Walnut Valley (not shown)
11. South San Gabriel Valley
12. South Central Los Angeles
13. Santa Clarita Valley
14. San Gabriel Mountains

Approx. Scale 0 4.5 9 Miles

N

SOURCE: South Coast Air Quality Management District Air Monitoring Areas Map, 1999.

FIGURE 4.2-2

AIR QUALITY MONITORING AREAS

Table 4.2-1 shows pollutant levels, the State and federal standards, and the number of exceedances recorded at the Compton – 700 North Bullis Road Monitoring Station from 2012 to 2014. **Table 4.2-1** indicates that criteria pollutants CO, NO_2, PM_{10} and SO_2 did not exceed the State and federal standards. The 8-hour State and National standard for O_3 and the1-hour State standard for O_3were exceeded during this 3-year period. The 24-hour federal standard for $PM_{2.5}$ was exceeded each year during this period.

TABLE 4.2-1: 2012-2014 AMBIENT AIR QUALITY DATA

Pollutant	Pollutant Concentration & Standards	2012	2013	2014
Ozone (O_3)	Maximum 1-hr Concentration (ppm) Days > 0.09 ppm (State 1-hr Standard)	0.086 0	0.090 0	0.094 3
	Maximum 8-hr Concentration (ppm) Days > 0.075 ppm (Federal 8-hr Standard)	0.070 0	0.080 1	0.081 2
	Maximum 8-hr Concentration (ppm) Days > 0.070 ppm (State 8-hr Standard)	0.71 2	0.080 0	0.082 7
Carbon Monoxide (CO)	Maximum 8-hr concentration (ppm) Days > 9.0 ppm (Federal 8-hr Standard) Days > 9 ppm (State 8-hr Standard)	3.96 0 0	NA	NA
Nitrogen Dioxide (NO_2)	Maximum 1-hr Concentration (ppm) Days > 100 ppb (Federal 1-hr Standard) Days > 0.18 ppm (State 1-hr Standard)	0.0793 0 0	0.0698 0 0	0.0682 0 0
	Annual Arithmetic Means Concentration Exceed Federal Standard (0.053 ppm) Exceed State Standard (0.030 ppm)	0.017	0.017	NA
Respirable Particulate Matter (PM_{10})	Maximum 24-hr Concentration (µg/m^3) Days > 150 µg/m^3 (Federal 24-hr Standard) Days > 50 µg/m^3 (State 24-hr Standard)	45.0 0 0	37.0 0 0	NA
	Annual Arithmetic Mean Concentration (µg/m^3) Exceeded Days > 20 µg/m^3 (State Standard)	23.2	NA	NA
Fine Particulate Matter ($PM_{2.5}$)	Maximum 24-hr Concentration (µg/m^3) Days > 35 µg/m^3 (Federal Standard)	51.2 1	52.1 1	35.8 1
	Annual Average Concentration (µg/m^3) Exceed Federal Standard (12.0 µg/m^3) Exceed State Standard (12 µg/m^3)	11.6 No No	11.9 No No	12.6 Yes Yes
Sulfur Dioxide (SO_2)	Maximum 24-hr Concentration (ppm) Days > 0.04 ppm (State 24-hr Standard)	0.003 0	0.001 0	NA

NA: Data Not Available
SOURCE: CARB, Air Quality Data Statistics, *Top 4 Summary*, http://www.arb.ca.gov/adam/topfour/topfour1.php, accessed July 14, 2015.

Sensitive Receptors

Some population groups are considered more sensitive to air pollution than others due to the types of users or activities involved. The California Air Resources Board (CARB) has identified the following groups who are most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes and people with cardiovascular and chronic respiratory diseases.

Sensitive receptors near the project site are shown in **Figure 4.2-3** and include the following:

- Single- and multi-family residences located approximately 100 feet to the north
- Single-family residences located approximately 200 feet to the east
- Redeemer Lutheran Church and School located approximately 770 feet to the northeast
- Single-family residences located approximately 795 feet to the south
- South Gate Educational Center located approximately 910 feet to the southwest
- Liberty Boulevard Elementary School located approximately 1,170 feet to the northeast

The above sensitive receptors represent the nearest air quality sensitive land uses with the potential to be impacted by the proposed project. Additional sensitive receptors are located further from the project site in the surrounding community and would be less affected by air emissions than the above sensitive receptors.

REGULATORY FRAMEWORK

Federal

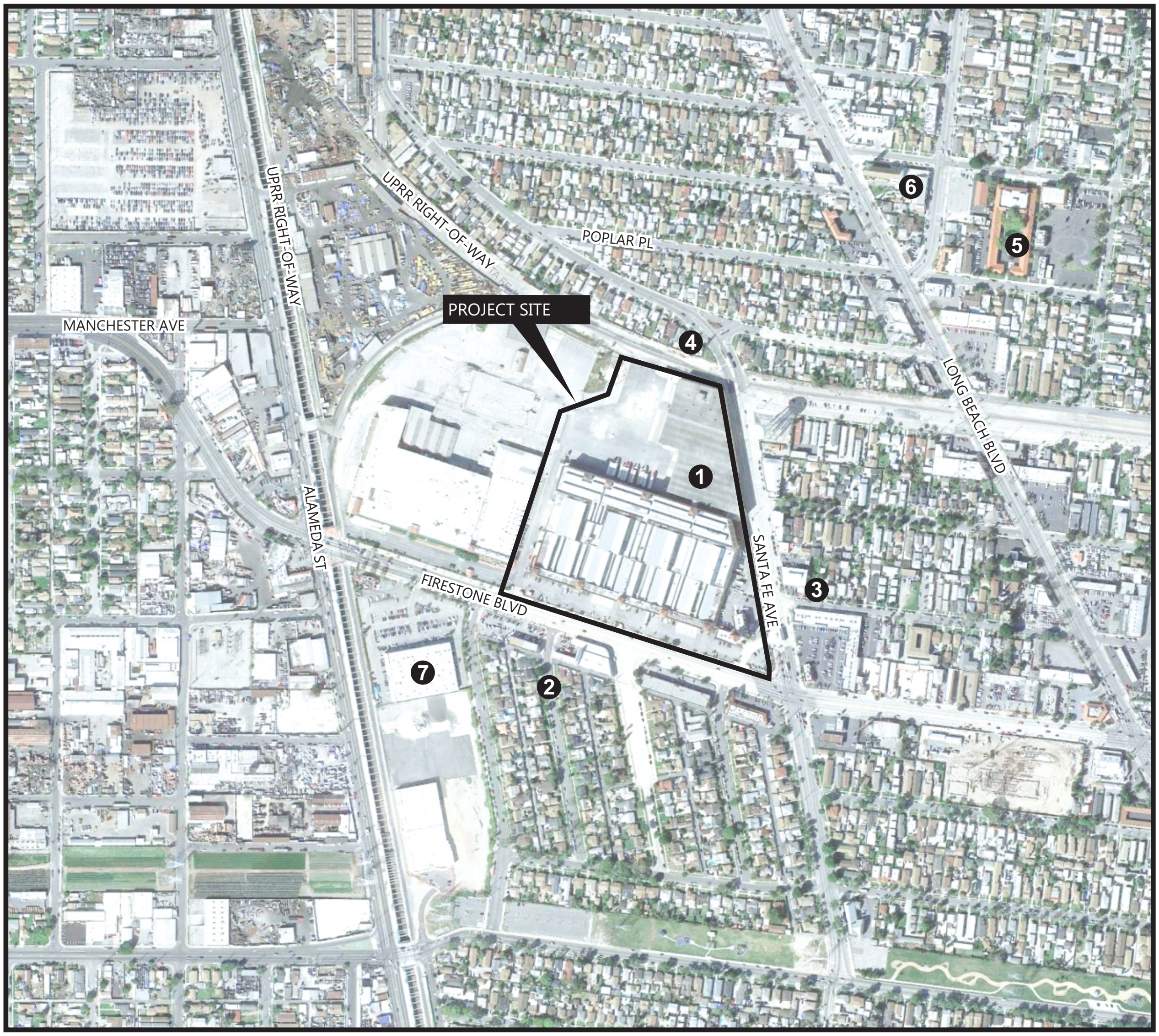
U.S. Environmental Protection Agency (USEPA). The Clean Air Act (CAA) governs air quality in the United States, and is enforced by the USEPA. USEPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain types of locomotives. USEPA has jurisdiction over emission sources outside State waters (i.e., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in states other than California. Automobiles sold in California must meet stricter emission standards established by the CARB.

As required by the CAA, National Ambient Air Quality Standards (NAAQS) have been established for seven major air pollutants: O_3, PM_{10}, $PM_{2.5}$, CO, NO_2, SO_2, and Pb. The CAA requires USEPA to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the NAAQS have been achieved. The federal ambient air quality standards are summarized in **Table 4.2-2**. The USEPA has classified the Basin as a nonattainment area for O_3 and $PM_{2.5}$, unclassified/attainment for lead, and a maintenance area for PM_{10}, CO, and NO_2.

TABLE 4.2-2: STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS AND STATUS FOR THE SOUTH COAST AIR BASIN

		California		Federal	
Pollutant	**Averaging Period**	**Standards**	**Attainment Status**	**Standards**	**Attainment Status**
Ozone (O_3)	1-hour	0.09 ppm (180 µg/m^3)	Nonattainment	--	--
	8-hour	0.070 ppm (137 µg/m^3)	n/a	0.075 ppm (147 µg/m^3)	Nonattainment
Respirable Particulate Matter (PM_{10})	24-hour	50 µg/m^3	Nonattainment	150 µg/m^3	Maintenance
	Annual Arithmetic Mean	20 µg/m^3	Nonattainment	--	--
Fine Particulate Matter ($PM_{2.5}$)	24-hour	--	--	35 µg/m^3	Nonattainment
	Annual Arithmetic Mean	12 µg/m^3	Nonattainment	12.0 µg/m^3	Nonattainment
Carbon Monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Maintenance
	8-hour	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Maintenance
Nitrogen Dioxide (NO_2)	1-hour	0.18 ppm (338 µg/m^3)	Attainment	100 ppb (190 µg/m^3)	Maintenance
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	Attainment	53 ppb (100 µg/m^3)	Maintenance
Sulfur Dioxide (SO_2)	1-hour	0.25 ppm (655 µg/m^3)	Attainment	75 ppb (196 µg/m^3)	Attainment
	24-hour	0.04 ppm (105 µg/m^3)	Attainment	--	--
Lead (Pb)	30-day average	1.5 µg/m^3	Attainment	--	--
	Calendar Quarter	--	--	0.15 µg/m^3	Attainment

SOURCE: CARB, *Ambient Air Quality Standards*, and *Attainment Status*, July 1, 2014.



LEGEND:

Project Site

Sensitive Receptors

1. Proposed Firestone Education Center
2. Single-Family Residences Located to the South
3. Single-Family Residences Located to the East
4. Single-Family Residences Located to the North
5. Liberty Boulevard Elementary School
6. Redeemer Lutheran Church
7. South Gate Educational Center

Approx. Scale

N

0 300 600 Feet

SOURCE: TAHA, 2016.

taha

taha 2014-075

2015 South Gate Educational Center Master Plan
Supplemental Draft Environmental Impact Report

LOS ANGELES COMMUNITY COLLEGE DISTRICT

FIGURE 4.2-3

AIR QUALITY SENSITIVE RECEPTOR LOCATIONS

In addition to the criteria pollutants, the air toxics provisions of the CAA require USEPA to develop and enforce regulations to protect the public from exposure to airborne contaminants that are known to be hazardous to human health. In accordance with Section 112 of the CAA, USEPA establishes National Emission Standards for Hazardous Air Pollutants. The list of hazardous air pollutants (HAP), or "air toxics", includes specific compounds that are known or suspected to cause cancer or other serious health effects.

State

California Air Resources Board (CARB). In addition to being subject to the requirements of CAA, air quality in California is also governed by more stringent regulations under the California Clean Air Act (CCAA). In California, the CCAA is administered by CARB at the State level and by the air quality management districts and air pollution control districts at the regional and local levels. CARB is responsible for meeting the State requirements of the CAA, administering the CCAA, and establishing the California Ambient Air Quality Standards (CAAQS). CAAQS are generally more stringent than the corresponding federal NAAQS standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The State ambient air quality standards are summarized in **Table 4.2-2**.

The CCAA requires CARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a State standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a State standard and are not used as a basis for designating areas as nonattainment. Under the CCAA, the Los Angeles County portion of the Basin is designated as a nonattainment area for O_3, $PM_{2.5}$, and PM_{10}.

CARB's Statewide comprehensive air toxics program was established in the early 1980s. The Toxic Air Contaminant Identification and Control Act created California's program to reduce exposure to air toxics. Under the Toxic Air Contaminant Identification and Control Act, CARB is required to use certain criteria in the prioritization for the identification and control of air toxics. In selecting substances for review, CARB must consider criteria relating to "the risk of harm to public health, amount or potential amount of emissions, manner of, and exposure to, usage of the substance in California, persistence in the atmosphere, and ambient concentrations in the community" [Health and Safety Code Section 39666(f)]. The Toxic Air Contaminant Identification and Control Act also requires CARB to use available information gathered from the Air Toxics "Hot Spots" Information and Assessment Act program to include in the prioritization of compounds. The State Air Toxics Program (AB 2588) identified over 200 TACs, including the HAPs identified in the federal CAA.

California Building Standards Commission (CBSC). The California Building Standards Code Title 24 is published by the CBSC and it applies to all building occupancies throughout the State of California. CBSC is responsible for overseeing the adoption and publication of the provisions in Title 24 of the CCR. Title 24 applies to all building occupancies and related features and equipment throughout the State; contains requirements to the structural, mechanical, electrical, and plumbing systems; and requires measures for energy conservation, green design, construction and maintenance, fire and life safety, and accessibility. Relevant rules and standard conditions include the following:

- Building Energy Efficiency Standards (Title 24, Part 6)
- California Green Building Code (Title 24, Part 11)

Regional

South Coast Air Quality Management District (SCAQMD). The 1977 Lewis Air Quality Management Act created the SCAQMD to coordinate air quality planning efforts throughout Southern California. This Act merged four county air pollution control agencies into 1 regional district to better address the issue of improving air quality in Southern California. Under the Act, renamed the Lewis-Presley Air Quality Management Act in 1988, the SCAQMD is the agency principally responsible for comprehensive air pollution control in the region. Specifically, the SCAQMD is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain State and federal ambient air quality standards in the district. Programs that were developed include air quality rules and regulations that regulate stationary sources, area sources, point sources, and certain mobile source emissions. The SCAQMD is also responsible for establishing stationary source permitting requirements and for ensuring that new, modified, or relocated stationary sources do not create net emission increases.

The SCAQMD is responsible for preparing the regional Air Quality Management Plan (AQMP). The AQMP is the SCAQMD plan for improving regional air quality. It addresses CAA and CCAA requirements and demonstrates attainment with State and federal ambient air quality standards. The AQMP is prepared by SCAQMD and the Southern California Association of Governments (SCAG). The AQMP provides policies and control measures that reduce emissions to attain both State and federal ambient air quality standards by their applicable deadlines. Environmental review of individual projects within the Basin must demonstrate that daily construction and operational emissions thresholds, as established by the SCAQMD, would not be exceeded. The environmental review must also demonstrate that individual projects would not increase the number or severity of existing air quality violations.

On December 7, 2012, the SCAQMD Governing Board adopted the 2012 AQMP to continue the progression toward clean air and compliance with State and federal requirements. It includes a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on- and off-road mobile sources and area sources. The 2012 AQMP proposes attainment demonstration of the federal 24-hour $PM_{2.5}$ standard by 2014 in the Basin through adoption of all feasible measures while incorporating current scientific information and meteorological air quality models. It also updates the USEPA approved 8-hour O_3 control plan with new commitments for short-term NO_X and VOC reductions.

The SCAQMD established rules to reduce emissions from various sources, including specific types of equipment, industrial processes, paints and solvents, even consumer products. SCAQMD Rules applicable to the proposed project include, but are not limited, to the following:

- SCAQMD Rule 201: Permit to Construct
- SCAQMD Rule 402: Nuisance Odors
- SCAQMD Rule 403: Fugitive Dust
- SCAQMD Rule 1113: Architectural Coatings
- SCAQMD Rule 1186: Street Sweeping

THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the State CEQA Guidelines, the proposed project would have a significant impact related to land use and planning if it would:

- Would the project conflict with or obstruct implementation of the applicable air quality plan?
- Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?
- Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?
- Would the project expose sensitive receptors to substantial pollutant concentrations?
- Would the project create objectionable odors affecting a substantial number of people?

Because of the SCAQMD's regulatory role in the Basin, the significance criteria and analysis methodologies in the SCAQMD's Air Quality Guidance Handbook are used in evaluating project impacts. The following presents these significance criteria for both construction and operational emissions:

Construction. The proposed project would have a significant impact related to construction activity if:

- Daily emissions were to exceed SCAQMD thresholds presented in **Table 4.2-3**;
- Localized concentrations of CO exceed the one-hour standard of 20 ppm or the eight-hour standard of 9.0 ppm;
- Localized concentrations of NO_2 exceed the one-hour standard of 0.18 ppm;
- Localized concentrations of $PM_{2.5}$ or PM_{10} exceed 10.4 $\mu g/m^3$;
- The proposed project would generate TAC emissions that generate a health risk that exceeds ten persons in one million; and/or
- The proposed project would create an odor nuisance.

TABLE 4.2-3: SCAQMD DAILY CONSTRUCTION EMISSIONS THRESHOLDS	
Criteria Pollutant	**Regional Emissions (Pounds Per Day)**
Volatile Organic Compounds (VOC)	75
Nitrogen Oxides (NO_X)	100
Carbon Monoxide (CO)	550
Sulfur Oxides (SO_X)	150
Fine Particulates ($PM_{2.5}$)	55
Particulates (PM_{10})	150
SOURCE: SCAQMD, *CEQA Air Quality Guidelines,* 2015.	

Operations. The proposed project would have a significant impact related to operational activity if:

- Daily operational emissions were to exceed SCAQMD operational emissions presented in **Table 4.2-4**;
- Project-related traffic causes CO concentrations at study intersections to violate the CAAQS for either the one- or eight-hour period. The CAAQS for the one- and eight-hour periods are 20 and 9.0 ppm, respectively;
- The proposed project would generate significant emissions of TACs;
- The proposed project would create an odor nuisance; and/or
- The proposed project would not be consistent with the AQMP.

TABLE 4.2-4: SCAQMD DAILY OPERATIONAL EMISSIONS THRESHOLDS	
Criteria Pollutant	**Pounds Per Day**
Volatile Organic Compounds (VOC)	55
Nitrogen Oxides (NO_X)	55
Carbon Monoxide (CO)	550
Sulfur Oxides (SO_X)	150
Fine Particulates ($PM_{2.5}$)	55
Particulates (PM_{10})	150
SOURCE: SCAQMD, *CEQA Air Quality Guidelines,* 2014.	

IMPACTS

METHODOLOGY

Construction

Construction activities are anticipated to begin in January of 2017, and occupancy of the SGEC is planned for the summer of 2021. Construction activities would occur in three phases. Phase 1 would include the demolition of Buildings 1, 3, and 4 and the bridge connecting Buildings 1 and 2. Following the demolition of the bridge, the point of connection on Building 2 would be repaired with a new exterior stair system which would include handrails, guardrails, stairs, and landings as well as a new 2nd floor door into **Building 2**.

Phase 1 would also include the removal of all hardscape and site grading. Asphalt and concrete may be crushed on-site and used as backfill material mixture. Approximately 3,400 loads of construction debris are anticipated to be hauled off-site (load = 10 cubic yards); and 95,000 cubic yards of soil would be imported to the site.

Phase 2 would include the construction of off-site improvements, including but not limited to, the construction of new walkways along Santa Fe Avenue, new site driveways, new traffic signals on Santa Fe Avenue and Firestone Boulevard, street restriping and other traffic-related improvements. Phase 2 is anticipated to begin in December of 2017. To better protect the new construction, some improvements such as the sidewalks and driveways along Santa Fe Avenue would not be completed until July of 2020 and would occur at the same time as some of the Phase 3 construction activities.

Phase 3 would include the construction of the underground utility infrastructure, a new surface parking lot, a new approximately 100,000-square-foot building and various other on-site campus amenities. Phase 3 is anticipated begin in August of 2018.

Regional and localized construction emissions were analyzed for the proposed project. Construction emissions were estimated using the California Emissions Estimator Model (CalEEMod). CalEEMod is a Statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutants emissions for a variety of land use projects. The emissions factors and calculation methodologies contained in the CalEEMod program have been approved for use by SCAQMD. The model contains data that are specific for the SCAQMD jurisdiction and Los Angeles County. Inputs include each land use type and size, in terms of building area, number of dwelling units, etc., and the vehicle trip generation for each land use.

Construction details were incorporated in CalEEMod for the estimate of emissions generated from construction activities. When information was not available from the project team, CalEEMod defaults for construction activities were assumed. CalEEMod cannot estimate emissions associated with concrete crushing. Concrete crushing emissions were estimated using the methodology provided in Chapter 11.19.2, Table 11.19.2 of the USEPA AP-42 Handbook. The amount of concrete crushed is not known at this time. The analysis considered two emission scenarios. One scenario where all of the demolition debris is hauled off site and anther where demolition debris is crushed on site and used as backfill. The first scenario maximizes haul truck emissions and the second scenario maximizes on-site dust emissions from crushing.

Construction activity would generate on-site pollutant emissions associated with equipment exhaust and fugitive dust. The SCAQMD guidance for assessing localized impact states that construction areas larger than five acres should assess potential impact through dispersion modeling. The maximum daily emissions from the regional emissions analysis were used to assess worst-case pollutant concentrations. Based on the maximum daily emissions, localized construction concentrations were modeled using the USEPA American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) dispersion model. Air concentrations were estimated for the worst-case construction scenario. The worst case construction scenario was considered to be a day during which the maximum amount of air pollutants would be emitted, factoring in the overlap between Phase 1 and Phase 3 construction phases.

Operations

CalEEMod was also used to calculate regional operational emissions generated by area and mobile sources. Area sources include natural gas for space heating and water heating, gasoline-powered landscaping and maintenance equipment, and consumer products (e.g., household cleaners). The average daily number of net trips generated by the project would be 2,780. Refer to Section 4.13, Transportation and Traffic, for the detailed methodology used to obtain the average daily trip rate. CalEEMod uses EMFAC emission rates to calculate vehicle emissions. EMFAC is the emission inventory model for motor vehicles operating on roads in California. This model reflects CARB's understanding of how vehicles travel and how much they pollute.

CONSTRUCTION

Regional Emissions

Construction of the proposed project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated by construction workers traveling to and from the project site. Fugitive dust emissions would primarily result from demolition and site preparation (e.g., grading) activities. NO_X emissions would primarily result from the use of construction equipment. During the finishing phase, the application of architectural coatings (e.g., paints) and other building materials would release VOC. The assessment of construction air quality impacts considers each of these potential sources. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

It is mandatory for all construction projects in the Basin to comply with SCAQMD Rule 403 for Fugitive Dust. Specific Rule 403 control requirements include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site, and maintaining effective cover over exposed areas. Compliance with Rule 403 would reduce $PM_{2.5}$ and PM_{10} emissions associated with construction activities by approximately 61 percent.

Table 4.2-5 presents daily maximum regional emissions associated with each construction phase. Construction-related daily maximum regional emissions would exceed the SCAQMD threshold for NO_X and VOC during the construction process. Therefore, without mitigation, the proposed project would result in a significant impact related to regional construction emissions.

TABLE 4.2-5: DAILY CONSTRUCTION EMISSIONS - UNMITIGATED

	Pounds per Day					
Construction Phase	**VOC**	**NO_X**	**CO**	**SO_X**	**$PM_{2.5}$**	**PM_{10}**
PHASE 1						
Site Preparation	3	35	28	<1	4	8
Demolition – No Concrete Crushing	6	74	58	<1	3	8
Demolition – Concrete Crushing	7	66	57	<1	4	10
Grading	9	100	67	<1	7	10
PHASE 2						
Construction	3	35	27	<1	2	2
PHASE 3						
Site Preparation	3	33	26	<1	4	7
Construction	4	32	41	<1	3	5
Paving	3	18	23	<1	1	2
Architectural Coating	113	6	8	<1	1	1
Maximum Regional Total /a/	120	206	166	<1	13	23
Regional Significance Threshold	**75**	**100**	**550**	**150**	**55**	**150**
Exceed Threshold?	Yes	Yes	No	No	No	No

/a/ Maximum emissions would generally occur when Phase 1 demolition and grading activity overlaps with Phase 2 construction activity. Maximum VOC emissions would occur during the Phase 3 architectural coating activity.
SOURCE: TAHA, 2015.

Localized Emissions

Localized construction concentrations were modeled using the USEPA AERMOD dispersion model. Concentrations are presented for overlapping grading and demolition phases. The maximum concentrations would occur on the northern portion of the project site would be located adjacent to residential sensitive receptors. The project would have no localized significant impacts. As shown in **Table 4.2-6**, localized concentrations do not exceed the significance thresholds for any pollutants at sensitive receptors.

TABLE 4.2-6: LOCALIZED CONSTRUCTION EMISSIONS - UNMITIGATED

Pollutant	Estimated Emissions (lbs/day)	Concentration at nearest sensitive receptor	Significance Threshold	Significant Impact?
PM_{10}	17	4.8 ug/m^3	10.4 ug/m^3	No
$PM_{2.5}$	10	2.9 ug/m^3	10.4 ug/m^3	No
NO_2	145	0.019 ppm	0.18 ppm	No
CO (One-Hour)	104	0.2 ppm	20 ppm	No
CO (Eight-Hour)	104	0.1 ppm	9.0 ppm	No

SOURCE: TAHA, 2015.

Toxic Air Contaminant (TAC) Emissions

The greatest potential for TAC emissions during construction would be diesel particulate emissions associated with heavy equipment operations. The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the maximally exposed individual. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the proposed project. Thus, because the use of diesel engine construction equipment on-site would be limited to approximately 35 months, exposure would occur approximately four percent of the 70-year exposure period. Therefore, the proposed project would result in less-than-significant impacts related to construction TACs.

Odors

Potential sources that may emit odors during construction activities include equipment exhaust and asphalt paving. Odors from this source would be localized and generally confined to the immediate area surrounding the project site. The proposed project would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. Therefore, the proposed project would result in less-than-significant impacts related to odors.

OPERATIONS

Regional Emissions

The proposed project consists of the construction of a new SGEC building, parking structure, and parking lot. The SGEC would accommodate up to 9,000 students and would generate new vehicle trips to the study area. The proposed project would generate 2,780 net new trips per weekday. **Table 4.2-7** compares existing conditions to existing plus project conditions and future without project conditions to future with project conditions. Regional emissions would not exceed the regional thresholds established by the SCAQMD. Therefore, the proposed project would result in less-than-significant impacts related to regional emissions.

TABLE 4.2-7: REGIONAL OPERATIONS EMISSIONS - EXISTING AND FUTURE CONDITIONS						
	pounds per day					
	VOC	NO_X	CO	SO_X	$PM_{2.5}$	PM_{10}
EXISTING WITHOUT PROJECT CONDITIONS						
Area Source	16	<1	<1	<1	<1	<1
Energy Source	<1	<1	<1	<1	<1	<1
Mobile Source	22	65	248	1	11	38
Total Emissions	38	65	248	1	11	38
EXISTING WITH PROJECT CONDITIONS						
Area Source	14	<1	1	<1	<1	<1
Energy Source	<1	1	1	<1	<1	<1
Mobile Source	30	86	331	1	14	50
Total Emissions	44	87	333	1	14	50
Net Emissions	**6**	**22**	**85**	**0**	**3**	**12**
Regional Significance Threshold	**55**	**55**	**550**	**150**	**55**	**150**
Exceed Threshold?	No	No	No	No	No	No
FUTURE NO PROJECT CONDITIONS						
Area Source	16	<1	1	<1	<1	<1
Energy Source	<1	<1	<1	<1	<1	<1
Mobile Source	11	28	125	1	11	38
Total Emissions	27	28	126	1	11	38
FUTURE PLUS PROJECT CONDITIONS						
Area Source	14	<1	1	<1	<1	<1
Energy Source	<1	1	1	<1	<1	<1
Mobile Source	16	37	168	1	14	50
Total Emissions	30	38	170	1	14	50
Net Emissions	**3**	**10**	**44**	**0**	**3**	**12**
Regional Significance Threshold	**55**	**55**	**550**	**150**	**55**	**150**
Exceed Threshold?	No	No	No	No	No	No
SOURCE: TAHA, 2015.						

Localized Emissions

There is no potential for the project to generate a new CO hot-spot or worsen an existing CO hot-spot at congested intersections. The last exceedance of a CO standard at the Downtown Los Angeles Monitoring Station was recorded in 1992. The Basin is designated as an attainment/maintenance area for CO concentrations. The SCAQMD attainment demonstration is in the AQMP. Attainment was demonstrated at the intersection of Wilshire Boulevard and Veteran Avenue using a 1997 peak hour volume of 10,601 vehicles. The attainment demonstration is relevant to the proposed project based on the following data:

- *Traffic Volume*: None of the intersections affected by the proposed project have peak hour volumes greater than 10,601 vehicles. The maximum volume under future with project conditions is 4,769 vehicles at the intersection of Firestone Boulevard and Truba Avenue which is below the daily traffic volumes that would be expected to generate CO exceedances as evaluated in the 2003 AQMP. In the 1992 CO Plan, a CO hot spot analysis was conducted for four busy intersections in Los Angeles at the peak morning and afternoon time periods. The intersections evaluated included: Long Beach Boulevard and Imperial Highway (Lynwood); Wilshire Boulevard and Veteran Avenue (Westwood); Sunset Boulevard and Highland Avenue (Hollywood); and La Cienega Boulevard and Century Boulevard (Inglewood). These analyses did not predict a violation of CO standards. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which has a daily traffic volume of approximately 100,000 vehicles per day. The 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm, which indicates that the most stringent 1-hour CO standard (20.0 ppm) would likely not be exceeded until the daily traffic at the evaluated intersection exceeded more than 400,000 vehicles per day.[3] The Los Angeles County Metropolitan Transportation Authority evaluated

[3] Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm).

the LOS in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection[4] and found it to be LOS E at peak morning traffic and LOS F at peak afternoon traffic.[5]

- *Background Concentrations*: The maximum 8-hour CO concentration in 1997 was 7.8 ppm. CO concentrations were last recorded at the Downtown Los Angeles Monitoring Station in 2012, and the 8-hour concentration was 1.9 ppm. The maximum CO concentration in 2012 was 76 percent less than the maximum concentration in 1997.
- *Emission Rates*: According to EMFAC2014, the Countywide average CO emission rate was 8.9 in 2000 and is 2019 in 1.9 grams per mile. With the turnover of older vehicles, introduction of cleaner fuels and implementation of control technology on industrial facilities, CO concentrations in ambient air have steadily declined. The average CO emission is 79 percent less than the average emission rate at the time that conformity was demonstrated.

The proposed project would not result in a CO hot-spot based on traffic volume, background concentrations, and emission rates. Therefore, the proposed project would result in a less-than-significant impact related to CO hot-spots.

Toxic Air Contaminant Emissions

The SCAQMD recommends that health risk assessments be conducted for substantial sources of diesel particulates (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions.[6] The CARB siting guidelines defined a warehouse as having more than 100 truck trips or 40 refrigerated truck trips per day, and recommend siting such facilities at least 1,000 feet away from sensitive land uses. The primary source of potential TACs associated with proposed project long-term operations is diesel particulates from delivery trucks (e.g., truck traffic on local streets and on-site truck idling). While the closest sensitive land uses is located approximately 100 feet to the east of the proposed project's site, potential localized TAC impacts from on-site sources of diesel particulate emissions would be minimal since less than 100 heavy-duty trucks (e.g., delivery trucks) would access the project site per day. Furthermore, the trucks that do visit the site would not idle on the project site for extended periods of time. Based on the limited activity of these TAC sources and the CARB siting guidelines, the proposed project would not warrant the need for a health risk assessment associated with on-site activities.

Regarding individuals that occupy the project site, some population groups are considered more sensitive to air pollution than others due to the types of users or activities involved. CARB has identified the following groups who are most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes and people with cardiovascular and chronic respiratory diseases. The proposed project does not include recreational areas or a childcare facility. College-age students typically over 18 years of age would attend classes for a couple of hours per week and do not represent a particularly sensitive group of receptors. Based on the above assessment, the proposed project would not expose sensitive receptors to substantial pollutant concentrations. Therefore, the proposed project would result in a less-than-significant impact related to operational TAC emissions.

Odors

According to the SCAQMD CEQA Air Quality Handbook, land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding. The project site would be developed with retail/commercial and residences and not land uses that are typically associated

[4]The Metropolitan Transportation Authority measured traffic volumes and calculated the LOS for the intersection Wilshire Boulevard/Sepulveda Boulevard which is a block west along Wilshire Boulevard, still east of Highway 405.

[5]Metropolitan Transportation Authority. 2004. Congestion Management Program for Los Angeles County. Exhibit 2-6 and Appendix A. July 22.

[6]SCAQMD, *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions*, December 2002.

with odor complaints. On-site trash receptacles would have the potential to create adverse odors. Trash receptacles would be located and maintained in a manner that promotes odor control and no adverse odor impacts are anticipated from these types of land uses. Therefore, the proposed project would result in a less-than-significant impact related to operational odors.

Consistency with the Air Quality Management Plan

The SCAQMD and SCAG have responsibility for preparing the AQMP, which details goals, policies, and programs for improving air quality in the Basin. The 2012 AQMP was adopted by the SCAQMD Board on December 7, 2012. It includes a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on- and off-road mobile sources and area sources. The 2012 AQMP proposes attainment demonstration of the federal $PM_{2.5}$ standard through adoption of all feasible measures while incorporating current scientific information and meteorological air quality models. It also updates the O_3 Control Plan with new commitments for short-term NO_X and VOC reductions.

According to the SCAQMD, there are two key indicators of consistency with the AQMP: 1) whether the project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP; and 2) whether the project will not exceed the assumptions in the AQMP based on the year of project buildout. The first consistency criterion refers to violations of the CAAQS. Construction emissions would be temporary and would not have a long-term impact on the region's ability to meet State and federal air quality standards. In addition, the proposed project would comply with State and local strategies designed to control air pollution, such as Rule 403 for the control of fugitive dust during construction. By meeting SCAQMD rules and regulations, project construction activities would be consistent with the goals and objectives of the AQMP to improve air quality in the Basin. Operational emissions (e.g., worker trips) would not exceed the SCAQMD significance thresholds, and would not interfere with attainment or maintenance of ambient air quality standards. Therefore, the proposed project would comply with Consistency Criterion No. 1.

The second consistency criterion requires that the proposed project not exceed the assumptions in the AQMP. A project is consistent with the AQMP if it is consistent with the population, housing, and employment assumptions that were used in the development of the AQMP. The proposed project does not include a residential component, and, therefore, would not increase population or housing in the area. LACCD estimates that when operating at maximum student capacity, the SGEC would be staffed with 62 administrative and support staff members and 90 full time employees. The SCAG 2016-2040 RTP/SCS Growth Forecast includes 1,910 new jobs in the City between 2020 and 2040. The 162 new employees generated by the proposed project would not significantly change employment projections that the City has provided to SCAG for in portion into regional planning documents, including the AQMP. In addition, the proposed project would not result in significant operational emissions. The proposed project is considered to be consistent with growth assumptions included in the AQMP, and it would comply with Consistency Criterion No. 2.

Therefore, the proposed project would result in a less-than-significant impact related to consistency with the AQMP.

CUMULATIVE IMPACTS

Because the Basin is designated as State and/or federal nonattainment for O_3, $PM_{2.5}$, PM_{10}, NO_2, and Pb, there is an ongoing regional cumulative impact associated with these pollutants. An individual project can emit these pollutants on a regional level without significantly contributing to this cumulative impact depending on the magnitude of emissions. The SCAQMD has indicated that the project-level thresholds may be used as an indicator defining if project emissions contribute to the regional cumulative impact. As discussed above, operational emissions would not exceed the SCAQMD significance thresholds, and, as such, project operations would not contribute to a cumulative impact. However, unmitigated construction emissions would result in the exceedance of SCAQMD's regional threshold for NO_X due to equipment and haul truck exhaust emissions. NO_X contributes to the formation of O_3, for which the Basin is non-attainment area. Therefore, construction emissions would result in a cumulatively considerable impact.

MITIGATION MEASURES

CONSTRUCTION

AQ1 The construction contractor shall use U.S. Environmental Protection Agency Tier 3 emission standards for diesel-powered construction equipment greater than 50 horsepower.

AQ2 The construction contractor shall use electricity from power poles rather than temporary diesel or gasoline generators.

AQ3 The construction contractor shall maintain equipment and vehicle engines in good condition and in proper tune per manufacturers' specifications.

AQ4 The construction contractor shall provide temporary traffic controls, such as a flag person, during all phases of construct to maintain smooth traffic flows.

AQ5 The construction contractor shall schedule construction activities that effect traffic flow on arterial system to off-peak hours.

AQ6 The construction contractor shall utilize super-compliant architectural coatings as defined by the South Coast Air Quality Management District (volatile organic compound standard of less than ten grams per liter).

OPERATIONS

Operational impacts related to air quality emissions and applicable plans, policies, and regulations would be less than significant. No mitigation measures are required.

SIGNIFICANCE OF IMPACTS AFTER MITIGATION

CONSTRUCTION

Construction activity would result in an unmitigated regional NO_X and VOC impact. Mitigation Measure **AQ1** requires USEPA Tier 3 emission controls for engines rated between 50 and 750 horsepower. Tier 3 emissions controls were phased-in between 2006 and 2008, and this equipment is readily available for use. The unmitigated emissions from CalEEMod were based on a combination of Tier 1 through Tier 3 emissions standards. Tier 3 emissions standards would reduce NO_X, PM, CO, VOC, and emissions. Mitigation Measures **AQ2** through **AQ5** would also reduce regional emissions, although no emissions reduction or benefit has been quantified for these mitigation measures. As shown in **Table 4.2-8**, Mitigation Measure **AQ1** would reduce unmitigated regional NO_X emissions from a maximum of 206 pounds per day to 105 pounds per day through the use of Tier 3 emission controls. Mitigated NO_X emissions would still exceed the 100 pounds per day significance threshold. Therefore, NO_X emissions would result in a significant and unavoidable short-term impact during construction activity.

TABLE 4.2-8: DAILY CONSTRUCTION EMISSIONS - MITIGATED

Construction Phase	Pounds per Day /a/					
	VOC	**NO_X**	**CO**	**SO_X**	**$PM_{2.5}$**	**PM_{10}**
PHASE 1						
Site Preparation	1	13	16	<1	3	6
Demolition – No Concrete Crushing	3	46	48	<1	2	6
Demolition – Concrete Crushing	2	43	47	<1	3	9
Grading	2	38	50	<1	4	8
PHASE 2						
Construction	1	13	15	<1	1	1
PHASE 3						
Site Preparation	1	13	16	<1	3	5
Construction	2	21	40	<1	2	5
Paving	3	15	24	<1	1	2
Architectural Coating	5	4	8	<1	<1	1
Maximum Regional Total /b/	10	105	138	<1	9	22
Regional Significance Threshold	**75**	**100**	**550**	**150**	**55**	**150**
Exceed Threshold?	No	Yes	No	No	No	No

/a/ The emission calculations include equipment exhaust reductions associated with Tier 3 emissions standards and VOC reductions associated with the application of low-VOC architectural coatings.
/b/ Maximum emissions would generally occur when Phase 1 demolition and grading activity overlaps with Phase 2 construction activity. Maximum VOC emissions would occur during the Phase 3 architectural coating activity.
SOURCE: TAHA, 2015.

Regarding VOC emissions from architectural coatings, Mitigation Measure **AQ6** would reduce project-related architectural coating emissions by 96 percent.[7] As shown in **Table 4.2-8**, VOC emissions would be reduced to approximately 4.5 pounds per day, which would be less than the SCAQMD regional significance threshold of 75 pounds per day. With mitigation, the proposed project would result in a less-than-significant impact related to regional VOC construction emissions.

OPERATIONS

Operational impacts related to air quality emissions and applicable plans, policies, and regulations were determined to be less than significant without mitigation.

[7]SCAQMD, *Super-Compliant Architectural Coatings Manufacturers and Industrial Maintenance Coatings List*, http://www.aqmd.gov/prdas/Coatings/super-compliantlist.htm.

4.3 CULTURAL RESOURCES

This section provides an overview of cultural resources within the vicinity of the project site and evaluates the potential for the 2015 South Gate Educational Center Master Plan (proposed project) to result in construction and operational impacts related to cultural resources. Topics addressed include historical, archaeological, and paleontological resources, and human remains. This section was prepared utilizing the Cultural Resources Technical Report prepared by SWCA Environmental Consultants (SWCA) in September 2009 and an Updated Built Environment Assessment also prepared by SWCA in July 2015. Both of these cultural resource studies are included in Appendix C of this Supplemental Draft EIR.

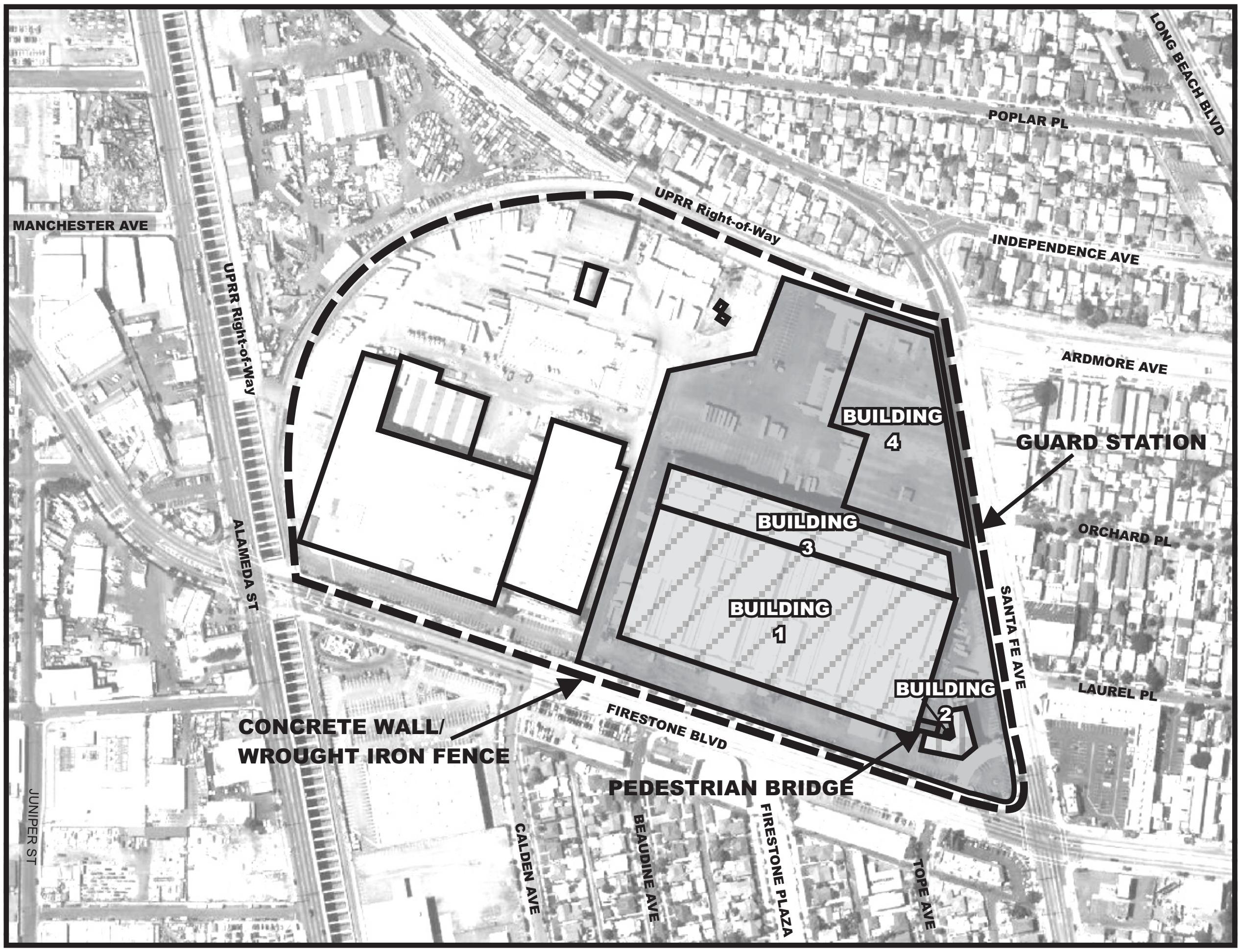
EXISTING SETTING

Historical Resources

The project site is the former location of the Firestone Tire and Rubber Plant. The tire manufacturer purchased the property in the late 1920s and began operation in December 1928. After the arrival of Firestone and B.F. Goodrich, Los Angeles became the second most prolific rubber manufacturing center in the nation, after Akron, Ohio. Automobile and aircraft manufacturing arrived shortly thereafter, followed by other related plants. By the outset of World War II, more than 900 factories existed in a two-mile region surrounding the City. The Firestone Company remained under family control until the 1970s. Up to that time, it had been one of the largest employers in the City. The industry giant relinquished its dominance, in part by failing to "respond effectively to new technology" including the radial tire. That weakness was exaggerated by not identifying or meeting the threat of aggressive, global competition. The Firestone Company, which had once been the leader in tire and rubber innovation, became an industry dinosaur. The company was acquired by Japanese titan, Bridgestone, in 1980, and the South Gate factory, once the largest employer in local commerce, closed.

Historic Buildings and Districts. The project site is part of the California Register-eligible South Gate Historic District, and Buildings 1, 2, and 3 on the project site are individually eligible for listing in the California Register. Building 4 was identified as being a contributor to the South Gate Historic District, but is not individually eligible for the California Register. The pedestrian bridge that connects Buildings 1 and 2, and a concrete wall/wrought iron fence with gate posts also contribute to the California Register-eligible South Gate Historic District. As these buildings are eligible for listing in the California Register, these buildings are considered historic resources under CEQA.

The South Gate Historic District encompasses the project site and the adjacent HON site. Buildings 1, 2, and 3 located on the project site were built in 1928 and designed in an Italianate Mediterranean Revival style. Character defining features include the tan stucco cladding, curved red terra cotta roof tiles, arched and rectangular multi-light metal sash windows, simple stringcourse detailing, pyramidal-roofed portals and towers, sculpted medallions that depict production and transportation, corbels with sculpted faces, copper ornamented sconces, and a prominently featured clock that breaks the roofline of the tower and a sculpted copper capped steeple atop the tower at Building 2. In 1929, Buildings 1 and 3 were expanded, symmetrically adding six bays each on either side. Building 4 was built in 1951 and is a two-story utilitarian building with an irregular plan. Although Building 4 is not designed in the Italianate Mediterranean Revival style, it retains the same color and exterior cladding as the other buildings original to the complex. **Figure 4.3-1** illustrates the location of buildings, including buildings on the HON site. Photographs of the buildings on the project site are illustrated in **Figures 4.3-2** and **4.3-3**.



LEGEND:

- Project Site
- California Register-Eligible South Gate Historic District
- South Gate Historic District Contributors
- California Register-Eligible Buildings

Approx. Scale
N
0 150 300 Feet

SOURCE: TAHA, 2016.

taha 2014-075

2015 South Gate Educational Center Master Plan
Supplemental Draft Environmental Impact Report

LOS ANGELES COMMUNITY COLLEGE DISTRICT

FIGURE 4.3-1

HISTORIC BUILDINGS AND STRUCTURES

Building 1 contributes to the South Gate Historic District's eligibility and is individually eligible to the California Register.

Building 2 contributes to the South Gate Historic District's eligibility and is individually eligible to the California Register.

Building 3 contributes to the South Gate Historic District's eligibility and is individually eligible to the California Register.

Building 4 contributes to the South Gate Historic District's eligibility, but is not individually eligible to the California Register.

SOURCE: SWCA and TAHA, 2016.

FIGURE 4.3-2

HISTORIC BUILDINGS

The pedestrian bridge contributes to the South Gate Historic District's eligibility, but is not individually eligible to the California Register.

The concrete wall/wrought iron fence contributes to the South Gate Historic District's eligibility, but is not individually eligible to the California Register.

The guard station contributes to the South Gate Historic District's eligibility, but is not individually eligible to the California Register.

SOURCE: SWCA and TAHA, 2016.

FIGURE 4.3-3

HISTORIC STRUCTURES

The South Gate Historic District is eligible for listing in the California Register under Criterion 1 because of its association with events that made a significant contribution to the broad patterns of California's history and cultural heritage. Eligibility is based on its association with the Firestone Company, including direct associations with the Harvey S. Firestone family, development of the tire and rubber industries in California, the automobile revolution and subsequent culture, and the early 20th century industrial boom of Los Angeles. The South Gate Historic District is also eligible under Criterion 3, as it embodies the distinctive characteristics of a type (industrial and manufacturing), period (1928 to 1954) and region (southern California). The South Gate Historic District's eligibility is based on the expression of the Italianate Mediterranean Revival style, and as the work of a prominent Los Angeles-based architecture firm, Curlett and Beelman. The Mediterranean Revival architectural style is a direct connection with then-developing California regionalism. As discussed above, character defining features of the South Gate Historic District include terra cotta roof tiles, arched and rectangular multi-light metal sash windows, stringcourse detailing, pyramidal-roofed portals and towers, bas-relief medallions that depict production and transportation, corbels with sculpted faces, copper ornamental sconces, the prominently-featured clock that breaks the roofline of the tower and a sculpted copper capped steeple atop the tower of Building 2. Buildings 1, 2, and 3 have retained adequate integrity to their original appearance; therefore, these buildings are individually eligible for listing in the California Register under Criterion 1 and 3, and as a contributing resource to the South Gate Historic District. Because Building 4 retains adequate integrity to its original appearance, Building 4 is eligible for listing in the California Register under Criterion 1 as a contributing resource to the South Gate Historic District.

Archaeological Resources

The project site and the surrounding area are fully urbanized. Buildings and paved areas cover the entire project area. A cultural resources record check conducted for the project site concluded that there are no archaeological sites located within the project area. The records, literature search, and surveys revealed a low sensitivity for historic-period and prehistoric archaeological resources in the project area.[1]

Paleontological Resources

The project area is underlain by younger Quaternary alluvial deposits of Holocene age. Surficial deposits of younger Quaternary alluvium generally consist of unconsolidated gravel, sand, silt, and clay deposited in modern stream channels and fluvial slope wash. These fluvial deposits are in part derived from the nearby Los Angeles River and overlie "older alluvium" of Pleistocene age at unknown but potentially shallow depths.

Museum collections maintained by the Natural History Museum of Los Angeles County contain no recorded vertebrate fossil localities within the boundaries of the project site. However, at least eight scientifically significant fossil localities have been documented within Quaternary older alluvium deposits in the project vicinity.[2] These localities yielded significant vertebrate remains of medium to large terrestrial mammals including specimens. The depths at which these fossil specimens were discovered were for the most part unreported. However, four fossils were reportedly recovered from excavations as shallow as 15 feet below the ground surface.

Quaternary older alluvium is considered to have a high paleontological sensitivity due to its proven potential to contain significant vertebrate fossils. No fossil localities were discovered within the younger Quaternary alluvium either within or in the vicinity of the project site, and Holocene-age deposits generally contain only the remains of modern organisms. Therefore, the surficial geologic sediments within the project area are considered to have a low paleontological sensitivity. However, the sensitivity of younger alluvium increases with depth, as it overlies highly sensitive older alluvium.

[1]SWCA, *Cultural Resources Technical Report East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California,* September 2009.
[2]*Ibid.*

Human Remains

Prior to the immigration of Spanish settlers, the Tongva Native Americans inhabited the land that is now the City of South Gate. The Tongva established large, permanent villages in the fertile lowlands along rivers and streams and in sheltered areas along the coast, stretching from the foothills of the San Gabriel Mountains to the Pacific Ocean. A total tribal population has been estimated at 5,000 persons, but recent ethnohistoric work suggests that 10,000 persons seem more likely.[3]

The Native American Heritage Commission was consulted as a means of determining the presence of Native American resources on the project site. A record search of the sacred lands file was conducted by the Commission, and it did not indicate the presence of Native American cultural resources in the immediate project area.[4]

REGULATORY FRAMEWORK

Several levels of government maintain jurisdiction over historic resources. The framework for the identification and, in certain instances, protection of historic resources is established at the federal level, while the identification, documentation, and protection of such resources are often undertaken by State and local governments. The principal federal, State, and local laws governing and influencing the preservation of historic resources of national, State, and local significance include the National Historic Preservation Act (NHPA) of 1966, as amended; the CEQA; the California Register of Historical Resources (California Register); and California Public Resources Code (PRC) Section 5024.

Federal

National Historic Preservation Act (NHPA). Section 106 of the NHPA of 1966, as amended, established a national policy of historic preservation. The NHPA established the Advisory Council on Historic Preservation (ACHP) and provided procedures for the agency to follow if a proposed action affects a property that is included, or that may be eligible for inclusion, on the National Register of Historic Places (National Register). The National Register was developed as a direct result of the NHPA. Section 106 requires that the head of any federal agency having direct or indirect jurisdiction over a proposed federal or federally-assisted undertaking in any State, and the head of any federal department or independent agency having authority to license any undertaking, shall, prior to the approval of the expenditure of any federal funds on the undertaking or prior to the issuance of any license, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register.

National Register of Historic Places (National Register). The National Register recognizes properties that are significant at the national, State, and/or local levels. Although administered by the National Park Service (NPS), the federal regulations explicitly provide that National Register listing of private property "does not prohibit under federal law or regulation any actions which may otherwise be taken by the property owner with respect to the property." Listing in the National Register assists in preservation of historic properties through the recognition that a property is of significance to the nation, the State, or the community; consideration in the planning for federal or federally-assisted projects; eligibility for federal tax benefits; and qualification for federal assistance for historic preservation, when funds are available. State and local regulations may apply to properties listed in the National Register.

[3] SWCA, *Cultural Resources Technical Report East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California,* September 2009.
[4] *Ibid.*

The following National Register criteria are the standards for determining if properties, sites, districts, structures, or landscapes of potential significance are eligible for nomination:

- **Criteria A**. Associated with events that have made a significant contribution to the broad patterns of our history;
- **Criteria B**. Associated with the lives of significant persons in or past;
- **Criteria C**. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- **Criteria D**. Yield, or may be likely to yield, information important in history or prehistory.

In addition to criteria listed above, the National Register recognizes seven aspects or qualities that comprise historic integrity. Historic integrity is the ability of a property to convey its significance and is defined as "the authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic period." The seven aspects or qualities that comprise historic integrity are:

- *Location*. The place where the historic property was constructed or the place where the historic event occurred.
- *Design*. The combination of elements that create the form, plan, space, structure, and style of a property.
- *Setting*. The physical environment of a historic property.
- *Materials*. The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
- *Workmanship*. The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- *Feeling*. A property's expression of the aesthetic or historic sense of a particular period of time.
- *Association*. The direct link between an important historic event or person and a historic property.

Archaeological Resources Protection Act (ARPA). ARPA applies when a project may involve archaeological resources located on federal or tribal land. ARPA requires that a permit be obtained before excavation of an archaeological resource on such land can take place.

State

Office of Historic Preservation (OHP). OHP, an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a Statewide level. The OHP also carries out the duties set forth in the PRC and maintains the California Historic Resources Inventory, a database that includes resources considered for listing in the National and California Registers or as California State Landmarks or Points of Historical Interest. The State Historic Preservation Officer (SHPO) is the appointed official who implements historic preservation programs within the state's jurisdiction.

California Register of Historical Resources (California Register). California Register is "an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change."[5] The criteria for eligibility for the California Register are based upon National Register criteria. These criteria are:

- **Criterion 1**: Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California of the United States;
- **Criterion 2**: Associated with the lives of persons important to local, California or national history;
- **Criterion 3**: Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values; and

[5]California Public Resources Code Section 50241(e).

- **Criterion 4**: Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

The California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed in the National Register (Category 1 in the State Inventory of Historical Resources) and those formally Determined Eligible for listing in the National Register (Category 2 in the State Inventory);
- California Registered Historical Landmarks from No. 0770 onward; and
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Resources Commission for inclusion in the California Register.

In addition to the resources listed above, the following resources may also be nominated for listing in the California Register:

- Historical resources with a significance rating of Categories 3 through 5 in the State Inventory. (Categories 3 and 4 refer to potential eligibility for the National Register, while Category 5 indicates a property with local significance)
- Individual historical resources
- Historical resources contributing to historic districts
- Historical resources designated or listed as a local landmark

Additionally, a historic resource eligible for listing in the California Register must meet one or more of the criteria of significance described above and retain enough of its historic character or appearance to be recognizable as a historic resource and to convey the reasons for its significance. Historical resources that have been rehabilitated or restored may be evaluated for listing.

California Environmental Quality Act (CEQA). Under CEQA a "project that may cause a substantial adverse change in the significance of a historic resource is a project that may have a significant effect on the environment."[6] This statutory standard involves a two-part inquiry: (1) A determination of whether the project involves a historic resource and (2) a determination whether the project may involve a "substantial adverse change in the significance" of the resource. To address these issues, guidelines that implement the 1992 statutory amendments relating to historical resources were adopted in final form on October 26, 1998, with the addition of CEQA Guidelines Section 15064.5. The CEQA Guidelines provide that for the purposes of CEQA compliance the term "historical resources" shall include the following:[7]

- A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register;
- A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC, or identified as significant in a historical resource survey meeting the requirements in Section 5024.1(g) of the PRC, shall be presumed to be historically or culturally significant. Public agencies must treat such resources as significant for purposes of CEQA unless the preponderance of evidence demonstrates that it is not historically or culturally significant;
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets one of the criteria for listing on the California Register; and

[6] California Public Resources Code Section 21084.1.
[7] California Code of Regulations, Title 14, Section 15064.5(a)(1-4).

- The fact that a resource is not listed in, or determined to be eligible for listing in the California Register, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the PRC, or identified in a historical resources survey (meeting the criteria in Section 5024.1(g) of the PRC does not preclude a lead agency from determining that the resource may be a historical resource as defined in Section 5020.1(j) or 5024.1 of the PRC.

Section 15064.5 of the CEQA Guidelines provides that "[s]ubstantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired."[8] Material impairment occurs when a project alters or demolishes a historical resource in an adverse manner "those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion" in a state or local historic registry.[9]

California Health and Safety Code Section 7050.5. California Health and Safety Code Section 7050.5 requires that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

California Public Resources Code (PRC). PRC Section 5097.5 defines the unauthorized disturbance or removal of archaeological, historical, or paleontological resources located on public lands as a misdemeanor. This section also prohibits the knowing destruction of objects of antiquity without a permit (expressed permission) on public lands, and provides for criminal sanctions. In 1987, PRC Section 5097.5 was amended to require consultation with the California Native American Heritage Commission whenever Native American graves are found. The section also established that violations for taking or possessing remains or artifacts are felonies.

PRC Section 5097.9 establishes the California Native American Heritage Commission to make recommendations to encourage private property owners to protect and preserve sacred places in a natural state and to allow appropriate access to Native Americans for ceremonial or spiritual activities. The California Native American Heritage Commission is authorized to assist Native Americans in obtaining appropriate access to sacred places on public lands, and to aid State agencies in any negotiations with federal agencies for the protection of Native American sacred places on federally administered lands in the State.

PRC Sections 5097.98-99 require that the California Native American Heritage Commission be consulted whenever Native American graves are found. According to these PRC Sections, it is illegal to take or possess remains or artifacts taken from Native American graves; however, it does not apply to materials taken before 1984. Violations occurring after January 1, 1988 are felonies.

Local

City of South Gate General Plan Community Design Element (Community Design Element). The Community Design Element provides land use policy guidance for protecting cultural resources in the City of South Gate. The project site is identified in the Community Design Element as being located within Subarea 1 of the SGCD. While California Government Code Section 53094 includes provisions for school districts to exempt classroom facilities from local zoning regulations, applicable objectives and policies of the City's General Plan related to cultural resources are identified in **Table 4.3-1**.

[8] California Code of Regulations, Title 14, Section 15064.5(b)(1).
[9] California Code of Regulations, Title 14, Section 15064.5(b)(2)(A-C).

TABLE 4.3-1: APPLICABLE GENERAL PLAN OBJECTIVES AND POLICIES RELATED TO CULTURAL RESOURCES	
COMMUNITY DESIGN ELEMENT	
Objective/Policy	**Objective/Policy Description**
Objective CD 9.1	Identify and preserve cultural and historic resources.
Policy P.1	Historic or culturally significant buildings and other resources in South Gate should be preserved and enhanced to contribute to the character of the community.
Policy P.3	Through its direct or indirect actions, the City will cause no substantial adverse change in the significance of a historical or archaeological resource as defined in the CEQA.
Policy P.4	Unique paleontological resources and sites will not be directly or indirectly destroyed or significantly altered.
Policy P.5	All new development should not disturb archeological sites.
SGCD Policy P.9	To the extent feasible, the existing Firestone Tire factory building should be adaptively reused and the building façade preserved.
Note: SGCD - South Gate College District **SOURCE**: City of South Gate, *South Gate General Plan 2035.*	

City of South Gate Preservation of Cultural Heritage Ordinance. The Preservation of Cultural Heritage Ordinance was passed on July 13, 2010, and its language is contained in the SGMC Section 7.68. The ordinance is intended to:

> *Protect, enhance and perpetuate areas, streets, places, buildings, structures, outdoor works of art, natural features and other similar objects which are reminders of past eras, events, and persons important in local, state or national history, or which provide significant examples of architectural styles of the past or are landmarks in the history of architecture, or which are unique and irreplaceable assets to the city of South Gate and its neighborhoods, or which provide for this and future generations significant examples of the physical surroundings in which past generations lived.*

The South Gate City Council has the authority to designate a locally significant cultural landmark upon submission of an application from an interested party. Three City properties have been designated as landmarks since the ordinance was adopted: the tile mosaic at the west entrance of the Civic Center Community Building, 8680 California Avenue; the South Gate Community Center (former library), 8680 California Avenue; and the Glenn T. Seaborg Residence, at 9237 San Antonio Avenue. The tile mosaic and the South Gate Community Center are located approximately 1.3 miles east, and the Seaborg Residence is located approximately 1.6 miles east of the proposed project site.[10]

THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the State CEQA Guidelines, the proposed project would have a significant impact related to cultural resources if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
- Directly or indirectly destroy a unique paleontological resources or site or unique geologic feature; and/or
- Disturb any human remains, including those interred outside of formal cemeteries.

[10] SWCA, *Cultural Resources Assessment for the East Los Angeles Satellite Campus Master Plan, City of South Gate, Los Angeles County, California*, May 2011.

IMPACTS

CONSTRUCTION

The proposed project would include the demolition of Buildings 1, 3, 4 and the bridge that connects Building 1 to Building 2. Building 2 would remain on-site, but it would not be used for the delivery of college educational curriculum. Following demolition, a new approximately 100,000-gross-square-foot building and surface parking lot would be constructed. The project site would also be improved with landscaping, an open space area, and other outdoor amenities

Historical Resources

As described above, the project site is part of a California Register-eligible Historic District, and Buildings 1, 2 and 3 are individually eligible for listing in the California Register. Building 4, the pedestrian bridge connecting Buildings 1 and 2, and the concrete wall/wrought iron fence with gate posts contribute to the California Register-eligible South Gate Historic District. Accordingly, under CEQA, these buildings are all considered historical resources. The demolition of Buildings 1, 3, 4 and the pedestrian bridge would result in a substantial adverse change in the significance of these historical resources, as well as the South Gate Historic District. Therefore, without mitigation, the proposed project would result in a significant impact related to historical resources.

Archaeological Resources

The project site is a previously disturbed area where grading and excavation have already occurred. No prehistoric or historic archaeological resources are apparent at the ground surface. The records search concluded that there are no archaeological sites located on project site, and there is a low likelihood that archaeological resources would be encountered during ground-disturbing activities, such as grading and vegetation clearing. However, there is a possibility of encountering such resources. Therefore, without mitigation, the proposed project would result in a significant impact related to archaeological resources.

Paleontological Resources

As discussed above, the project site is a previously disturbed area where grading and excavation have already occurred. No paleontological resources are apparent at the ground surface. Superficial and/or very shallow excavations related to the construction of proposed project are unlikely to result in a significant impact to paleontological resources. However, as described above, fossils recovered from excavations as shallow as 15 feet below ground surface have been documented in the vicinity of the project site. Accordingly, excavations ten feet deep or greater at the project site have the potential to encounter and possibly destroy fossils, making biological records of ancient life permanently unavailable for study. Therefore, without mitigation, the proposed project would result in a significant impact related to paleontological resources.

Human Remains

According to the Native American Heritage Commission, no Native American cultural resources are present in the immediate vicinity of the project site. In addition, the project site is not part of a formal cemetery and, therefore, it is unlikely that human remains exist on or in the vicinity of the site. Although the absence of site-specific information does not preclude the existence of buried cultural resources, the project site is an area that is fully developed and previously graded, making it unlikely that human remains would be encountered during ground-disturbing activities. Nonetheless, there is a possibility of encountering such resources during ground-disturbing activities. Therefore, without mitigation, the proposed project would result in a significant impact related to human remains.

OPERATIONS

No impacts related to cultural resources would occur. Therefore, no further discussion of operational impacts is necessary.

CUMULATIVE IMPACTS

Impacts associated with historic resources are typically isolated in nature and do not contribute to additive effects on a particular geographic location. However, the project site and the adjacent HON site comprise the California Register-eligible South Gate Historic District. Implementation of the South Gate Shopping Center would likely result in the removal of historical resources associated with the South Gate Historic District. Since the proposed project would also result in the removal of a historical resource, implementation of the proposed project, in combination with the South Gate Shopping Center project, would compound impacts to the South Gate Historic District. Therefore, impacts related to historical resources would be cumulatively considerable, and a significant cumulative impact would occur.

Impacts related to archeological, paleontological, and human remains resulting from the proposed project have been mitigated to a less-than-significant level. Potential impacts to these cultural resources from other related projects would be assessed on a case-by-case basis, and, if necessary, would be required to implement appropriate mitigation measures. Therefore, impacts related to archeological, paleontological resources, and human remains would not be cumulatively considerable.

MITIGATION MEASURES

CONSTRUCTION

Historical Resources

CR1 Impacts resulting from the demolition of Buildings 1, 3, and 4 and a pair of historic gate posts shall be minimized through archival documentation of as-built and as-found condition. Prior to issuance of demolition permits, the lead agency shall ensure that documentation of the buildings and structures proposed for demolition is completed in the form of a Historic American Building Survey (HABS) Level I documentation that shall comply with the Secretary of the Interior's Standards for Architectural and Engineering Documentation (National Park Service [NPS] 1990). The documentation shall include large-format photographic recordation, detailed historic narrative report, and compilation of historic research. The documentation shall be completed by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualification Standards for History and/or Architectural History (NPS 1983). The original archival-quality documentation shall be offered as donated material to the new campus library where it would be available for current and future generations. Archival copies of the documentation also would be submitted to the South Gate's Leland R. Weaver Public Library where it would be available to local researchers. Completion of this mitigation measure shall be monitored and enforced by the LACCD.

CR2 Impacts related to the loss of Buildings 1, 3, and 4, historic gateposts, and the historic district shall be reduced through the development of a retrospective display detailing the history of the historic district, its significance, and its important details and features. This display can be in the form of a physical exhibit and/or kiosk, and can be incorporated into publically-accessible spaces within the new SGEC building. It shall include images and details from the HABS documentation and any collected research pertaining to the historic district. The display content shall be prepared by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional

Qualification Standards for History and/or Architectural History (NPS 1983). The display shall be completed within two years of the date of completion of the proposed project. Completion of this mitigation measure shall be monitored and enforced by the LACCD.

CR3 Avoidance of impacts to Building 2 shall be accomplished by ensuring that any alterations, including the construction of a new stair system and door on the building's second floor, is completed in conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines of Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (Weeks and Grimmer 1995). The work shall conform to the standards and guidelines for "rehabilitation." Completion of this mitigation measure shall be completed under the direction of a qualified architectural historian and shall be monitored and enforced by the LACCD.

Archaeological Resources

CR4 If evidence of archaeological resources (artifacts or features) are discovered during construction related earth-moving activities, all ground-disturbing activities (e.g., grading, grubbing, vegetation clearing) within 100 feet of the resource shall be halted and LACCD shall be notified. LACCD shall hire an archaeologist who meets the Secretary of the Interior's professional qualification standards shall be retained to assess the significance of the resource. Impacts to any significant resources shall be mitigated to a less-than-significant level through data recovery or other methods determined adequate by the archaeologist and LACCD and shall be consistent with the Secretary of the Interior's Standards for Archaeological Documentation. Any identified archaeological resources shall be recorded on the appropriate Department of Park and Recreation 523 (A-L) form and filed with the appropriate Information Center.

Paleontological Resources

CR5 All project-related ground disturbances that could potentially impact paleontologically sensitive Quaternary older alluvium shall be monitored by a qualified paleontological monitor on a full-time basis, as this geologic unit is considered to have a high paleontological sensitivity. Since Quaternary older alluvium is estimated to occur at depths of ten feet and greater, all excavations deeper than ten feet will be monitored full-time. Additionally, any excavations that occur in surficial younger (Holocene age) Quaternary alluvial and fluvial deposits and/or topsoil (estimated to occur at less than ten feet in depth) shall be spot-checked on a part-time basis at the discretion of the Qualified Paleontologist to ensure that underlying paleontologically sensitive sediments are not being impacted.

CR6 A Qualified Paleontologist shall be retained to supervise monitoring of construction excavations beyond ten feet in depth and inspect exposed rock units during active excavations within sensitive geologic sediments. The paleontologist shall implement a paleontological monitoring and mitigation plan for the proposed project to reduce impacts to paleontological resources to a less-than-significant level in the event that such resources are encountered. The qualified paleontologist shall have authority to temporarily divert grading away from exposed fossils in order to professionally and efficiently recover the fossil specimens and collect associated data. In the event that fossils are encountered, at each fossil locality, field data forms shall be used to record pertinent geologic data, stratigraphic sections will be measured, and appropriate sediment samples will be collected and submitted for analysis.

Human Remains

CR7 If human remains are discovered during any demolition/construction activities, all ground-disturbing activity within a 100 foot radius of the remains shall be halted immediately, and the Los Angeles County Coroner shall be notified immediately, according to Public Resources Code Section 5097.98 and California Health and Safety Code Section 7050.5. If the human remains are determined to be

Native American, the Coroner will notify the Native American Heritage Commission, and the guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains. The Native American Heritage Commission will consult with the Most Likely Descendant (MLD), if any. The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. LACCD shall be responsible for the approval and implementation of the MLD recommendations as deemed appropriate, prior to resumption of ground-disturbing activities within 100 foot radius of where the remains were discovered.

OPERATIONS

No impacts related to cultural resources would occur. No mitigation measures are required.

SIGNIFICANCE OF IMPACTS AFTER MITIGATION

CONSTRUCTION

Historical Resources

Implementation of Mitigation Measures **CR1** through **CR3** would reduce significant impacts related to historical resources to the maximum extent feasible. Historical resource impacts with regard to Building 2, which is individually eligible for listing in the California Register, would be less than significant, since Building 2 would not being demolished. Rather, Building 2 would be rehabbed in accordance with the Secretary of the Interior standards. However, the proposed project would result in a significant and unavoidable impact associated with the demolition of Buildings 1 and 3, as individually eligible historic resources, and Buildings 1, 3, and 4, as well as the pedestrian bridge, as contributors to a California Register-eligible South Gate Historic District. Therefore, impacts related to historical resources would be significant and unavoidable.

Archaeological Resources

Impacts related to archaeological resources were determined to be significant without mitigation. Mitigation Measure **CR4** would reduce these impacts to less than significant.

Paleontological Resources

Impacts related to paleontological resources were determined to be significant without mitigation. Mitigation Measures **CR5** and **CR6** would reduce these impacts to less than significant.

Human Remains

Impacts related to human remains were determined to be significant without mitigation. Mitigation Measure **CR7** would reduce these impacts to less than significant.

OPERATIONS

No impacts related to cultural resources would occur.

4.4 GREENHOUSE GAS EMISSIONS

This section provides an overview of existing greenhouse gas (GHG) emissions inventories and regulations and evaluates the potential for the 2015 South Gate Educational Center Master Plan (proposed project) to result in construction and operational impacts related to GHG emissions. Topics addressed include project GHG emissions and consistency with applicable GHG reduction plans and policies.

Pollutants and Effects

The standard definition of GHG includes six substances: carbon dioxide (CO_2); methane (CH_4); nitrous oxide (N_2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulfur hexafluoride (SF_6).[1] Tropospheric ozone (O_3), a short-lived, not-well-mixed gas, and black carbon are also important climate pollutants. CO_2 is undoubtedly the most important GHG, and collectively CO_2, CH_4, and N_2O amount to 80 percent of the total radiative forcing from well-mixed GHGs.

CO_2, CH_4, and N_2O concentrations have increased in the atmosphere since pre-industrial times, and this increase is the main driver of climate change. Globally, CO_2 increased by 40 percent from 278 parts per million (ppm) circa 1,750 to 390.5 ppm in 2011. During the same time interval, CH_4 increased by 150 percent, from 722 parts per billion (ppb) to 1,803 ppb, and N_2O by 20 percent, from 271 ppb to 324.2 ppb in 2011.[2] The increase of CO_2, CH_4, and N_2O is caused by anthropogenic emissions from the use of fossil fuel as a source of energy, fertilizer usage, and from land use and land use change—in particular, agriculture.

For each GHG, a global warming potential (GWP) has been calculated to reflect how long emissions remain in the atmosphere and how strongly it absorbs energy on a per-kilogram basis relative to CO_2. GWP is a metric that indicates the relative climate forcing of a kilogram of emissions when averaged over the period of interest (both 20-year and 100-year horizons are used for the GWPs shown in **Table 4.4-1**. Other important climate-forcing species large human sources are tropospheric ozone and particulate matter (PM, including black carbon and other absorbing organic carbon aerosols).

TABLE 4.4-1: GLOBAL WARMING POTENTIAL FOR SELECTED GREENHOUSE GASES

Pollutant	Lifetime (Years)	Global Warming Potential (20-Year)	Global Warming Potential (100-Year)
Carbon Dioxide	100	1	1
Nitrous Oxide	121	264	265
Nitrogen Triflouride	500	12,800	16,100
Sulfur Hexaflouride	3,200	17,500	23,500
Perflourocarbons	3,000-50,000	5,000-8,000	7,000-11,000
Black Carbon	days to weeks	270-6,200	100-1,700
Methane	12	84	28
Hydroflourocarbons	Uncertain	100-11,000	100-12,000

SOURCE: CARB, *First Update to the Climate Change Scoping Plan*, May 2014.

The primary effect of rising global concentrations of atmospheric GHG levels is a rise in the average global temperature of approximately 0.2 degrees Celsius per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling using emission rates shows that further warming is likely to occur given the expected rise in global atmospheric GHG concentrations from innumerable sources of GHG emissions worldwide, which would induce further changes in the global

[1] CARB, *First Update to the Climate Change Scoping Plan*, May 2014.
[2] *Ibid*.

climate system during the current century.[3] Adverse impacts from global climate change worldwide and in California include:

- Declining sea ice and mountain snowpack levels, thereby increasing sea levels and sea surface evaporation rates with a corresponding increase in atmospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures;[4]
- Rising average global sea levels primarily due to thermal expansion and the melting of glaciers, ice caps, and the Greenland and Antarctic ice sheets;[5]
- Changing weather patterns, including changes to precipitation, ocean salinity, and wind patterns, and more energetic aspects of extreme weather including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones;[6]
- Declining Sierra Mountains snowpack levels, which account for approximately half of the surface water storage in California, by 70 percent to as much as 90 percent over the next 100 years;[7]
- Increasing the number of days conducive to ozone formation (e.g., clear days with intense sun light) by 25 to 85 percent (depending on the future temperature scenario) in high O_3 areas located in the Southern California area and the San Joaquin Valley by the end of the 21st Century;[8] and
- Increasing the potential for erosion of California's coastlines and seawater intrusion into the Sacramento Delta and associated levee systems due to the rise in sea level.[9]

Scientific understanding of the fundamental processes responsible for global climate change has improved over the past decade. However, there remain significant scientific uncertainties. For example, in predictions of local effects of climate change, occurrence of extreme weather events, and effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation. Due to the complexity of the climate system, the uncertainty surrounding the implications of climate change may never be completely eliminated. Because of these uncertainties, there continues to be significant debate as to the extent to which increased concentrations of GHGs have caused or will cause climate change, and with respect to the appropriate actions to limit and/or respond to climate change. In addition, it may not be possible to link specific development projects to future specific climate change impacts, though estimating project-specific impacts is possible.

EXISTING SETTING

Emissions of GHGs contributing to global climate change are attributable, in large part, to human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural sectors.[10] In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. Emissions of CO_2 are by-products of fossil fuel combustion.[11] CH_4, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N_2O is also largely attributable to agricultural practices and soil management.[12] CO_2 sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution, respectively, two of the most common processes of CO_2 sequestration.[13]

[3]USEPA, Draft Endangerment Finding, 74 Fed. Reg. 18886, 18904, April 24, 2009.
[4]*Ibid*.
[5]Intergovernmental Panel on Climate Change, *Climate Change,* 2007.
[6]*Ibid*.
[7]Cal/EPA, *Climate Action Team Report to Governor Schwarzenegger and the Legislature*, 2006.
[8]*Ibid*.
[9]*Ibid*.
[10]Intergovernmental Panel on Climate Change. Climate Change, *The Physical Science Basis, Fifth Assessment Report*, 2013.
[11]CARB, *First Update to the Climate Change Scoping Plan: Building on the Framework*, May 2014.
[12]USEPA, *Methane and Nitrous Oxide Emissions from Natural Sources*, 2010.
[13]USEPA, *Carbon Sequestration through Reforestation, A Local Solution with Global Impact*, March 2012.

California produced 474 million gross metric tons of CO_2e averaged over the period from 2002 to 2004. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2002 to 2004, accounting for 38 percent of total GHG emissions in the state. This sector was followed by the electric power sector (including both in-state and out-of-state sources) (18 percent) and the industrial sector (21 percent).

Over the last decade, the Statewide GHG emissions decreased from 468 million metric tons (MMT) CO_2e in 2000 to 456 MMT CO_2e in 2011—a decrease of 2.7 percent. The emissions in 2011 are the lowest of the 12-year period, while 2004 had the highest emissions, with 495 MMT CO_2e. During the same period, California's population grew by 10.5 percent. As a result, California's per capita GHG emissions have decreased by 11.9 percent between 2000 and 2011. The recent recession had a major impact on GHG emissions between 2008 and 2009, when emissions decreased by almost 6 percent.

REGULATORY FRAMEWORK

Federal

Supreme Court Ruling. The U.S. Supreme Court ruled in *Massachusetts v. Environmental Protection Agency, 127 S. Ct. 1438 (2007)*, that CO_2 and other GHGs are pollutants under the federal Clean Air Act (CAA), which the U.S. Environmental Protection Agency (USEPA) must regulate if it determines they pose an endangerment to public health or welfare. On December 7, 2009, the USEPA Administrator made two distinct findings: (1) the current and projected concentrations of the six key GHGs in the atmosphere (i.e., CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) threatens the public health and welfare of current and future generations; and (2) the combined emissions of these GHGs from motor vehicle engines contribute to GHG pollution which threatens public health and welfare.

State

California's Energy Efficiency Standards for Residential and Nonresidential Buildings. Located in Title 24, Part 6 of the Code of California Regulations (CCR) and commonly referred to as "Title 24," these energy efficiency standards were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The goal of Title 24 energy standards is the reduction of energy use. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.[14] On May 31, 2012, the California Energy Commission (CEC) adopted the 2013 Building and Energy Efficiency Standards. Buildings that are constructed in accordance with the 2013 Building and Energy Efficiency Standards are 25 percent (residential) to 30 percent (nonresidential) more energy efficient than the 2008 standards as a result of better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in home and businesses.

Executive Order (E.O.) S-3-05. On June 1, 2005, E.O. S-3-05 set the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels. The E.O. establishes State GHG emission targets of 1990 levels by 2020 (the same as AB 32) and 80 percent below 1990 levels by 2050. It calls for the Secretary of California Environmental Protection Agency (Cal/EPA) to be responsible for coordination of State agencies and progress reporting. A recent CEC Report concludes, however, that the primary strategies to achieve this target should be major "decarbonization" of electricity supplies and fuels, and major improvements in energy efficiency.

In response to the E.O., the Secretary of the Cal/EPA created the Climate Action Team (CAT). California's CAT originated as a coordinating council organized by the Secretary for Environmental Protection. It included

[14] The CEC, California's Energy Efficiency Standards for Residential and Nonresidential Buildings, *Title 24, Part 6, of the California Code of Regulations*, http://www.energy.ca.gov/title24.

the Secretaries of the Natural Resources Agency, the Department of Food and Agriculture, and the Chairs of the Air Resources Board, Energy Commission, and Public Utilities Commission. The original council was an informal collaboration between the agencies to develop potential mechanisms for reductions in GHG emissions in the State. The council was given formal recognition in E.O. S-3-05 and became the CAT.

The original mandate for the CAT was to develop proposed measures to meet the emission reduction targets set forth in the E.O. The CAT has since expanded and currently has members from 18 State agencies and departments. The CAT also has ten working groups, which coordinate policies among their members. The working groups and their major areas of focus are as follows:

- *Agriculture:* Focusing on opportunities for agriculture to reduce GHG emissions through efficiency improvements and alternative energy projects, while adapting agricultural systems to climate change
- *Biodiversity:* Designing policies to protect species and natural habitats from the effects of climate change
- *Energy:* Reducing GHG emissions through extensive energy efficiency policies and renewable energy generation
- *Forestry:* Coupling GHG mitigation efforts with climate change adaptation related to forest preservation and resilience, waste to energy programs and forest offset protocols
- *Land Use and Infrastructure:* Linking land use and infrastructure planning to efforts to reduce GHG from vehicles and adaptation to changing climatic conditions
- *Oceans and Coastal:* Evaluating the effects sea level rise and changes in coastal storm patterns on human and natural systems in California
- *Public Health:* Evaluating the effects of GHG mitigation policies on public health and adapting public health systems to cope with changing climatic conditions
- *Research:* Coordinating research concerning impacts of and responses to climate change in California
- *State Government:* Evaluating and implementing strategies to reduce GHG emissions resulting from State government operations
- *Water:* Reducing GHG impacts associated with the State's water systems and exploring strategies to protect water distribution and flood protection infrastructure

Assembly Bill 32 (AB 32). In September 2006, the California Global Warming Solutions Act of 2006, also known as AB 32, was signed into law. AB 32 focuses on reducing GHG emissions in California and requires the California Air Resources Board (CARB) to adopt rules and regulations that would achieve GHG emissions equivalent to Statewide levels in 1990 by 2020. The CARB initially determined that the total Statewide aggregated GHG 1990 emissions level and 2020 emissions limit was 427 million metric tons of CO_2e. The 2020 target reduction was estimated to be 174 million metric tons of CO_2e.

To achieve the goal, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce Statewide GHG emissions from stationary sources, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. Because the intent of AB 32 is to limit 2020 emissions to the equivalent of 1990, it is expected that the regulations would affect many existing sources of GHG emissions and not just new general development projects. Senate Bill (SB) 1368, a companion bill to AB 32, requires the California Public Utilities Commission and the CEC to establish GHG emission performance standards for the generation of electricity. These standards will also apply to power that is generated outside of California and imported into the State.

AB 32 charges CARB with the responsibility to monitor and regulate sources of GHG emissions in order to reduce those emissions. On June 1, 2007, CARB adopted three discrete early action measures to reduce GHG emissions. These measures involved complying with a low carbon fuel standard, reducing refrigerant loss from motor vehicle air conditioning maintenance, and increasing methane capture from landfills.[15] On October 25, 2007, CARB tripled the set of previously approved early action measures. The approved measures include improving truck efficiency (i.e., reducing aerodynamic drag), electrifying port equipment,

[15] CARB, *Proposed Early Action Measures to Mitigate Climate Change in California*, April 20, 2007.

reducing PFCs emissions from the semiconductor industry, reducing propellants in consumer products, promoting proper tire inflation in vehicles, and reducing SF_6 emissions from the non-electricity sector.

The CARB AB 32 Scoping Plan (Scoping Plan) contains the main strategies to achieve the 2020 emissions cap. The Scoping Plan was developed by CARB with input from the CAT and proposes a comprehensive set of actions designed to reduce overall carbon emissions in California, improve the environment, reduce oil dependency, diversify energy sources, and enhance public health while creating new jobs and improving the State economy. The GHG reduction strategies contained in the Scoping Plan include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system. Key approaches for reducing GHG emissions to 1990 levels by 2020 include the following:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a Statewide renewable electricity standard of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout the State, and pursuing policies and incentives to achieve those targets; and
- Adopting and implementing measures to reduce transportation sector emissions.

CARB has adopted the First Update to the Climate Change Scoping Plan.[16] This update identifies the next steps for California's leadership on climate change. The first update to the initial AB 32 Scoping Plan describes progress made to meet the near-term objectives of AB 32 and defines California's climate change priorities and activities for the next several years. It also frames activities and issues facing the State as it develops an integrated framework for achieving both air quality and climate goals in California beyond 2020. Specifically, the update covers a range of topics, including the following:

- An update of the latest scientific findings related to climate change and its impacts, including short-lived climate pollutants.
- A review of progress-to-date, including an update of Scoping Plan measures and other State, federal, and local efforts to reduce GHG emissions in California.
- Potential technologically feasible and cost-effective actions to further reduce GHG emissions by 2020.
- Recommendations for establishing a mid-term emissions limit that aligns with the State's long-term goal of an emissions limit 80 percent below 1990 levels by 2050.
- Sector-specific discussions covering issues, technologies, needs, and ongoing State activities to significantly reduce emissions throughout California's economy through 2050.

As discussed above, in December 2007, CARB approved a total statewide GHG 1990 emissions level and 2020 emissions limit of 427 million metric tons of CO_2e. As part of the update, CARB is proposing to revise the 2020 Statewide limit to 431 million metric tons of CO_2e, an approximately 1 percent increase from the original estimate. The 2020 business-as-usual (BAU) forecast in the update is 509 million metric tons of CO_2e. The State would need to reduce those emissions by 15 percent to meet the 431 million metric tons of CO_2e 2020 limit.

Senate Bill (SB) 375. SB 375, adopted in September 30, 2008, provides a means for achieving AB 32 goals through the reduction in emissions by cars and light trucks. SB 375 requires Regional Transportation Plans (RTP) prepared by metropolitan planning organizations (MPOs) to include Sustainable Communities Strategies (SCS). In adopting SB 375, the Legislature found that improved coordination between land use planning and transportation planning is needed in order to achieve the GHG emissions reduction target of AB 32. Further, the staff analysis for the bill prepared for the Senate Transportation and Housing

[16]CARB, *First Update to the Climate Change Scoping Plan: Building on the Framework*, May 2014.

Committee's August 29, 2008 hearing on SB 375 stated that the bill would help implement AB 32 by aligning planning for housing, land use, transportation and GHG emissions for the 17 MPOs in the state.

Senate Bill (SB) 743. SB 743, adopted September 27, 2013, encourages land use and transportation planning decisions and investments that reduce vehicle miles traveled that contribute to GHG emissions, as required by AB 32. Key provisions of SB 743 include reforming aesthetics and parking California Environmental Quality Act (CEQA) analysis for urban infill projects and eliminating the measurement of auto delay, including level of service (LOS), as a metric that can be used for measuring traffic impacts in transit priority areas. SB 743 requires the State Office of Planning and Research (OPR) to develop revisions to the CEQA Guidelines establishing criteria for determining the significance of transportation impacts of projects within transit priority areas that promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. It also allows OPR to develop alternative metrics outside of transit priority areas.

California Green Building Code. The California Green Building Code, referred to as CALGreen, is the first Statewide green building code. It was developed to provide a consistent, approach for green building within California. CALGreen lays out minimum requirements for newly constructed buildings in California, which will reduce GHG emissions through improved efficiency and process improvements. It requires builders to install plumbing that cuts indoor water use by as much as 20 percent, to divert 50 percent of construction waste from landfills to recycling, and to use low-pollutant paints, carpets, and floors.

CEQA Guidelines Amendments. SB 97 required the Governor's OPR to develop CEQA Guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions." The CEQA Guidelines amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. Noteworthy revisions to the CEQA Guidelines include the following:

- Lead agencies should quantify all relevant GHG emissions and consider the full range of project features that may increase or decrease GHG emissions as compared to the existing setting;
- Consistency with the CARB Scoping Plan is not a sufficient basis to determine that a project's GHG emissions would not be cumulatively considerable;
- A lead agency may appropriately look to thresholds developed by other public agencies, including the CARB's recommended CEQA thresholds;
- To qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project. General compliance with a plan, by itself, is not mitigation;
- The effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis; and
- Given that impacts resulting from GHG emissions are cumulative, significant advantages may result from analyzing such impacts on a programmatic level. If analyzed properly, later projects may tier, incorporate by reference, or otherwise rely on the programmatic analysis.

California Air Resources Board (CARB) Guidance. CARB published draft guidance for setting interim GHG significance thresholds (October 24, 2008). The guidance does not attempt to address every type of project that may be subject to CEQA but, instead, focuses on common project types that are responsible for substantial GHG emissions, such as industrial, residential, and commercial projects. CARB believes that thresholds in these important sectors will advance climate objectives, streamline project review, and encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the State.

Regional

Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). While Southern California is a leader in reducing emissions, and ambient levels of air pollutants are improving, the SCAG region continues to have the worst air quality in the nation. SCAG completed the RTP/SCS, which includes a strong commitment to reduce emissions from transportation sources to comply with SB 375. Goals and policies included in the RTP/SCS to reduce air pollution consist of adding density in proximity to transit stations, mixed-use development and encouraging active transportation (i.e., non-motorized transportation such as bicycling). SCAG promotes the following policies and actions related to active transportation to help the region confront congestion and mobility issues and consequently improve air quality:

- Implement Transportation Demand Management (TDM) strategies including integrating bicycling through folding bikes on buses programs, triple racks on buses, and dedicated racks on light and heavy rail vehicles;
- Encourage and support local jurisdictions to develop "Active Transportation Plans" for their jurisdiction if they do not already have one;
- Expand Compass Blueprint program to support member cities in the development of bicycle plans;
- Expand the Toolbox Tuesday's program to encourage local jurisdictions to direct enforcement agencies to focus on bicycling and walking safety to reduce multimodal conflicts;
- Support local advocacy groups and bicycle-related businesses to provide bicycle-safety curricula to the general public;
- Encourage children, including those with disabilities, to walk and bicycle to school;
- Encourage local jurisdictions to adopt and implement the proposed SCAG Regional Bikeway Network; and
- Support local jurisdictions to connect all of the cities within the SCAG region via bicycle facilities.

California Air Pollution Control Officers Association (CAPCOA). CAPCOA is a non-profit association of the air pollution control officers from all 35 local air quality agencies throughout California. CAPCOA promotes unity and efficiency in State air quality issues, and strives to encourage consistency in methods and practices of air pollution control. In 2008, CAPCOA published the *CEQA and Climate Change White Paper*.[17] This paper is intended to serve as a resource for reviewing GHG emissions from projects under CEQA. It considers the application of thresholds and offers approaches toward determining whether GHG emissions are significant. The paper also evaluates tools and methodologies for estimating impacts, and summarizes mitigation measures.

South Coast Air Quality Management District (SCAQMD). The SCAQMD adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" on April 6, 1990. The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan (AQMP). In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy.

SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds. In its October 2008 document, the SCAQMD proposed the use of a percent emission reduction target (e.g., 30 percent) to determine significance for commercial/residential projects that emit greater than 3,000 metric tons per year. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for stationary source/industrial projects where the SCAQMD is the lead agency. However, SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g., residential/commercial projects) and has formed a GHG Significance Threshold Working Group to further evaluate potential GHG significance thresholds.

SCAQMD has convened a GHG CEQA Significance Threshold Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. Members of the working group include government agencies implementing CEQA and representatives from various stakeholder groups that will provide input to the SCAQMD staff on developing CEQA GHG Significance Thresholds. The working group is currently discussing multiple methodologies for determining project significance. These methodologies include categorical exemptions, consistency with regional GHG budgets in approved plans, a numerical threshold, performance standards, and emissions offsets.

[17]CAPCOA. *CEQA and Climate Change White Paper*, January 2008.

Local

Los Angeles Community College District (LACCD). The LACCD's Board of Trustees adopted a sustainable building policy in March 2002, which mandates that all new buildings funded with at least 50 percent bond dollars should be developed to fit Leadership in Energy and Environment Design (LEED) certification standards, a national rating system developed by the U.S. Green Buildings Council. LEED certification provides a benchmark for the design, construction, and operation of green buildings. Standard features of the LACCD sustainability policy include energy saving elements, water saving elements, and the use of sustainable products, equipment, and materials.

City of South Gate General Plan Green City Element (Green City Element). The Green City Element provides objectives and policies, and implementation actions on making South Gate a "green" city. The element addresses parks, civic plazas, open space, rivers, trails, equestrian facilities, the conservation of natural resources, energy and climate change, and green building. Objectives and policies of the City's General Plan related to GHG and applicable to the proposed project are identified in **Table 4.4-2**.

TABLE 4.4-2: APPLICABLE GENERAL PLAN OBJECTIVES AND POLICIES RELATED TO GREENHOUSE GAS

Objective/Policy	Objective/Policy Description
GREEN CITY ELEMENT	
Objective GC 5.3	Create "green" parking lots with trees and other landscaping in order to improve visual appearance and to minimize negative effects on the environment.
Policy P.1	Large parking lots as part of new development or major renovations should be well landscaped with trees and other greenery and designed to hold and filter stormwater runoff, reduce heat island effects and create a comfortable pedestrian environment.
Policy P.2	Where parking lots front public streets, landscaping should be provided to serve as a buffer between the parking lot and the public right-of-way.
Objective GC 5.4	Increase the use of environmentally preferable products in city purchasing and operations
Policy P.5	The City should use recycled-content materials for building, streetscaping and roadway construction whenever feasible.
Objective GC 6.1	Increase the use of green techniques in new buildings, new building sites and building remodels and retrofits.
Policy P.1	All new municipal buildings should meet or exceed silver in the appropriate LEED Rating System, or a comparable green building standard.
Policy P.2	The City should encourage green building techniques efforts in single-family homes as well as in new municipal, commercial, mixed-use or multifamily residential projects.
Policy P.4	The City should emphasize design for water conservation in its green building efforts.
Policy P.5	New buildings should meet or exceed California Title 24 energy efficiency requirements.
Policy P.6	When feasible or required by law, new development should utilize Low Impact Design (LID) features, including infiltration of stormwater, but LID should not interfere with the City's goals of infill development and appropriate densities as defined in the Community Design Element.
Policy P.7	The City should assess all new development's use of green building techniques as a formal stage of design review.
Policy P.8	The City may finance energy efficiency retrofits and on-site renewable energy installation through a local assessment district, or provide administrative or financial support in other ways.
Policy P.9	On an ongoing basis, City staff should be trained to implement the green building program and to provide advice and expertise about green building to residents, particularly small-scale developers or homeowners that may have less access to green building expertise.
Objective GC 7.1	Reduce South Gate's production of greenhouse emissions and contribution to climate change, and adapt to the effects of climate change.
Policy P.4	The City will reduce greenhouse gas emissions and adapt to climate change with efforts in the following areas: energy, building, waste, and ecology.

SOURCE: City of South Gate, *South Gate General Plan 2035.*

THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the State CEQA Guidelines, the proposed project would have a significant impact related to GHG emissions if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and/or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG.

CARB and SCAQMD have not adopted significance criteria for analyzing GHG emissions associated with land use development projects. However, the SCAQMD released draft guidance regarding interim CEQA GHG indicators of significance in October 2008, proposing a tiered approach whereby the level of detail and refinement needed to determine significance increases with a project's total GHG emissions. The SCAQMD proposed a screening level of 3,000 metric tons per year for commercial or mixed-use residential projects under which project impacts are considered less than significant. In the absence of approved guidance, this draft SCAQMD guidance is used to assess potential impacts from GHG emissions.

IMPACTS

METHODOLOGY

GHG emissions were calculated for mobile sources, natural gas consumption, general electricity consumption, electricity consumption associated with the use and transport of water, wastewater treatment, and solid waste decomposition. Mobile source GHG emissions were obtained from CalEEMod, which is a statewide land use emissions computer model designed to quantify GHG emissions for a variety of land use projects. The model quantifies direct emissions from construction and operation (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The model contains data that are specific to the SCAQMD jurisdiction and Los Angeles County. Inputs include each land use type and size, in terms of building area, number of dwelling units, square feet of development, and the vehicle trip generation for each land use.

The construction-related GHG analysis uses the same methodology as the air quality analysis. Refer to Section 4.2 Air Quality for a detailed discussion of construction assumptions. The SCAQMD recommends amortizing construction-related GHG emissions over a project's lifetime, defined as a 30-year period, in order to include these emissions as part of the annual total operational emissions.

CalEEMod was also used to calculate regional operational emissions generated by area and mobile sources. Area sources include natural gas for space heating and water heating, gasoline-powered landscaping and maintenance equipment, and consumer products (e.g., cleaners). Vehicle trip generation data for the proposed project has been derived from the traffic study prepared for the project. The overall net project trip generation would be 2,126 trips per day. Refer to Section 4.13 Transportation and Traffic, of this Supplemental Draft EIR for the detailed methodology used to obtain the average daily trip rate. The traffic analysis assumes that the existing warehouses are partially occupied. Similarly, stationary source (e.g., energy use) GHG emissions have been reduced by 75 percent on the assumption that 25 percent of the warehouses are utilized. This methodology results in a more conservative analysis (i.e., higher net emissions) than using 100 percent vacancy of the warehouses.

CONSTRUCTION

Greenhouse Gas Emissions

Construction of the proposed project has the potential to create GHG impacts through the use of heavy-duty construction equipment and through vehicle trips generated by construction workers traveling to and from the project site. The proposed project would generate 2,950 metric tons per year of CO_2e emissions. The SCAQMD recommends that construction GHG emissions be amortized over a 30-year span and included in the summary of annual operational emissions. Therefore, the significance of construction GHG emissions is discussed under operational emissions.

Applicable Plans, Policies or Regulations

The LACCD Board of Trustees mandates the use of sustainable building practices for its campuses, and all new buildings that are funded with Measure J Bond monies are required to be "green" buildings and built to LEED certification standards. LEED is a national rating system developed by the USGBC to provide a benchmark for the design, construction, and operation of green buildings. LACCD is committed to constructing buildings using a recycled building material and fly-ash concrete mixture and sustainable wood that has been salvaged, recycled, and certified by the Forest Stewardship Council. In addition, the construction contractor will be required to divert at least 50 percent and up to 75 percent of construction waste from landfills. The proposed project would be constructed in a manner such that GHG emissions are minimized, thus encouraging consistency with plans, policies, and regulations designed to control GHG emissions. Therefore, construction activity would result in a less-than-significant impact related to consistency with applicable plans, policies, and regulations.

OPERATIONS

Greenhouse Gas Emissions

GHG emissions would be generated by on-road mobile vehicle operations, general electricity consumption, electricity consumption associated with the use and transport of water, natural gas consumption, and solid waste decomposition. As shown in **Table 4.4-3**, the proposed project would result in 2,022 metric tons of CO_2e per year under the future with project conditions. Existing plus project conditions would result in 1,853 metric tons of CO_2e per year. Estimated GHG emissions would be less than the 3,000 metric tons of CO_2e per year quantitative significance threshold. Therefore, the proposed project would result in a less-than-significant impact related to GHG emissions.

Applicable Plans, Policies or Regulations

The LACCD Board of Trustees mandates the use of sustainable building practices for its campuses, and all new buildings that are funded with Measure J Bond monies are required to be "green" buildings and built to LEED certification standards. As part of achieving LEED certification, the proposed project includes design strategies related to water efficiency, energy, innovation, indoor air quality, materials and resources, and site design. Design strategies include, but are not limited to, low flow water efficiency plumbing fixtures, high performance building envelope, and green power (e.g., solar energy), green cleaning program, kiosk and signage green education program, the usage of low volatile organic compounds in building materials, outdoor air delivery monitoring, the usage of recycled building content (e.g., building materials and fly-ash concrete mixture), sustainable wood, and maximizing infiltration on-site. The 2015 SGEC Master Plan contains preliminary LEED checklists for the proposed project.

TABLE 4.4-3: ANNUAL GREENHOUSE GAS EMISSIONS

Emission Source	Carbon Dioxide Equivalent (Metric Tons per Year)
EXISTING CONDITIONS	
Mobile	6,649
General Electricity	334
Water Cycle Electricity	261
Natural Gas	85
Solid Waste Decomposition	466
Total	**7,795**
EXISTING WITH PROJECT CONDITIONS	
Mobile	8,001
General Electricity	457
Water Cycle Electricity	192
Natural Gas	153
Solid Waste Decomposition	747
Total	**9,550**
Net Operational Emissions	1,755
Construction Emissions Amortized	98
Net Emissions	**1,853**
Regional Significance Threshold	**10,000**
Exceed Threshold?	No
FUTURE WITHOUT PROJECT CONDITIONS	
Mobile	5,468
General Electricity	333
Water Cycle Electricity	261
Natural Gas	85
Solid Waste Decomposition	466
Total	**6,613**
FUTURE WITH PROJECT CONDITIONS	
Mobile	6,400
General Electricity	888
Water Cycle Electricity	351
Natural Gas	151
Solid Waste Decomposition	747
Total	**8,537**
Net Operational Emissions	1,924
Construction Emissions Amortized	98
Net Emissions	**2,022**
Regional Significance Threshold	**10,000**
Exceed Threshold?	No

SOURCE: TAHA, 2015.

The CARB AB 32 Scoping Plan contains the main strategies to achieve the 2020 emissions cap. The Scoping Plan was developed by the CARB with input from the Climate Action Team and proposes a comprehensive set of actions designed to reduce overall carbon emissions in California, improve the environment, reduce oil dependency, diversify energy sources, and enhance public health while creating new jobs and improving the State economy. The California Attorney General has prepared a Fact Sheet listing various mitigation measures that local agencies may consider to offset or reduce global warming impacts and ensure compliance with AB 32.

The proposed project's consistency with the Attorney General Greenhouse Gas Reduction Measures and the CAPCOA is described **Tables 4.4-4** and **4.4-5**. The proposed project would meet the objectives and overall intent of reducing GHGs consistent with direction/measures of the CAPCOA and the Attorney General. Therefore, the proposed project would result in a less-than-significant impact related to GHG reduction plans and policies.

CUMULATIVE IMPACTS

The CEQA Guidelines emphasize that the effects of Greenhouse Gas Emissions (GHG) emissions are cumulative, and should be analyzed in the context of CEQA's existing cumulative impacts analysis. Consequently, the project-level analysis, , also represents the cumulative GHG analysis. The GHG analysis determined that the proposed project would not result in significant impacts related to GHG emissions and would be consistent with applicable GHG plans, policies, and regulations. Therefore, impacts related to GHG emissions would not be cumulatively considerable.

MITIGATION MEASURES

CONSTRUCTION

Impacts related to GHG emissions and consistency with applicable plans, policies, and regulations would be less than significant. No mitigation measures are required.

OPERATIONS

Impacts related to GHG emissions and consistency with applicable plans, policies, and regulations would be less than significant. No mitigation measures are required.

SIGNIFICANCE OF IMPACTS AFTER MITIGATION

CONSTRUCTION

Impacts related to GHG emissions and consistency with applicable plans, policies, and regulations were determined to be less-than-significant without mitigation.

OPERATIONS

Impacts related to GHG emissions and consistency with applicable plans, policies, and regulations emissions were determined to be less-than-significant without mitigation.

TABLE 4.4-4: PROJECT CONSISTENCY WITH APPLICABLE ATTORNEY GENERAL GREENHOUSE GAS REDUCTION MEASURES

Strategy	Project Consistency
ENERGY EFFICIENCY	
Incorporate green building practices and design elements.	**Consistent**: The proposed project includes energy design strategies. High-performance insulation, optimize shading, and high performance glazing are part of the building design features. The proposed project is committed to provide at least 10% of building's electricity from renewable source.
Meet reorganized green building and energy efficiency benchmarks.	**Consistent**: The proposed project would be designed and constructed using the USGBC LEED rating system. The proposed project would seek for the highest LEED certification level as feasible.
Install energy efficient lighting (e.g., light emitting diodes (LEDS)), heating and cooling systems, appliances, equipment, and control systems.	**Consistent**: The proposed project includes outdoor air delivery monitoring (i.e., air flow sensors) and energy-efficient fixtures.
Use passive solar designs (e.g., orient buildings and incorporate landscaping to maximize passive solar heating during cooling seasons, minimize solar heat gain during hot seasons, and enhance natural ventilation. Design buildings to take advantage of sunlight.	**Consistent**: The proposed project building is strategically oriented to take advantage of natural heating and cooling effects. The new SGEC building would maximize south-facing exposure and minimize and protect west-facing windows.
Provide education on energy efficiency to residents, customers and/or tenants.	**Consistent**: The proposed project includes a kiosk and signage green education program to promote and heighten public awareness of sustainability.
RENEWABLE ENERGY AND ENERGY STORAGE	
Install solar panels on unused roof and ground space and over carports and parking areas.	**Consistent**: The proposed project is committed to provide at least 10% of building's electricity from renewable source (e.g., solar panels).
WATER CONSERVATION AND EFFICIENCY	
Incorporate water-reducing features into building and landscape design.	**Consistent**: The proposed project incorporates low flow water efficiency plumbing fixtures (i.e., faucets, toilets, urinals, and shower heads). The proposed project would maximize vegetated open space, which includes drought tolerant plants and ground-cover to conserve water and minimize runoff.
Create water-efficient landscapes.	**Consistent**: The proposed project would maximize vegetated open space, which includes drought tolerant plants and ground-cover to conserve water and minimize runoff.
Design buildings to be water-efficient. Install water-efficient fixtures and appliances.	**Consistent**: The proposed project incorporates low flow water efficiency plumbing fixtures (i.e., faucets, toilets, urinals, and shower heads). Other water use reduction includes limited use of project site's potable water, natural surface or subsurface water resources for landscape irrigcation.
SOLID WASTE	
Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).	**Consistent**: The proposed project would use recycled building materials including fly-ash concrete mixture and sustainable wood (i.e., salvageed, recycled and Forest Stewardship Council Certified wood products).

SOURCE: TAHA, 2015.

TABLE 4.4-5: PROJECT CONSISTENCY WITH CAPCOA GREENHOUSE GAS REDUCTION MEASURES

CAPCOA-Suggested Measure	Project Consistency
EE-1.1. Green Building Ordinance: Adopt a Green Building Ordinance that requires new development and redevelopment projects for both residential and commercial buildings to incorporate sufficient green building methods and techniques to qualify for the equivalent of a current LEED Certified rating, GreenPoints, or equivalent rating system.	**Consistent**: The new SGEC building would be designed and constructed using the United States Green Buildings Council LEED rating system. At this time, ELAC has not decided which LEED certification level that they will be seeking; however, the goal is to reach the highest certification level feasible.
EE-2.1. Improved Building Standards: Adopt energy efficiency performance standards for buildings that achieve a greater reduction in energy and water use than otherwise required by state law.	**Consistent**: The proposed design strategies include, but are not limited to, low flow water efficiency plumbing fixtures, high performance building envelop, and green power (e.g., solar energy).
AE-2.1. On-Site Renewable Energy Generation: New office/retail/commercial or industrial development, or major rehabilitation shall incorporate renewable energy generation either on- or off-site to provide 15% or more of the project's energy needs.	**Consistent**: The proposed project includes green power (e.g., solar energy) to provide at least 10% of building's electricity from renewable sources.
MO 5.2. Landscaping: Evaluate existing landscaping and options to convert reflective and impervious surfaces to landscaping, and will install or replace vegetation with drought-tolerant, low-maintenance native species or edible landscaping that can also provide shade and reduce heat-island effects.	**Consistent**: The proposed project would maximize vegetated open space and use drought-tolerant vegetations.
WRD-2.3. Construction and Demolition Waste: Adopt a Construction and Demolition Waste Recovery Ordinance, requiring building projects to recycle or reuse a minimum percentage of unused or leftover building materials.	**Consistent**: The proposed project would use recycled building materials including fly-ash concrete mixture, use salvaged, recycled and Forest Stewardship Council Certified wood products, and divert construction waste from landfills for recycling and salvage.
COS-2.2. Water-Efficient Infrastructure and Technology: Ensure water-efficient infrastructure and technology are used in new construction, including low-flow toilets and shower heads, moisture-sensing irrigation, and other such advances.	**Consistent**: The proposed project includes low-flow water efficiency plumbing fixtures (i.e., faucets, toilets, urinals, and shower heads).
COS-3.1. Water-Efficient Landscapes: Install water-efficient landscapes and irrigation.	**Consistent**: The proposed project limits the use of project site's potable water, natural surface or subsurface water resources for landscape irrigation.
EO-1.1. Outreach Methods: Use a variety of media and methods to promote climate awareness and GHG reductions.	**Consistent**: The proposed project includes a Kiosk and Signage Green Education Program to promote and heighten public awareness of sustainability.
SOURCE: TAHA, 2015.	

4.5 HAZARDS AND HAZARDOUS MATERIALS

This section provides an overview of hazards and hazardous materials and evaluates the construction and operational impacts associated with the 2015 South Gate Educational Center Master Plan (proposed project). Topics addressed in this section include hazardous materials, schools, airport hazards, emergency response plans, and wildland fires. This section was prepared utilizing the Phase I Environmental Site Assessment (ESA) dated September 2009, Environmental Sampling Report dated September 2010, and Soil Removal and Exploratory Excavation Report dated April 2011 prepared by Andersen Environmental, and the Underground Storage Tank Closure and Soil Investigation Report prepared by Parsons in February 2013.

EXISTING SETTING

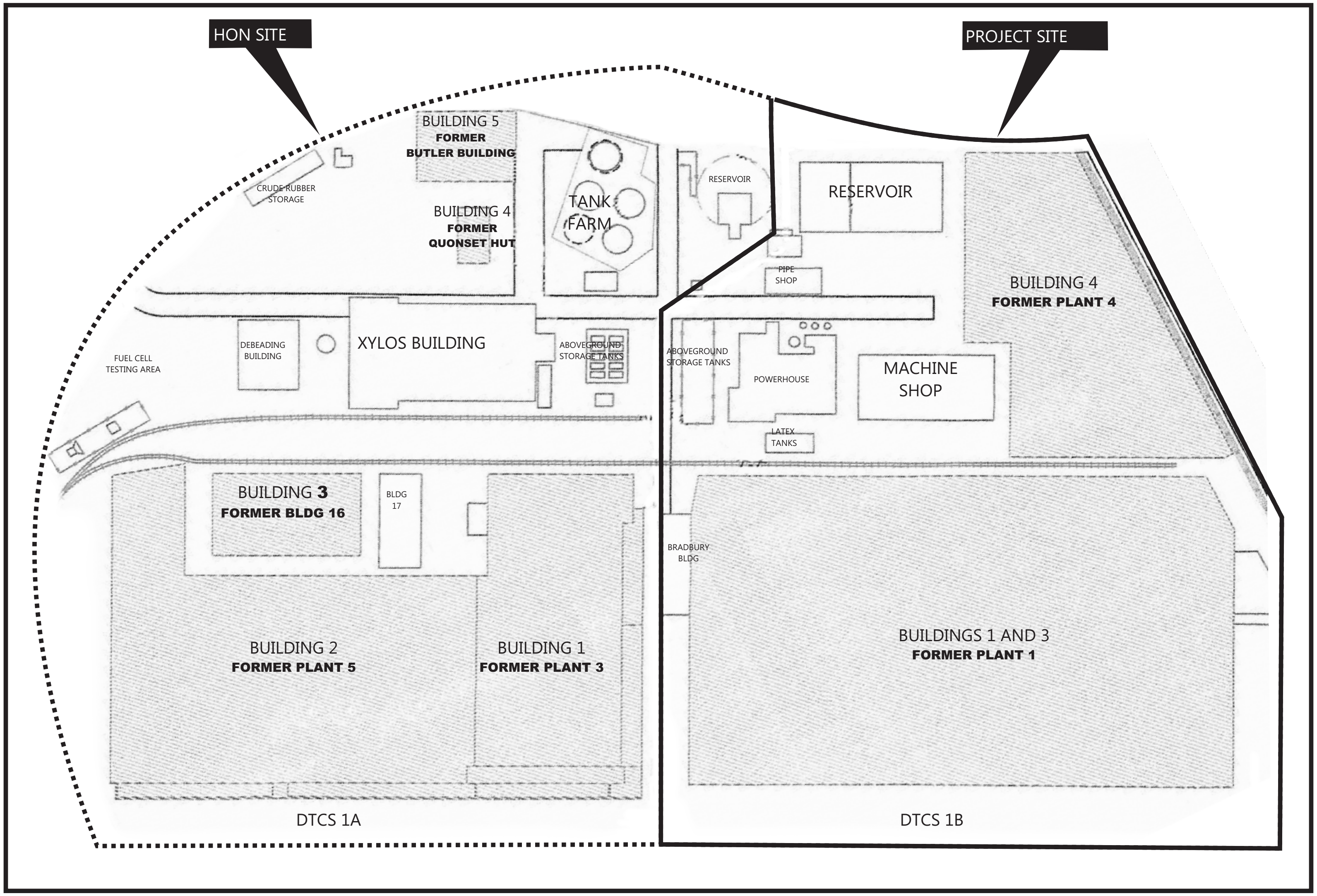
Hazardous Materials

The project site is currently occupied with four buildings (Buildings 1 through 4). Buildings 1, 3 and 4 are currently vacant; Building 2 is partially utilized by Los Angeles Community College District (LACCD) for warehousing purposes. The project site and the adjacent HON site buildings to the west were first occupied by the Firestone Tire and Rubber Plant, which operated from 1927 to 1980. During this time, industrial operations performed on the project site included tire manufacturing and warehousing, fuel cell production and assembly of corporal missiles (a guided surface-to-surface missile). The adjacent HON site was most recently utilized as a furniture manufacturing facility; however, this facility has since closed and the HON site is being used as warehouse storage and for manufacturing building windows.

The Firestone Tire Company main manufacturing facility was located on the project site and included Plants 1 and 4, an administration building, machine shop, powerhouse, pipe shop, reservoir, latex tanks, and the Banbury building. Buildings 1 and 3 were formerly occupied by Firestone Plant 1, and Building 4 was Firestone Plant 4. Building 2 was formerly Firestone's administrative building. A site plan depicting the buildings and structures as they were when Firestone occupied the project site and adjacent HON site is presented in **Figure 4.5-1**.

Tires were manufactured and stored in Plant 1 (Buildings 1 and 3). Crude rubber was delivered via railway spurs and stored on the northeast corner of the project site. East and west additions to Plant 1 were constructed in 1929. One 12,000-gallon underground gasoline tank, one 1,000-gallon underground lube oil tank, and four 50-gallon underground lube oil tanks were installed on the west side of Plant 1 before 1932. Two 13,000-gallon fuel oil tanks were installed in 1928 and utilized within the Powerhouse located at the central portion of the project site and were connected by underground piping to the above ground fuel tanks located at the adjacent HON site. The area east of the mechanical building and reservoirs, which occupied the northern portion of the project site, remained vacant and unused prior to 1932. A pipe shop was built east of the mechanical building sometime between 1932 and 1947.

In 1951, Plant 4 (Building 4) was constructed on the northeast corner of the project site and was utilized for tire storage. The pipe shop that was formerly located on the lot was dismantled. After the completion of Plant 4, corporal missile assembly began. Missile parts arrived at the site by railroad and were subsequently assembled into a final product because rubber, shock-resistant, missile transportation "cradles" were manufactured and fastened to the ground transportation equipment at the plant. After their assembly, missiles were then loaded and transported to their final off-site designation for testing. The metal and guidance components for the missiles were assembled in Plant 4 and "touchup" paint was applied as needed. No fueling or firing of the missiles was conducted on-site. Corporal missile assembly was discontinued in 1963.



LEGEND:

Project Site

HON Site

Remaining Buildings

Demolished Buildings

Approx. Scale

N

0 110 220 Feet

SOURCE: TAHA, 2016.

taha

taha 2014-075

2015 South Gate Educational Center Master Plan
Supplemental Draft Environmental Impact Report

LOS ANGELES COMMUNITY COLLEGE DISTRICT

FIGURE 4.5-1

HISTORIC SITE PLAN

Between 1952 and 1955, a pipe shop was erected south of the water reservoirs to replace the water reservoir that was demolished as a part of the construction of Plant 4. In 1955, the majority of Plant 4 was converted into a finished goods and tires warehouse. In 1965, the remainder of Plant 4 was converted to tire and finished goods storage when fuel cell manufacturing was discontinued. In 1972, a new Banbury mixer and associated building, known as the Banbury building, were added to the west side of Plant 1. The Banbury building contained a single Banbury mixer, a transfer mixer, a roller die, a cooling conveyor and a stacker. Tire production continued until 1980 at which time the Firestone Plant was closed.

In 1981, HON Industries purchased the project site from Firestone and subdivided the property into two parcels (the project site and the adjacent HON site) for the purpose of using those portions separately and because the two parcels had differing degrees of environmental concerns. The Banbury building was demolished in late 1981. The machine shop and pipe shop were demolished and the reservoirs were filled in and paved over in late 1982. The sand trap and degreasing rack associated with the machine shop was filled in during this time.

The 12,000-gallon underground gasoline storage tank located west of Plant 1 was removed in approximately 1984 and closed. The 1,000-gallon underground lubrication oil tank and four 50-gallon underground lubrication oil tanks, located to the west of Plant 1, were also removed. The removal of the five underground oil lubrication tanks has been thought to have occurred during installation of a heating and air conditioning system prior to HON's ownership; however, the exact removal date is unknown.

Soil and Groundwater Contamination. In 1986, HON Industries sold the project site to Indian Wells Estates. The Indian Wells Estates used the project site for storage and warehousing. In 1991, the Indian Wells Estates fell into bankruptcy. During the bankruptcy proceedings, the project site was investigated by several environmental consulting firms to assess the environmental status of the site. These investigations identified the presence of volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), and metals in subsurface soils. The DTSC subsequently issued an Imminent or Substantial Endangerment Order and Remedial Action Order in April 1994. The Order required that the project site be properly investigated, a clean-up plan be prepared and submitted, and the contaminated soil and groundwater be remediated. Since the Order was to remediate contaminated soil and groundwater at the project site, several environmental investigations have been conducted under the guidance of the DTSC.

In February 2009, Premiere Environmental Services, Inc. (now Earthcon) prepared a Supplemental Investigation Report to present results from soil and soil gas sampling conducted at the project site in October 2008. The work was approved and overseen by the DTSC. The results of the investigations indicated that the contamination at the site consisted of polycyclic aromatic hydrocarbons (PAHs), metals (arsenic, barium, beryllium, chromium, lead, molybdenum, nickel, vanadium, and zinc), and trace amounts of volatile organic compounds within the soil and tetrachloroethylene (PCE), trichloroethylene (TCE) and other hydrocarbons in the soil gas. In August 2009, Environ International Corporation prepared a Human Health Risk Assessment (HHRA) based on existing site conditions and data obtained during Premier Environmental Service's 2008 investigation plus metals data obtained during a 1996 Risk Investigation/Feasibility Study (RI/FS). Calculations and modeling was performed to evaluate health risks for potential receptors at the site, and the results indicated no significant human health risks.

DTSC reviewed the HHRA and provided comments relative to assessing risk with respect to the use of the project site as a college campus. The HHRA was revised and submitted it to DTSC for final review. Concurrent to the revision of the HHRA, approximately five-cubic yards of soil were removed from a small area where according to the DTSC PAHs exceeded human health screening levels. The action was approved by the DTSC, and on September 3, 2009, DTSC issued a "No Further Action" letter deeming the project site suitable for unrestricted use.

In September 2009, Andersen Environmental prepared a Phase I ESA to identify recognized environmental conditions associated with the project site. A recognized environmental condition is the presence or likely presence of any hazardous substances or petroleum products on a property that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. Based upon the recognized environmental conditions identified in the Phase I ESA, specific recommendations related to additional sampling and investigations were identified. Per these recommendations, additional soil vapor, soil sampling, and remedial actions were undertaken at the project site.[1] Earthcon sampled groundwater on the project site and the adjacent HON site in late September 2012 and recommended a continued semi-annual monitoring program.[2] Groundwater sampling continues under the supervision of DTSC.

Since acquisition of the project site by LACCD, soils containing elevated arsenic concentrations were removed, and the excavation, cleaning, certification, removal, and disposal of two 13,000-gallon USTs and associated product pipes, and contaminated material, including asbestos containing materials (ACMs) was completed.[3][4] While the USTs were removed under the direction of the Los Angeles County Department of Public Works in 2013, jurisdiction over final closure of the USTs has been transferred to DTSC oversight. LACCD will seek closure certification for the area of the USTs from DTSC as part of its development of the property.

Although DTSC had issued a "No Further Action" letter for the project site in 2009, LACCD entered into a Voluntary Cleanup Agreement (VCA) with DTSC for continued environmental oversight at the project site. DTSC oversight will be sought for final closure of the former UST area as well as any required investigation and/or remediation of hazardous substances at or from the project site identified as part of the demolition activities.[5]

Additionally, as part of its pre-construction activities, LACCD plans to conduct soil gas monitoring in the vicinity of the planned academic building to evaluate the impact of potential residual contamination in the soil and groundwater on the proposed development and to guide safety measures to be incorporated into the construction plans for the facility. This work will also be conducted in coordination with DTSC under the VCA.

Asbestos and Lead-Based Paint. Consistent with federal regulations, asbestos and ACMs are presumed to be present in all structures constructed prior to 1979. Asbestos was banned in the United States in 1979 and is typically present in structures beyond 25 years of age. Asbestos was commonly used for acoustic insulation, thermal insulation, and fire proofing. Asbestos fibers are incredibly strong and heat resistant. Asbestos is often found in ceiling tiles, pipe insulation, floor tiles, and linoleum. When broken apart in activities such as during demolition of structures, microscopic asbestos particles may become airborne and pose a threat to human health. Inhalation of asbestos fibers can lead to various health problems, the most serious of which include lung disease and cancer.

In the 1920s through 1978, leaded paint was primarily utilized. Structures are affected by lead-based paint regulations if the paint is in a deteriorated condition or if remodeling, renovation or demolition activities disturb lead-based paint surfaces.

Hazardous Material Database Sites. Federal, State, local, tribal and proprietary environmental databases were searched to determine the environmental regulatory status of the project site, adjoining facilities, and facilities identified within the specified approximate minimum search distance of the site. **Table 4.5-1**

[1] Andersen Environmental, *Environmental Sampling Report*, September 20, 2010.

[2] Earthcon, *Groundwater Monitoring Report- September 2012*, February 4, 2013.

[3] Andersen Environmental, *Soil Removal and Exploratory Excavation Report*, April 18, 2011.

[4] Parsons, *Draft Underground Storage Tank Closure and Soil Investigation Report, Former Firestone Rubber and Tire Facility 2525 East Firestone Boulevard, South Gate California*, February 13, 2013.

[5] Department of Toxic Substances Control, *Voluntary Cleanup Agreement with LACCD*, Docket No. HAS VCA-12/13-055, executed January 22, 2013.

summarizes the databases reviewed and the approximate search distances, and indicates if the project site, adjacent properties or surrounding sites are listed.

The project site is listed on the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), Facility Index System/Facility Registry System (FINDS), "Cortese" Hazardous Waste and Substances Sites List (Cortese), Historical Calsites Database (HIST Cal-Sites), Resource Conservation and Recovery Act Non-Generator (RCRA-NonGen), State Response Sites (Response), and EnviroStor Database (Envirostor), Resource Conservation and Recovery Act Information Small Quantity Generator (RCRA-SQG), Emergency Response Notification System (ERNS) databases, Facility and Manifest Data (HAZNET), and Los Angeles County Street Number List (LA County HMS) databases.

TABLE 4.5-1: REGULATORY DATABASE RESEARCH

Database	Search Distance (Miles)	Project Site (YES/NO)	Adjacent Site (YES/NO)	Other Site (#)
Federal NPL	1.0	No	No	0
Federal De-listed NPL	1.0	No	No	0
Federal CERCLIS	0.5	Yes	No	1
Federal CERCLIS NFRAP	0.5	No	No	0
Federal RCRA CORRACTS	1.0	No	No	1
Federal RCRA non-CORRACTS TSD	0.5	No	No	0
Federal RCRA Generators	0.25	Yes	No	9
Federal Institutional/Engineering Controls	0.5	No	No	0
Federal ERNS	Project Site	No	No	0
State/Tribal Equivalent NPL	1.0	No	No	3
State/Tribal Equivalent CERCLIS	0.5	No	No	13
State/Tribal Landfill	0.5	No	No	3
State/Tribal UST	0.25	No	No	16
State/Tribal Leaking UST	0.5	No	No	17
State/Tribal Institutional/Engineering Controls	0.5	No	No	0
State/Tribal Voluntary Clean-up Sites	0.5	No	No	2
State/Tribal Brownfield Sites	0.5	No	No	0

SOURCE: Andersen Environmental, 2009.

The project site was a generator of hazardous materials with an off-site waste receiver whose commercial status was listed as unknown. Hazardous wastes including "waste oil and mixed oil," contaminated soil from site clean-ups," "asbestos containing waste," "organic solids with halogens," "halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)," "aqueous solution with less than ten percent total organic residues," and "aqueous solution with metals (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc)" were disposed of by a recycler, disposal land fill, and treatment incineration. The hazardous wastes disposal was likely associated with Firestone's vacation of the site within 1980 and 1981.

Transport, Use and Disposal. If improperly handled, hazardous materials can result in public health hazards through human contact with contaminated soils or groundwater, or through airborne releases in vapors, fumes, or dust. There is also the potential for accidental or unauthorized releases of hazardous materials that would pose a public health concern. The transport, use, and disposal of any hazardous materials and wastes are required to occur in accordance with federal, State and local regulations. In accordance with such regulations, the transport of hazardous materials and wastes can only occur with transporters who have received training and appropriate licensing. Additionally, hazardous waste transporters are required to complete and carry a hazardous waste manifest. Nonetheless, accidents or spills during transport of hazardous materials or wastes can expose the public and the environment to these substances. Likewise, if contamination at a site remains undetected, workers and the public may be at risk of exposure if precautions are not taken.

Schools

A potentially significant impact would occur if the release of hazardous materials from the proposed project were to occur within one-quarter-mile of an existing or proposed school. There are four public and/or private schools are located within 0.25 mile of the project site. Building 2 on the project site was formerly occupied by the Los Angeles Unified School District (LAUSD) South Gate Community Adult School; however, the school vacated the project site in 2012. The locations of existing schools are depicted in **Figure 4.5-2**.

Airport Hazards

A potentially significant impact would occur if the proposed project exposed persons residing or working in the area to risks associated with the proximity of an airstrip. The project site is not within an airport land use plan, or within two miles of an airport or airstrip. The nearest public airport or private airstrip, Long Beach Municipal Airport, is located approximately ten miles to the south-southeast of the project site. Operations on the project site are not affected by air traffic or other hazards from this airport.

Emergency Response Plans

The project site is located at the northwestern corner of the Firestone Boulevard/Santa Fe Avenue intersection in the City of South Gate. The City of South Gate's emergency response needs are served by the Los Angeles County Fire Department (LACFD) and the Los Angeles County Sheriff's Department (LASD). Firestone Boulevard is a primary arterial that runs east-west through the City of South Gate. Santa Fe Avenue is a minor arterial that runs north-south. In the event of an evacuation, there are several routes out of the City. Firestone Boulevard is a designated emergency evacuation route in the City of South Gate.[6] The nearest freeway access is the Firestone Boulevard/I-710 interchange located approximately three miles east.

Wildland Fires

A potentially significant impact would occur if the project exposed people and structures to high risk of wildfire. The project site is located within a fully developed urban area, with no wildlands for several miles in all directions.

REGULATORY FRAMEWORK

Federal

Resource Conservation and Recovery Act (RCRA). RCRA gives the United States Environmental Protection Agency (USEPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste by "large-quantity generators".[7] Under RCRA regulations, hazardous wastes must be tracked from the time of generation to the point of disposal. At a minimum, each generator of hazardous waste must register and obtain a hazardous waste activity identification number. A facility that stores hazardous waste for more than 90 days, or treats hazardous waste, must be permitted under the RCRA. Additionally, all hazardous waste transporters are required to be permitted and must have an identification number. The RCRA allows individual states to develop their own program for the regulation of hazardous waste as long as state regulations are at least as stringent as the RCRA. The USEPA has delegated RCRA enforcement to the California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC).

[6]City of South Gate, *SEMS Multihazard Functional Plan,* March 1998.
[7]Large quantity generators produce 1,000 kilograms, or more, hazardous waste per month.

LEGEND:

Project Site

School

1. Redeemer Lutheran School
2. South Gate Education Center
3. Liberty Boulevard Elementary School
4. Pilgrim Baptist School

APPROX. SCALE

0 625 1,250 FEET

SOURCE: TAHA, 2016.

FIGURE 4.5-2

PUBLIC AND PRIVATE SCHOOLS WITHIN ONE-QUARTER MILE OF THE PROJECT SITE

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERLCA, commonly known as Superfund, was enacted by Congress on December 11, 1980. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. The law authorizes two kinds of response actions; short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response and long-term remedial response actions, that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life threatening. These actions can be conducted only at sites listed on USEPA's National Priorities List (NPL). CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants, and established the NPL.

Occupational Safety and Health Administration (OSHA). OSHA implements regulation related to hazardous materials handling. Federal OSHA requirements, as set forth in Title 29 of the Code of Federal Regulation (CFR) Section 1910, *et. seq*., are intended to promote worker safety, worker training, and a worker's right-to-know. The federal OSHA has delegated the authority to administer OSHA regulations to the DTSC.

Hazardous Materials Transportation Act. Regulations set forth by the Hazardous Materials Transportation Act of 1975 are contained within CFR Title 49. CFR Title 49 specifies requirements and regulations, in addition to those OSHA requirements and regulations that pertain to the transport of hazardous materials. CFR Title 49 requires that every employee who transports hazardous materials receive training to recognize and identify hazardous materials and become familiar with hazardous materials requirements. Drivers are also required to be trained in function and commodity specific requirements.

State

Department of Toxic Substances Control (DTSC). Cal/EPA's DTSC has the Statewide authority to administer and enforce the RCRA. The DTSC has the primary responsibility to regulate the generation, storage and disposal of hazardous materials; however, the DTSC may further delegate its enforcement authority to local jurisdictions. In addition, the DTSC is responsible and/or provides oversight for contamination cleanup, and administers state-wide hazardous waste reduction programs. DTSC operates programs to deal with the aftermath of improper hazardous waste management by overseeing site cleanups, prevent releases of hazardous waste by ensuring that those who generate, handle, transport, store, and dispose of wastes do so properly, and evaluate soil, water, and air samples taken at sites.

California Health and Safety Code. The California Health and Safety Code includes statutory code sections that are implemented by the DTSC. Division 20, Chapter 6.5 of the California Health and Safety Code establishes regulations and incentives to ensure that the generators of hazardous waste employ technology and management practices for the safe handling, treatment, recycling, and destruction of their hazardous wastes prior to disposal. Division 20, Chapter 6.8 of the California Health and Safety Code establishes a program to provide for response authority for release of hazardous substances, including spill and hazardous waste disposal sites that pose a threat to the public heath of the environment.

State Water Resource Control Board (SWRCB). The storage of hazardous materials in underground storage tanks (USTs) is regulated by the SWRCB. The SWRCB delegates its authority to regulate USTs to nine Regional Water Quality Control Boards (RWQCB) throughout the State and typically to the local fire department on the local level. The project site is located within the Los Angeles Regional Water Quality Control Board (LARWQCB) jurisdiction.

California Occupational Safety and Health Administration (Cal/OSHA). The Cal/OSHA program is administered and enforced by the Division of Occupational Safety and Health (DOSH). Cal/OSHA regulations identify rules and procedures related to exposure to hazardous materials during demolition and construction activities. In addition, Cal/OSHA requires employers to implement a comprehensive, written Injury and Illness Prevention Program (IIPP). An IIPP is an employee safety program for potential workplace hazards, including those associated with hazardous materials.

Environmental Health Standards for the Management of Hazardous Waste. CCR Title 22, Division 4.5 establishes a hazardous waste management system, identifies and defines hazardous wastes, and includes standards applicable to hazardous waste generators, transporters, and facilities involved in the handling of hazardous waste, as well as the management of hazardous waste. Division 4.5 also establishes a Hazardous Waste Permit Program that requires that a permit is obtained for the transfer, treatment, storage and disposal of any hazardous waste.

Hazardous Waste Source Reduction and Management Review Act. This Act requires generators that produce 12,000 kilograms of typical/operational hazardous waste per year to conduct an evaluation of their waste streams every four years and to select and implement viable source reductions alternatives. This Act does not apply to non-typical hazardous waste such as asbestos and polychlorinated biphenyls. In addition, the California Vehicle Code requires that every motor carrier transporting hazardous materials to have a Hazardous Materials Transportation License issued by the California Highway Patrol.[8]

Local

County of Los Angeles Hazardous Materials Control Program. In May 1982, the Los Angeles County Board of Supervisors established the Hazardous Materials Control Program within the Department of Health Services. Originally, this program focused on the inspection of businesses that generate hazardous waste. Since the program's inception, it has been expanded to include hazardous materials inspections, criminal investigations, site mitigation oversight, and emergency response operations. On July 1, 1991, the program name was changed to Health Hazardous Materials Division (HHMD), and it was transferred to the LACFD. The mission of the HHMD is to protect the public health and the environment throughout Los Angeles County from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and wastes through coordinated efforts of inspections, emergency response, enforcement, and site mitigation oversight.

City of South Gate General Plan Healthy Community Element (Healthy Community Element). The City of South Gate General Plan includes chapters on land use, circulation, housing, conservation, open space, noise, safety, community design, educational and cultural resources, and utility infrastructure. The General Plan determines the potential growth of the City, including residential, commercial, and industrial growth, and then it establishes goals to accommodate that growth. A stated goal of the Health Community Element is to protect the community from the harmful effects of hazardous materials and waste. While California Government Code Section 53094 includes provisions for school districts to exempt classroom facilities from local zoning regulations, applicable objectives and policies of the City's General Plan related to hazards and hazardous materials are identified in **Table 4.5-2**.

TABLE 4.5-2: APPLICABLE GENERAL PLAN OBJECTIVES AND POLICIES RELATED TO HAZARDS AND HAZARDOUS MATERIALS

Objective/Policy	Objective/Policy Description
HEALTHY COMMUNITY ELEMENT	
Objective HC 9.1	Minimize South Gate residents' and employees' exposure to hazardous materials and waste.
Policy P.1	The City will regularly update Hazardous Waste Management procedures and actively implement appropriate Hazardous Waste Management policies recommended by the Los Angeles County Emergency Survival Program.
Policy P.2	The City will enforce state and local codes that regulate the use, storage and transportation of hazardous materials in order to prevent, contain and effectively respond to accidental releases.
Policy P.3	The City should monitor the use and release of hazardous materials in the City.
Policy P.4	The City should, to the extent possible, ensure on a case by case basis that new development near known locations of hazardous waste or materials is suitable for human habitation and does not pose higher than average health risks from exposure to hazardous material.
SOURCE: City of South Gate, *South Gate General Plan 2035*.	

[8] California Code of Regulations, Title 13.

City of South Gate Natural Hazards Mitigation Plan (Mitigation Plan). The Mitigation Plan, which includes resources and information to assist City residents, public and private sector organizations, and others interested in participating in planning for natural hazards.[9] The Mitigation Plan provides a list of activities that may assist City in reducing risk and preventing loss from future natural hazard events. The action items address multi-hazard issues, as well as activities for earthquakes, flooding, and windstorms. The Mitigation Plan contains a Mitigation Actions Matrix for implementation of activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to losses from natural hazards.

THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the State CEQA Guidelines, the proposed project would have a significant impact related to hazards and hazardous materials if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and/or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are adjacent to urbanized areas or where residences are intermixed with wildlands.

IMPACTS

CONSTRUCTION

The proposed project would include the demolition of Buildings 1, 3, 4 and the bridge that connects Building 1 to Building 2. Building 2 would remain on-site, but it would not be used for college uses. Following demolition, a new approximately 100,000-gross-square-foot building and a surface parking lot would be constructed. The project site would also be improved with landscaping, an open space area, and other outdoor amenities

Hazardous Materials

The project site was a generator of hazardous materials when occupied by the Firestone Tire and Rubber Plant, and contamination at the site led to the DTSC issuing an Imminent or Substantial Endangerment Order and Remedial Action Order in April 1994 that required the project site to be investigated, a clean-up plan be prepared and implemented. As discussed above, since the DTSC issued their 1994 order several environmental investigations have been conducted on the project site, and based on the findings of a HHRA

[9] City of South Gate, *Natural Hazards Mitigation Plan*, October 26, 2004, amended May 13, 2008.

prepared for the project site in August 2009, DTSC issued a "No Further Action" letter on September 3, 2009 deeming the project site suitable for unrestricted use. However, additional investigations conducted per the recommendations of the Phase I ESA prepared for the project site subsequent to the HHRA, necessitated further action at the site. Specifically, soils containing elevated arsenic concentrations were removed and appropriately disposed of, two 13,000-gallon USTs and associated product pipes were excavated and removed, and contaminated materials and soils were disposed of. However, the potential exists that contaminated soils not previously identified due to the presence of buildings and asphalt could be encountered during demolition and of the existing buildings to make way for construction of the proposed project. DTSC certification of closure of the UST removal will be sought as part of the de3velopment of the project site. Any required investigation and remediation of a release or threatened release of any hazardous substances at or from the project site in the future would be overseen by the DTSC in accordance with the VCA between DTSC and LACCD, pursuant to the Health and Safety Code.[10]

In addition to the environmental investigations discussed above, ACM, lead-based paint and other hazardous building material surveys have been conducted. Prior to activities that could disturb these materials, such as demolition, these hazardous materials would be removed and disposed of in compliance with applicable federal and State regulations to ensure the health and safety of construction workers and those in the surrounding community. Demolition and construction activities would also involve the temporary use of potentially hazardous materials, including paints, adhesives, surface coatings, cleaning agents, fuels, and oils. However, construction activities would comply with applicable regulations and would not expose persons to substantial risk resulting from the release of hazardous materials or exposure to health hazards in excess of regulatory standards. Similarly, while construction of the proposed project may include the transport of hazardous materials to a permitted facility for treatment and/or disposal, the handling of hazardous materials and wastes would occur in accordance with manufacturers' instructions and handled in compliance with applicable federal, State and local regulations. Compliance with existing standards and regulations would ensure that construction of the proposed project not create a significant hazard to the public or the environmental through the routine transport, use, or disposal of hazardous materials. Nonetheless, without mitigation, the proposed project would result in a significant impact related to hazardous materials.

Schools

Four public and/or private schools are located within a quarter-mile of the project site. Disposal and use of hazardous materials during construction of the proposed project would be done in compliance with applicable regulations. In the event that contaminated soils or other hazardous materials that could poses a health and safety risk are encountered during construction of the proposed project, any associated activities, which could include transporting hazardous materials to a permitted facility for treatment and/or disposal, would occur in coordination with DTSC and in accordance with federal, State and local regulations. These actions would ensure that the proposed project would not emit hazardous materials, substances, or waste within one quarter mile of an existing or proposed school during construction. Therefore, without mitigation, the proposed project would result in a significant impact related to schools, but with mitigation, the proposed project would not result in a significant impact.

Airport Hazards

The project site is not within an airport land use plan, or within two miles of an airport or airstrip. The nearest public airport or private airstrip is Long Beach Municipal Airport, approximately ten miles to the south-southeast. The project site is not affected by air traffic or other hazards from this airport. Therefore, no impacts related to airport hazards would occur.

[10]Department of Toxic Substances Control, *Voluntary Cleanup Agreement with LACCD*, Docket No. HAS VCA-12/13-055, executed January 22, 2013.

Emergency Response Plans

As discussed above, the City of South Gate's emergency response needs are served by the LACFD and the LASD. Firestone Boulevard is a designated emergency evacuation route in the City of South Gate.[11] Construction of the proposed project would require street and sidewalk improvements. Specifically, vehicular access to the project site would be provided via five driveways. A right-turn in/right-turn out only driveway is proposed on Santa Fe Avenue, north of Orchard Place. A driveway accommodating full access is also proposed opposite Orchard Place, essentially forming the fourth leg of the Santa Fe Avenue/Orchard Place intersection. This intersection is proposed to be signalized. A right-turn out (egress) only driveway is proposed on Santa Fe Avenue, south of Orchard Place, and a right-turn in/right-turn out only driveway is proposed on Firestone Boulevard, opposite Firestone Plaza. The Firestone Boulevard West Driveway is the existing shared driveway with the adjacent HON site and full access would be maintained in order to continue to accommodate ingress and egress movements for both the project site and the HON site. Although short-term, construction activities within the right-of-way could potentially impact the use of Firestone Boulevard and Santa Fe Avenue during an emergency response or evacuation, interfering with the implementation of the City's emergency response plan. Coordination with the LACFD and LASD regarding any lane closures, movement of heavy construction equipment, or any construction in, or use of, the Firestone Boulevard and Santa Fe Avenue right-of-ways would reduce potential impacts to emergency response plans. Therefore, without mitigation, the proposed project would result in a significant impact related to emergency response plans.

Wildland Fires

As the project site is approximately 18 miles from the nearest wildlands, construction of the proposed project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. Therefore, no impacts related to wildland fires would occur.

OPERATIONS

Hazardous Materials

The proposed project would replace a former industrial land use that routinely used hazardous materials in regular operations, with an educational land use that would not typically transport, use and dispose of hazardous materials. Operations associated with the proposed project may handle small quantities of chemical substances, such as chemical solvents and lubricants, and fertilizers, pesticide and herbicides for landscape maintenance, and if the college offers chemistry classes, this may involve a variety of materials for teaching and laboratory purposes. However, in general the operation of the proposed project would involve very little, if any, use of petroleum products or hazardous materials, and these would be transported, contained, and disposed of in accordance with applicable federal, State and local regulations. In addition, as previously discussed, an HHRA was prepared for the project site to evaluate health risks for with respect to the use of the project site as a college campus. The results indicated no significant human health risks, and on September 3, 2009, DTSC issued a "No Further Action" letter deeming the project site suitable for unrestricted use and any further environmental issues encountered on site that warrant action would be handled in coordination with DTSC under the VCA.

Compared to the previous uses on the project site, operation of the proposed project would not typically involve the transport, use and disposal of hazardous materials, and would represent a significant reduction in the amount and frequency of the use of hazardous materials. No industrial land uses or activities that would result in the use or discharge of unregulated hazardous materials and/or substances are part of the proposed project. Hazardous materials expected for occasional use during operation of the proposed project could include limited quantities of lubricating products, paints, solvents, and custodial products, pesticides and other landscaping supplies, and vehicle fuels, oils, and transmission fluids. All hazardous materials would be

[11]City of South Gate, *SEMS Multihazard Functional Plan,* March 1998.

contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable federal, State and local regulations. Any associated risk would be adequately reduced through compliance with these standards and regulations. If there were a release of hazardous materials related to the operation proposed project, the amount would be small and localized. Therefore, impacts related to hazardous materials would be less than significant.

Schools

Four public and/or private schools are located within a quarter-mile of the project site. However, as described above, limited quantities of hazardous materials are expected for occasional use during operation of the proposed project. Associated risk would be reduced through compliance with applicable standards and regulations. Therefore, hazardous material impacts related to schools would be less than significant.

Airport Hazards

As discussed above, the project site is not within an airport land use plan, or within two miles of an airport or airstrip. The nearest public airport or private airstrip, Long Beach Municipal Airport, is approximately ten miles to the south-southeast of the project site. The project site is not affected by air traffic or other hazards from this airport. Therefore, no impacts related to airport hazards would occur.

Emergency Response Plans

Operation of the proposed project would not impair or interfere with any emergency response plans or emergency evacuation plans. The proposed project would incorporate street improvements to manage the traffic associated with the proposed project and implement additional improvements proposed in City of South Gate General Plan 2035. Specifically, vehicular access to the project site would be provided via five driveways. A right-turn in/right-turn out only driveway is proposed on Santa Fe Avenue, north of Orchard Place. A driveway accommodating full access is also proposed opposite Orchard Place, essentially forming the fourth leg of the Santa Fe Avenue/Orchard Place intersection. This intersection is proposed to be signalized. A right-turn out (egress) only driveway is proposed on Santa Fe Avenue, south of Orchard Place, and a right-turn in/right-turn out only driveway is proposed on Firestone Boulevard, opposite Firestone Plaza. The Firestone Boulevard West Driveway is the existing shared driveway with the adjacent HON site and full access would be maintained in order to continue to accommodate ingress and egress movements for both the project site and the HON site. The improvements to Firestone Boulevard, which is a designated emergency evacuation route in the City of South Gate, would not interfere with emergency evacuation.[12] In addition, fire truck access to within 150 feet of all building exterior walls would be provided, and the proposed project would incorporate the requirements of the LACFD and the LASD for emergency access. Therefore, impacts related to emergency response plans would be less than significant.

Wildland Fires

As the project site is located approximately 18 miles from the nearest wildlands, operation of the proposed project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. Therefore, no impacts related to wildland fires would occur.

CUMULATIVE IMPACTS

The geographic area affected by potential cumulative hazards and hazardous materials impacts would depend on the migration characteristics of the hazardous materials as they are released into the soil, air, or groundwater. Similar to the proposed project, which was determined to have less-than-significant impacts with the implementation of identified mitigation measures, the related projects would also be required to evaluate and mitigate their respective public health and safety impact prior to implementation. The related

[12]City of South Gate, *SEMS Multihazard Functional Plan,* March 1998.

projects are expected to be constructed and operated in accordance with applicable hazardous materials laws, statutes, and regulations. Therefore, impacts related to hazards and hazardous materials would not be cumulatively considerable.

MITIGATION MEASURES

CONSTRUCTION

No impacts related to airport hazards or wildland fires would occur. No mitigation measures are required.

Hazardous Materials

HM1 Should LACCD discover a previously undocumented release or threatened release of any hazardous substances during pre-construction demolition and/or construction, the release shall be addressed by a contingency plan developed and implemented in consultation with the Department of Toxic Substances Control (DTSC). If still in effect, the response can be overseen by the DTSC in accordance with the Voluntary Cleanup Agreement (VCA) between DTSC and LACCD entered into on January 22, 2013.

HM2 Prior to the demolition of Buildings 1, 3 and 4, asbestos containing materials, lead based paint and other identified hazardous materials shall be removed in accordance with the recommendations contained in Hazardous Building Materials surveys conducted for the buildings. Removal would be conducted by a California Occupation Safety and Health Administration (Cal/OSHA)-registered and State-licensed asbestos removal contractor. Abatement operations shall be performed under the direct observation of a California Certified Asbestos Consultant or Certified Site Surveillance Technician. For all abatement activities which involve the removal of at least 100 square feet of hazardous materials, notifications must be made to the South Coast Air Quality Management District and Cal/OSHA, 10 days and 24 hours, respectively, prior to initiation of such activities.

Schools

Mitigation Measures **HM1** and **HM2** would apply to this impact.

Emergency Response Plans

HM3 Prior to the construction of the proposed project, LACCD shall provide to the Los Angeles County Fire Department all building plans, construction plans, construction schedules, and, if applicable, proposed construction and street or lane closures related to the proposed project for review and approval.

HM4 At least three days in advance of any street or lane closure that may affect Fire and/or Paramedic responses in the area, LACCD shall notify the Los Angeles Sheriff's Department, South Gate Police Department, and the Los Angeles County Fire Department.

OPERATIONS

Impacts related to hazardous materials, schools, and emergency response plans would be less than significant. No mitigation measures are required.

No impacts related to airport hazards and wildland fires would occur. No mitigation measures are required.

SIGNIFICANCE OF IMPACTS AFTER MITIGATION

CONSTRUCTION

No impacts related to airport hazards or wildland fires would occur.

Hazardous Materials

Impacts related to hazardous materials were determined to be significant without mitigation. Implementation of Mitigation Measures **HM1** and **HM2** would reduce the impacts to less than significant.

Schools

Impacts related to schools were determined to be significant without mitigation. Implementation of Mitigation Measures **HM1** and **HM2** would reduce the impacts to less than significant.

Emergency Response Plans

Impacts related to emergency response plans were determined to be significant without mitigation. Implementation of Mitigation Measures **HM3** and **HM4** would reduce the impacts to less than significant.

OPERATIONS

No impacts related to airport hazards or wildland fires would occur.

Impacts related to hazardous materials, schools, and emergency response plans were determined to be less than significant without mitigation.

4.6 LAND USE AND PLANNING

This section provides an overview of City and/or regional land use plans and policies, and evaluates the construction and operational impacts associated with the 2015 South Gate Educational Center Master Plan (proposed project). Topics addressed include land use compatibility, land use consistency, parking and habitat conservation plans.

EXISTING SETTING

Project Site

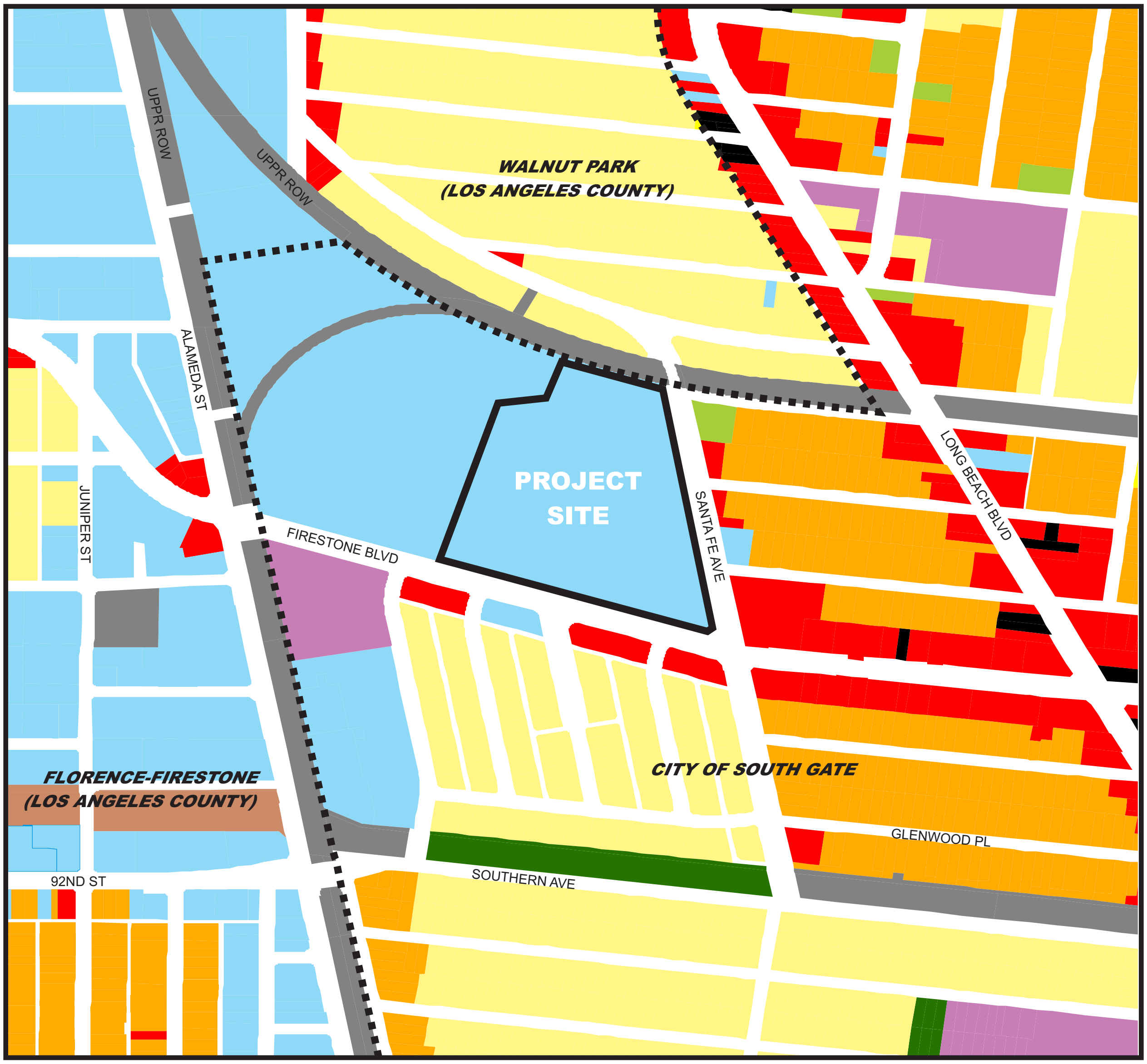
The 18.5-acre project site is located at the northwest corner of the Firestone Boulevard/Santa Fe Avenue intersection in the City of South Gate. The City's General Plan designates the project site Mixed Commercial/Industrial, and the site is zoned Heavy Manufacturing (M-3). According to the General Plan, the project site is part of Subarea 1 of the South Gate College District (SGCD), which states that civic/institutional and open space uses are highly desirable.

The project site is currently developed with four buildings and surface parking. Building 1, the largest building on the project site, fronts Firestone Boulevard. Building 2 is located at the southeast corner of the project site at the Firestone Boulevard/Santa Fe Avenue intersection. Building 3 is located immediately north of Building 1, and its eastern façade faces Santa Fe Avenue. Building 4 is located at the northeast corner of the project site at the Santa Fe Avenue/Ardmore Avenue intersection. Building 4 was constructed later than the other buildings on-site, and has a different architectural style than the other three buildings. The project site contains minimal landscaping, which consists of solely of ornamental trees and shrubs along Firestone Boulevard and Santa Fe Avenue. Surface parking is provided in front and to the west of Building 1, surrounding Building 2, and to north of Building 3. The project site has four driveways. Two driveways provide access to Building 2; one on Santa Fe Avenue and the other on Firestone Boulevard. A third driveway provides access to the Building 3 from Santa Fe Avenue. The fourth driveway is located on the north side of Firestone Boulevard. This driveway provides shared access to the project site and the adjacent HON site to the west. Figure 3-3 in Chapter 3.0 Project Description depicts existing development on the project site. Photographs of the four buildings on the project site are provided in Section 4.1 Aesthetics.

Surrounding Land Uses

The project site is bounded on the north by the Union Pacific Railroad (UPRR) right-of-way, on the east by Santa Fe Avenue, on the south by Firestone Boulevard, and on the west by HON site. Firestone Boulevard is the major arterial serving the project site that connects to the Harbor Freeway (I-110) and the Long Beach Freeway (I-710). Santa Fe Avenue is a secondary arterial, but serves as a regional major street. Heavy vehicular traffic, freight railroad lines, the Alameda Corridor, and older residential areas encircle the project site and surrounding area. Most structures in the surrounding area of the project site are at least 25 years old, with the exception of properties that have been recently redeveloped as chain commercial businesses. The land uses surrounding the project site are shown in **Figure 4.6-1**.

Residential land uses are located immediately north of the adjacent UPRR right-of-way. These residential land uses extend north for approximately two miles to Slauson Avenue. The UPRR serves as a barrier between these residential uses and the project site. Three city blocks of residential uses are located east of the project site along Santa Fe Avenue, between the UPRR right-of-way and Firestone Boulevard. The block located at the southeast corner of Santa Fe and Ardmore Avenues contains a water tower of approximately 130 feet in height. The block between Orchard and Laurel Places consists of commercial businesses including a discount store, a restaurant, and other similar commercial uses. The block between Laurel Place and Firestone Boulevard includes a shopping plaza at the northeast corner of Santa Fe Avenue/Firestone Boulevard intersection. This shopping plaza is a commercial strip mall that includes a discount store, a fast food restaurant, a beauty salon, coin laundry, a dentist's office, and a surface parking area.



LEGEND: Project Site | City of South Gate Boundary

- Low Density Residential
- Medium Density Residential
- Retail/Commercial/Office
- Educational Institutions
- Industrial
- Public Facilities
- Parks/Open Space
- Vacant Land
- Transportation and Utility Facilities

Approx. Scale
0 355 710 Feet
N

SOURCE: SCAG 2008 and TAHA, 2016.

FIGURE 4.6-1

EXISTING LAND USES

Extending further east beyond the commercial strip mall are multi-family residences and additional commercial uses, including a motel. A gas station is located at the southeast corner of the Santa Fe Avenue/Firestone Boulevard intersection.

There are four city blocks located immediately south of the project site from Santa Fe Avenue to the Alameda Corridor. The first block, between Tope and Santa Fe Avenues, contains a commercial strip mall that includes a donut shop, coin laundry facility, and dry cleaners. The following three blocks between Tope and Calden Avenues contain automotive-related commercial uses, including a repair shop, an automotive sound shop, a car wash, an automotive window tinting and detailing shop, a used car dealership, and an engine and transmission repair shop. Further south of these commercial uses is a single-family residential neighborhood. The existing SGEC is located at the southwest corner of the Firestone Boulevard and Calden Avenue intersection, just west of the single-family residential neighborhood.

The HON site is located immediately west of the project site. A 64-foot wide shared driveway separates the project site from the HON site and serves as an ingress and egress point for both properties. The HON site consists of five one- to two-story buildings and surface parking. The HON site was most recently utilized as a furniture manufacturing facility. However, the buildings on both the HON site and the project site comprise the former Firestone Tire and Rubber Plant. Further west of the HON site, across the Alameda Corridor between Firestone Boulevard and 85th Street are commercial uses which include a McDonald's drive-thru restaurant and several industrial auto-related businesses. Residential uses are located further west of these commercial uses. A large heavy industrial use is located northwest of the HON site, east of the Alameda Corridor and south of the UPPR tracks.

REGULATORY FRAMEWORK

Federal

Habitat Conservation Plans (HCPs). HCPs, designated under Section 10(a)(1)(B) of the Endangered Species Act, are federal planning documents required when a project will affect a species identified as listed, non-listed, or eligible under the Endangered Species Act. An HCP details how project impacts upon affected species would be minimized, or mitigated, and how the HCP is to be funded. Currently, no animal species protected by the Endangered Species Act have been identified on the project site, and, thus, there are no applicable HCPs.

State

California Government Code (CGC) Section 53094. CGC Section 53094 allows the governing board of a school district that has complied with the requirements of CGC Section 65352.2 and Public Resources Code (PRC) Section 21151.2, by two thirds vote of its members, may render a city or county zoning ordinance inapplicable to a proposed use of property by the school district. However, the school district may not take this action when the proposed use of the property by the school district is for non-classroom facilities. The city or county concerned is required by notified within 10 days of this action. CGC Section 65352.2 is aimed at fostering improved communication and coordination between cities, counties, and school districts related to planning for school siting. PRC Section 21151.2 promotes the safety of pupils and comprehensive community planning by requiring the governing board of each school district to notify the planning commission of the jurisdiction before acquiring title to property for a new school site or for an addition to a present school site.

Natural Community Conservation Planning (NCCP). NCCP programs of the California Department of Fish and Wildlife take a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity at the State level.[1] The primary objective of NCCPs is to conserve natural communities while accommodating compatible land use. Currently, there are no NCCPs for the project site.

[1] California Department of Fish and Wildlife, *Natural Community Conservation Planning (NCCP)*, available at: https://www.wildlife.ca.gov/Conservation/Planning/NCCP, accessed May 10, 2016.

Regional

Regional plans that provide general policies and guidance for growth and development in the project area include the Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), Growth Vision Report, and Regional Comprehensive Plan (RCP). These regional plans and associated regulatory documents are further discussed below.

Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). SCAG's RTP/SCS, presents a long-term transportation vision through the year 2040 for the SCAG region. Specific issues addressed within the RTP/SCS include mobility, sustainability, air quality, climate change, energy, transportation financing, security and safety, environmental justice and mitigation, revenues and expenditures, transportation conformity, implementation and monitoring, corridor preservation, and future connections and growth. The RTP/SCS provides a basic policy and program framework for long-term investment in the regional transportation system in a coordinated, cooperative, and continuous manner. Transportation investments in the SCAG region that receive State or federal transportation funds must be consistent with the RTP/SCS and must be included in their Regional Transportation Improvement Plan when ready for funding. The RTP/SCS also includes population, housing, and employment forecasts that provide advisory information to local jurisdictions for use in planning activities.

Regional Comprehensive Plan (RCP). SCAG prepared and issued the 2008 RCP in response to SCAG's Regional Council directive to define solutions to interrelated housing, traffic, water, air quality, and other regional challenges.[2] The 2008 RCP is an advisory document that describes future conditions if current trends continue, defines a vision for a healthier region, and recommends an Action Plan with a target year of 2035. The RCP is a voluntary document to be used by local jurisdictions in developing local plans and addressing local issues of regional significance. The plan incorporates principles and goals of the Compass Growth Vision Report, as well as the policies and strategies identified in the 2008 RCP. It includes nine chapters addressing land use and housing, transportation, air quality, energy, open space, water, solid waste, economy, and security and emergency preparedness. The action plans contained therein provide a series of recommended near-term policies that developers and key stakeholders should consider for implementation, as well as potential policies for consideration by local jurisdictions and agencies when conducting project review.

Local

City of South Gate General Plan Community Design Element (Community Design Element). The Community Design Element provides goals, objectives, policies, and implementation strategies for community design, which include land use, urban design, and the characteristics that give the City its unique image and identity. The Community Design Element meets State mandated requirements for a land use element by designating the general location, distribution, and the extent of various land uses, and clearly identifying standards for population density and development intensities for the City. The Community Design Element takes a unique approach to land use by organizing the City into neighborhoods, districts, and corridors. This approach identifies land uses and densities according to these differing corridors and districts as opposed to the traditional parcel approach. In addition to identifying land uses and densities, this approach also defines the character and form of these corridors and districts. Each corridor and district includes a policy guidance that includes a statement of existing conditions, a vision statement, allowable place types, and specific policies to help achieve the vision for the area. Place types include a land use type and density designation, as well as a priority ranking from highly desired to discouraged. The place type designations consist of policy and design guidance that addresses the form and character of future development. Corridors or districts may contain more than one place type to allow for a greater mixing of uses and flexibility in achieving City objectives. The project site is located in Subarea 1 of the SGCD. As shown in **Figure 4.6-2**, the general plan land use designation of the project site is Mixed Commercial/Industrial.

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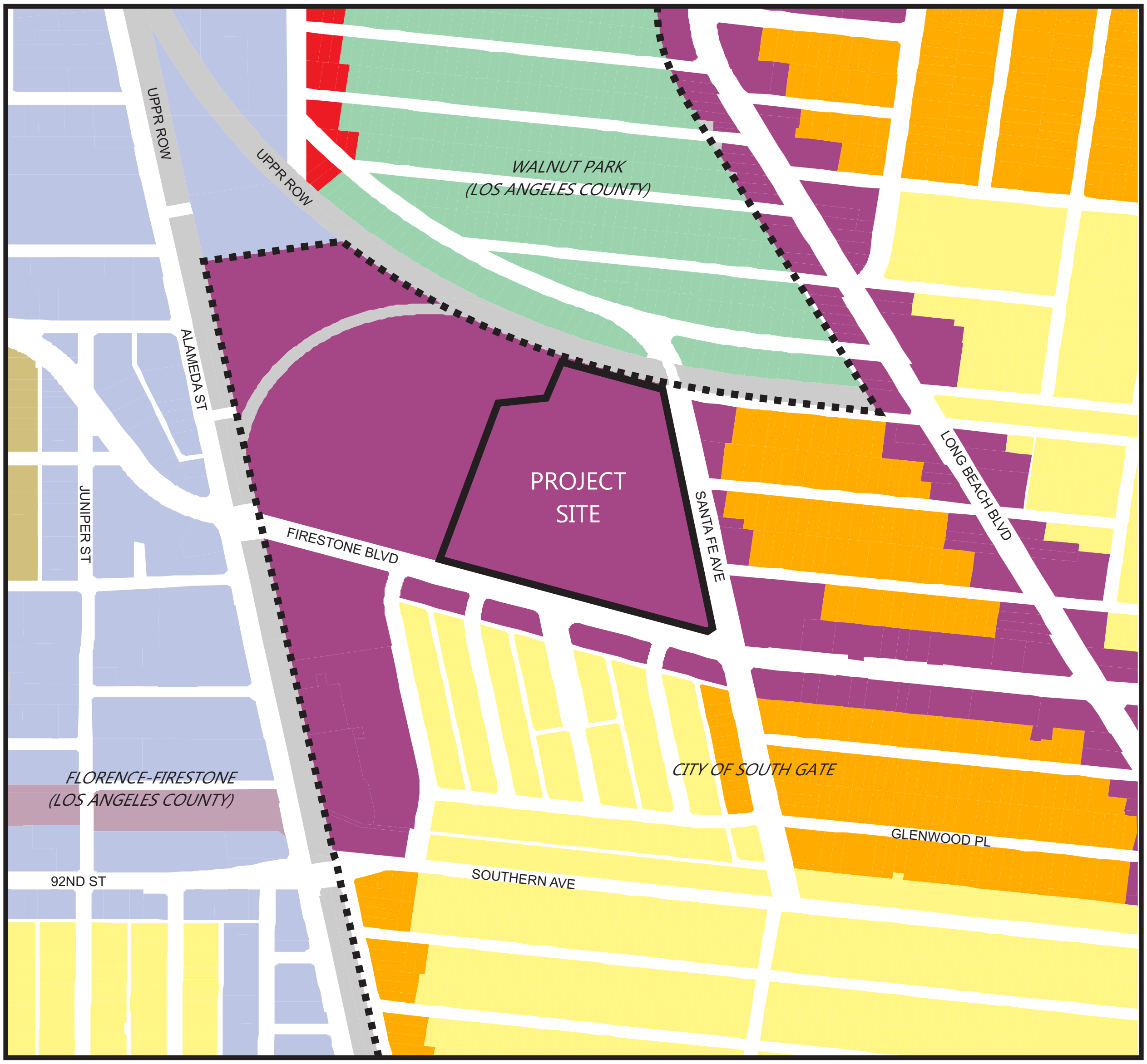
[2] SCAG, *Final 2008 Regional Comprehensive Plan*, website: http://www.scag.ca.gov/rcp/pdf/finalrcp/f2008RCP_Complete.pdf, accessed October 30, 2013.



LEGEND: Project Site City of South Gate Boundary

City of South Gate Land Use

- Low Density Residential
- Medium Density Residential
- Mixed Commercial/Industrial

Los Angeles County Land Use

- Low Density Residential
- Low/Medium Density Residential
- Major Commercial
- Major Industrial
- Public and Semi-Public Facilities
- Transportation Corridor
- Neighborhood Revitalization

APPROX. SCALE

N

0 355 710 FEET

SOURCE: SCAG 2008 and TAHA, 2016.

taha

taha 2014-075

2015 South Gate Educational Center Master Plan
Supplemental Draft Environmental Impact Report

LOS ANGELES COMMUNITY COLLEGE DISTRICT

FIGURE 4.6-2

GENERAL PLAN LAND USE DESIGNATIONS

The Community Design Element has a vision for the SGCD to become a diverse, dense, and vibrant area that contains a wide array of facilities such as classrooms, a library, public meeting spaces, parks and plazas, cultural facilities and a hub for emerging green technology firms. Supporting retail and services, including restaurants, are proposed along the Firestone Boulevard and Santa Fe Avenue frontages. Allowable place types for Subarea 1 of the SGCD include civic/institutional and open space as being "Highly Desired" and Office/R&D, and Light Industrial/Flex as being "Desired."

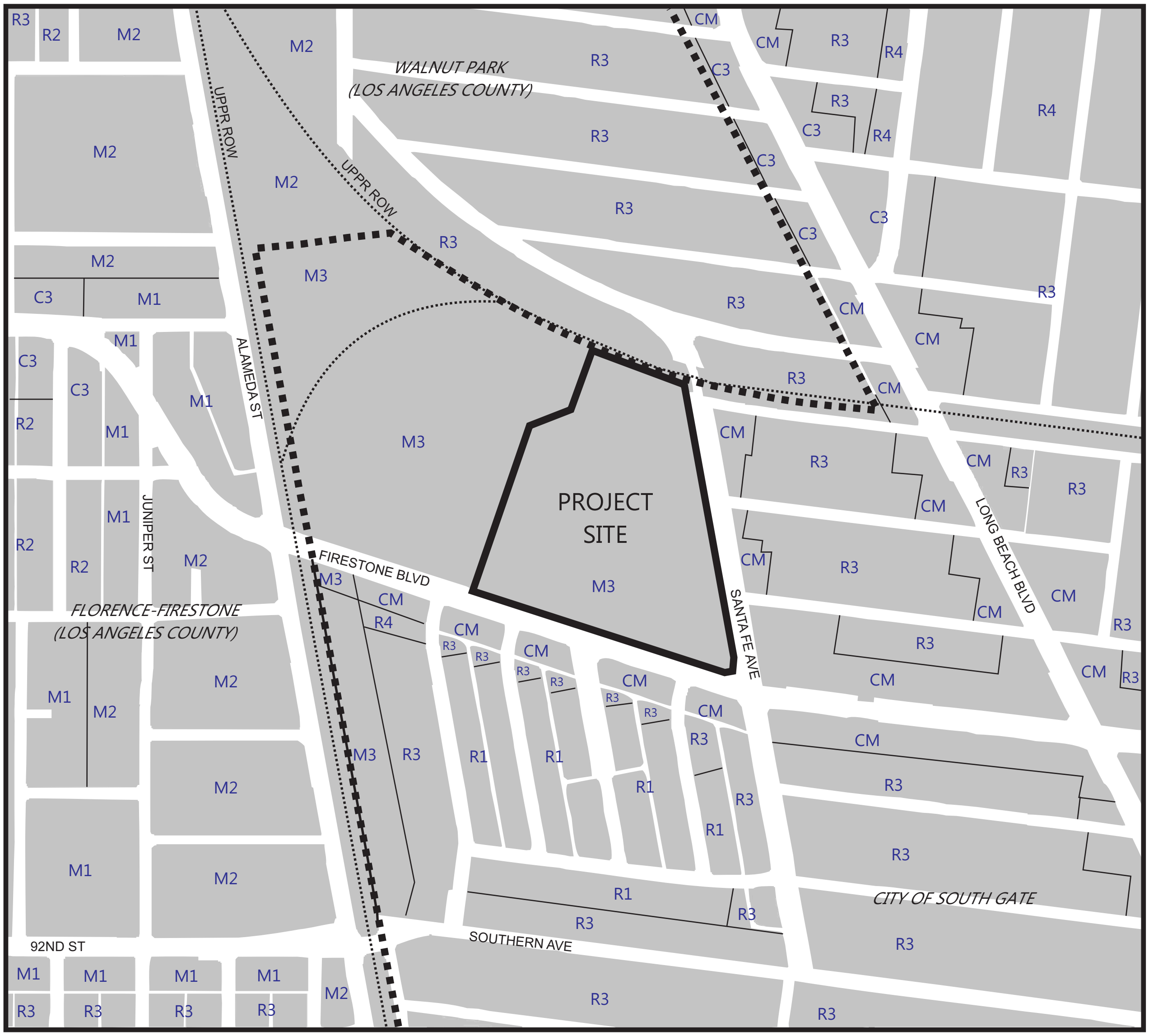
As discussed above, CGC Section 53094 includes provisions for school districts to exempt classroom facilities from local zoning regulations; however, applicable objectives and policies of the City's General Plan related to land use are identified in **Table 4.6-1**.

TABLE 4.6-1: APPLICABLE GENERAL PLAN OBJECTIVES AND POLICIES RELATED TO LAND USE AND PLANNING

Objective/Policy	Objective/Policy Description
COMMUNITY DESIGN ELEMENT	
Objective CD 2.1	Establish a clearly defined urban form and structure to the City consisting of "Neighborhoods," "Districts," and "Corridors" in order to enhance the area's identity and livability.
Policy P.1	New development and redevelopment will be encouraged to advance a unified and coherent pattern of development, maximize the use of land and fill gaps in the urban environment.
Objective CD 2.5	Ensure that public and institutional uses, such as government and administrative offices, recreation facilities, senior and youth centers and educational uses adequately support existing and future populations.
Policy P.2	New public uses will be allowed and encouraged in identified Neighborhood, Districts and Corridors.
Policy P.4	Public buildings and sites will be designed to be compatible in scale, mass, and character with the vision for the specific Neighborhood, District, or Corridor.
Objective CD 3.2	Minimize the impact of parking on the pedestrian environment and residential neighborhoods.
Policy P.1	Parking lots for new buildings should be located behind or on the side of buildings to reduce their visual impact.
Policy P.2	Large parking lots should be sited to avoid potential impacts to adjacent residential areas or buffered from the residential uses.
Policy P.3	Parking lots for new buildings that front a sidewalk should include landscaping between the parking lot and the sidewalk.
Objective CD 6.1	Create a series of distinct Districts throughout the City, each with its own character, identity and mix of uses.
Policy P.3	The following Districts will contain a mix of uses with a significant amount of new multi-family residential development: • South Gate College • Gateway (Subarea 2) • Imperial District (Subareas 1 and 2) • Firestone Industrial
Objective CD 6.2	Design landscaping, buildings, and sites to enhance the pedestrian environment and enhance the urban character of the City's Districts.
Policy P.1	New development in Districts will be designed and developed to achieve a high level of quality and distinctive character and architecture.
Policy P.2	Publicly-accessible parks and open space will be required in new projects of 5 acres or more in any District.
Policy P.3	With the possible exception of some manufacturing and distribution uses, new buildings and substantial remodels in Districts will be sited and designed to enhance pedestrian activity along sidewalks, including but not limited to: • Providing maximum window exposure and minimizing "blank wall" exposure to the sidewalk and street. • Integrating sidewalks, plazas and other amenities that contribute to pedestrian-oriented activities. • Incorporating uses in the first floor along the street frontage that stimulate pedestrian activity. • Siting the linear frontage of the building along or near the front property line and near the sidewalk to maintain a no-setback or minimal-setback building that runs along the sidewalk or property line in a "building wall" design, which is more pleasant and accessible for pedestrians.

TABLE 4.6-1: APPLICABLE GENERAL PLAN OBJECTIVES AND POLICIES RELATED TO LAND USE AND PLANNING	
Objective/Policy	**Objective/Policy Description**
	• Incorporating landscaping that visually distinguishes the site or structure. • Incorporating building articulation of the façade and the use of multiple building volumes and planes. • Using rooflines and height variations to break up the massing and provide visual interest. • Providing distinct treatment of building entrances. • Limiting the street wall height to no more than 50 feet. Floors above 50 feet should be set back from the street wall to preserve light and air.
Policy P.4	Buildings adjacent to lower scale residential development should step down toward the residential uses or provide other buffering techniques.
Objective CD 8.4	Reduce the impact of Manufacturing/Distribution and Light Industrial/Flex businesses on adjoining land uses.
Policy P.1	Neighborhoods should be protected from incompatible non-residential uses and disruptive traffic and other noise generating uses to the greatest extent feasible.
SGCD Policy P.1	The former Firestone Tire factory should be rehabilitated and adaptively reused for the creation of a public/private research and development hub specializing in emerging green technology that supports the East Los Angeles Community College's "green workforce" training programs.
SGCD Policy P.2	The City will work with the East Los Angeles Community College and Los Angeles Community College District to develop a Specific Plan or Precise Plan for the South Gate College District. The plan should identify specific information on the location of uses, the needs of the Community College District and the needs of the City and the community.
SGCD Policy P.3	The City will work with the East Los Angeles Community College, Los Angeles Community College District and others to pursue a public/private partnership for the creation of a green technology center that is associated with East Los Angeles Community College.
SGCD Policy P.4	All of the East Los Angeles Community College facilities are encouraged to be constructed as green buildings.
SGCD Policy P.6	Industrial and manufacturing uses should remain in the area but could be phased out as the college district expands.
SGCD Policy P.7	New uses that serve, and are used by, both the community college and the residents of South Gate should be included in the area. This includes a library, community meeting space, theaters, parks and plazas.
SGCD Policy P.8	Retail uses should be located in the ground floor of all buildings along Firestone and Santa Fe; restaurants and cafés with outdoor seating are also encouraged.
SGCD Policy P.9	To the extent feasible, the existing Firestone Tire factory building should be adaptively reused and the building façade preserved.
Note: SGCD – South Gate College District **SOURCE**: City of South Gate, *South Gate General Plan 2035.*	

City of South Gate Comprehensive Zoning Code (CZC). Title 11 of the South Gate Municipal Code (SGMC) contains the CZC. The CZC serves as the primary implementation tool of the General Plan. The General Plan is a policy document that sets forth direction for development decisions and the CZC is a regulatory ordinance that establishes specific standards for the use and development of all properties in the City. The CZC regulates development intensity using a variety of methods, such as setting limits on building setbacks, yard landscaping standards, and building heights. The CZC also indicates which land uses are permitted in the various zones. As shown in **Figure 4.6-3**, the zoning designation for the project site is Heavy Manufacturing (M-3). The Heavy Manufacturing (M-3) zoning designation allows for high-intensity manufacturing uses, as well as lower-intensity manufacturing uses categorized under the light manufacturing (M-2) and commercial manufacturing (C-M) zoning designations. Institutional land uses are permitted under all three of these industrial zoning designations.



LEGEND:

Project Site

City of South Gate Boundary

C3	General Commercial
CM	Commercial Manufacturing
M1	Light Manufacturing
M2, M3	Heavy Manufacturing
R2	Two-Family Residential
R3	Multiple Residential
R4	Restricted Service Zone

APPROX. SCALE

N

0 264 528 FEET

SOURCE: SCAG 2008 and TAHA, 2016.

FIGURE 4.6-3

ZONING DESIGNATIONS

Following the adoption of the General Plan in 2009 the City began a City-wide update of the CZC to reflect the vision, goals, objectives, and policies and development intensities established within the General Plan. The purpose of the CZC update is to ensure that it is consistent with the General Plan; specifically by:

- Developing a form-based code for parts of the City;
- Developing incentives to ensure that the "Highly Desired" Place Types occur in each area and/or a disincentive to limit the "Discouraged" Place Types;
- Allowing existing uses to remain even though they are inconsistent with the City's long-term vision for a particular Neighborhood, District or Corridor; and
- Addressing development review regulations for different types of projects.

While the CZO update is in the process of being completed, zoning of the project site remains Heavy Manufacturing (M-3). Nonetheless, as discussed above, CGC Section 53094 includes provisions for school districts to exempt classroom facilities from local zoning regulations.

THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the State CEQA Guidelines, the proposed project would have a significant impact related to land use and planning if it would:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; and/or
- Conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan.

IMPACTS

CONSTRUCTION

No impacts related to land use and planning would occur. Therefore, no further discussion of construction impacts is necessary.

OPERATIONS

Land Use Compatibility

The project site has historically contained industrial uses that have resulted in incompatible land use issues related to air quality, noise, and odors associated with various industrial processes that are problematic to surrounding residences. However, according to the City's General Plan, the vision for the project area is to transition it into a dense and vibrant institutional area. The proposed project, which would introduce a new LACCD satellite campus to replace the existing SGEC, would comply with the General Plan's vision and could serve as an anchor to the revitalization of the surrounding community and future development.

The existing buildings on the project site are primarily industrial and largely inaccessible to the surrounding community. The UPRR right-of-way acts as a barrier between the residential community to the north and the project site. The residences are also separated by a fence and are oriented away from the project site. Therefore, the proposed project would not introduce any new boundaries or divisions into the community. On the contrary, the proposed project would enhance the pedestrian accessibility of the project site, and provide a new area for community members to gather, work, and learn. The proposed project would result in a land use that is compatible with the surrounding residences and community scale commercial development that front Santa Fe Avenue and Firestone Boulevard. Therefore, impacts related to land use compatibility would be less than significant.

Land Use Consistency

The proposed project would redevelop an area targeted for revitalization and would better utilize the existing facilities by providing for expanded and improved educational facilities consistent with the applicable regional plans and policies listed in **Table 4.6-1** above. Specifically, the proposed project incorporates a number of elements that would improve the pedestrian environment both on and adjacent to the project site, a policy specified in SCAG's RCP/SCS and Growth Vision Report. Such elements include new entrances to the project site from Santa Fe Avenue, walking paths across the campus, open space areas and amenities, and the signalization of intersections along Santa Fe Avenue and Firestone Boulevard. The proposed project would also use green development techniques such as the United States Green Building Council Leadership in Energy and Environmental Design-New Construction (LEED-NC) standards. The LEED-NC designation would implement strategies to use resources efficiently, eliminate pollution and significantly reduce waste through site design, water efficiency, energy, indoor air quality design strategies.

The proposed project would also include several components to minimize vehicular trips and promote alternative transportation modes. For example, the proposed project would increase the amount of education resources in the area and would, therefore, decrease the need for some students to commute to the ELAC campus, which is located over seven miles to the northeast of the project site. Also, the project site is identified as a bicycle hub in the City's General Plan, and the proposed project would provide bike racks and related amenities. In addition, the project site is located at the intersection of two major arterials, Santa Fe Avenue and Firestone Boulevard, and there are two bus stops providing service to the project site, one at Santa Fe Avenue and Firestone Boulevard and one at Ardmore and Santa Fe Avenues. The proposed project would improve accessibility to educational services for residents in the region, which is consistent with the policy of maximizing accessibility in the RTP/SCS. Therefore, the proposed project would be consistent with all of the applicable policies of the RTP/SCS.

While California Government Code Section 53094 includes provisions for school districts to exempt classroom facilities from local zoning regulations, the proposed project would be consistent with applicable local plans and policies. As discussed above, the project site is designated Mixed Commercial/Industrial and is located in Subarea 1 of the SGCD. The introduction of a full service institutional use would serve as an anchor to the revitalization of the surrounding community and future development, consistent with the City vision for the project area. Also, as discussed above, the City is in the process of updating its zoning code to reflect the vision, goals, objectives, and policies and development intensities established within the General Plan. Nonetheless, the proposed project remains zoned Heavy Manufacturing (M-3), which allows for high-intensity manufacturing uses, as well as lower-intensity manufacturing uses categorized under the Light Manufacturing (M-2) and Commercial Manufacturing (C-M) zones. Institutional land uses are permitted under all three of these industrial zones. The proposed project is also consistent with the City of South Gate Municipal Code in relation to height. The proposed building and parking structure would not exceed the maximum building height permitted in the Heavy Manufacturing (M-3) zone of seven stories, or 85 feet, whichever is less. The new building would be approximately 50 feet tall and be consistent with all applicable regional and local plans and policies. Therefore, impacts related to land use consistency would be less than significant.

Parking

Parking requirements for a satellite community college are not specifically defined in the South Gate Municipal Code; however, a parking accumulation survey was conducted at the existing SGEC to determine the proposed project's parking demand. There were 4,912 students enrolled at the existing SGEC at the time the parking survey was conducted. The results of the parking demand surveys are shown in **Table 4.6-2**. The derived parking demand indicates a parking demand ratio ranging from 0.06 to 0.08 spaces per school population.

Implementation of the proposed project would initially provide 700 surface parking spaces in the southern portion of the project site for approximately 5,000 students. This equates to a parking ratio of 0.14 spaces per school population. When student enrollment reaches a level that dictates the need for additional parking, the northern portion of the site would be improved with an additional 650 parking spaces for a total of 1,350 parking spaces for a maximum enrollment of 9,000 students. This equates to a parking ratio of 0.15 spaces per school population, or approximately twice the parking ratio derived from the parking accumulation survey conducted at the existing SGEC. Therefore, impacts related to parking would be less than significant.

TABLE 4.6-2: EXISTING SOUTH GATE EDUCATION CENTER PARKING ACCUMULATION SURVEY

	Parking Supply (No. of Spaces)	Monday		Tuesday		Wednesday	
		12PM - 1PM	6PM - 7PM	12PM - 1PM	6PM - 7PM	12PM - 1PM	6PM - 7PM
SOUTH GATE EDUCATIONAL CENTER PARKING							
Main Parking Lot	246	199	229	141	222	204	234
Remote West Lot	28	11	13	10	21	22	24
Remote East Lot	127	1	47	4	57	8	73
Subtotal	**401**	**211**	**289**	**155**	**300**	234	**331**
CALDEN AVENUE STREET PARKING							
West Side	50	42	48	26	48	0	49
East Side	46	40	0	0	0	37	0
Subtotal	**96**	**82**	**48**	**26**	**48**	**37**	**49**

SOURCE: Based on parking accumulation surveys conducted by Linscott, Law & Greenspan, Engineers on Monday, November, 5, 2012, Tuesday, November 6, 2012, and Wednesday, November 7, 2012. The survey time periods coincide with peak student attendance which occurred between 10:00 a.m. to 1:00 p.m. and 4:00 p.m. to 7:00 p.m.

Building 2, which was most recently occupied by the Los Angeles Unified School District (LAUSD) South Gate Community Adult School, is currently vacant although a portion of the building is currently being used by LACCD for storage. However, there are an additional 89 parking spaces available for a future tenant within Building 2. Accordingly, with implementation of the proposed project, a sufficient number of parking spaces would be provided on-site to accommodate parking demand created by the proposed project and a future tenant within Building 2.

Habitat Conservation Plans

As described above, the project site is not within any Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, no impacts related to habitat conservation plans would occur.

CUMULATIVE IMPACTS

Based on information available regarding the related projects, it is reasonable to assume that the related projects would implement and support local and regional planning goals and policies. It is expected that the related projects would be compatible with the zoning and land use designations for each of the related project sites and their surrounding properties. However, potential land use and planning impacts would be evaluated on a project-by-project basis to ensure the related projects and any change in land uses would be consistent with the surrounding land uses and applicable goals and policies for the area. The proposed project is consistent with the project site's zoning and General Plan designation and would not conflict with applicable land use plans and policies. Therefore, impacts related to land use and planning would not be cumulatively considerable.

MITIGATION MEASURES

CONSTRUCTION

No impacts related to land use and planning would occur. No mitigation measures are required.

OPERATIONS

Impacts related to land use compatibility, land use consistency, parking and habitat conservation plans would be less than significant. No mitigation measures are required.

SIGNIFICANCE OF IMPACTS AFTER MITIGATION

CONSTRUCTION

No impacts related to land use and planning would occur.

OPERATIONS

Impacts related to land use compatibility, land use consistency, parking and habitat conservation plans would be less than significant without mitigation.

4.7 NOISE AND VIBRATION

This section provides an overview of noise and vibration levels and evaluates the construction and operational impacts associated with the 2015 South Gate Educational Center Master Plan (proposed project). Topics addressed include short-term construction and long-term operational noise and vibration. The following background information provides noise and vibration characteristics and effects. Supporting data and calculation worksheets are included in Appendix D this Supplemental Draft EIR.

Noise Characteristics and Effects

Characteristics of Sound. Sound is technically described in terms of the loudness (amplitude) and frequency (pitch) of the sound. The standard unit of measurement for sound is the decibel (dB). The human ear is not equally sensitive to sound at all frequencies. The "A-weighted scale," abbreviated dBA, reflects the normal hearing sensitivity range of the human ear. On this scale, the range of human hearing extends from approximately 3 to 140 dBA. **Figure 4.7-1** provides examples of A-weighted noise levels from common sounds.

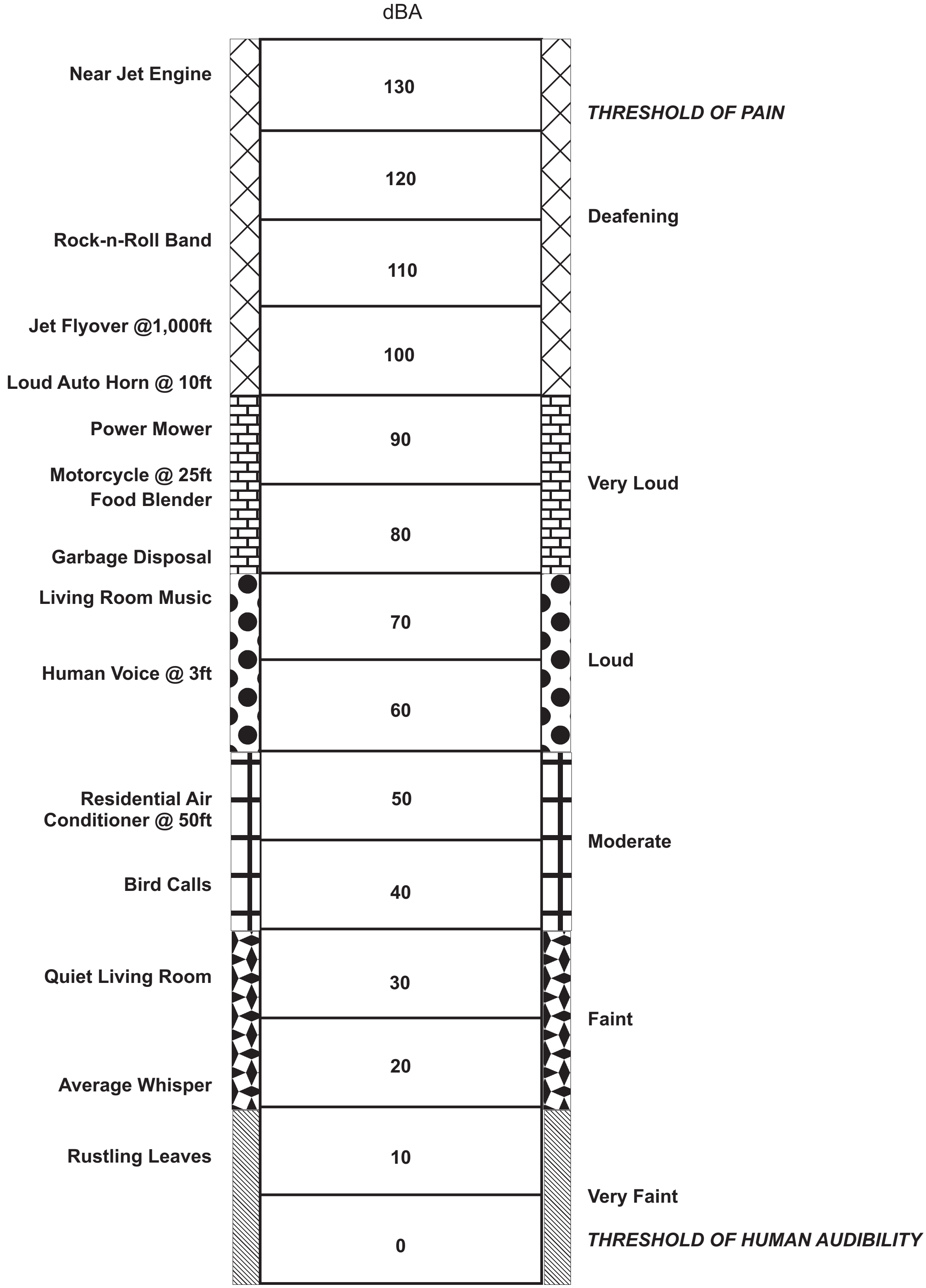
Noise Definitions. This noise analysis discusses sound levels in terms of Community Noise Equivalent Level (CNEL) and Equivalent Noise Level (L_{eq}).

Community Noise Equivalent Level (CNEL). CNEL is an average sound level during a 24-hour period. CNEL is a noise measurement scale, which accounts for the noise source, distance, single event duration, single event occurrence, frequency, and time of day. Human reaction to sound between 7:00 p.m. and 10:00 p.m. is as if the sound were actually 5 dBA higher than if it occurred from 7:00 a.m. to 7:00 p.m. From 10:00 p.m. to 7:00 a.m., humans perceive sound as if it were 10 dBA higher due to the lower background level. Hence, the CNEL is obtained by adding an additional 5 dBA to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and 10 dBA to sound levels in the night from 10:00 p.m. to 7:00 a.m. Because CNEL accounts for human sensitivity to sound, the CNEL 24-hour figure is always a higher number than the actual 24-hour average.

Equivalent Noise Level (L_{eq}). L_{eq} is the average noise level on an energy basis for any specific time period. The L_{eq} for 1-hour is the energy average noise level during the hour. The average noise level is based on the energy content (acoustic energy) of the sound. L_{eq} can be thought of as the level of a continuous noise which has the same energy content as the fluctuating noise level. The equivalent noise level is expressed in units of dBA.

Effects of Noise. Noise is generally defined as unwanted sound. The degree to which noise can impact the human environment range from levels that interfere with speech and sleep (annoyance and nuisance) to levels that cause adverse health effects (hearing loss and psychological effects). Human response to noise is subjective and can vary greatly from person to person. Factors that influence individual response include the intensity, frequency, and pattern of noise, the amount of background noise present before the intruding noise, and the nature of work or human activity that is exposed to the noise source.

Audible Noise Changes. Studies have shown that the smallest perceptible change in sound level for a person with normal hearing sensitivity is approximately 3 dBA. A change of at least 5 dBA would be noticeable and would likely evoke a community reaction. A 10-dBA increase is subjectively heard as a doubling in loudness and would cause a community response. Noise levels decrease as the distance from the noise source to the receiver increases. Noise generated by a stationary noise source, or "point source," will decrease by approximately 6 dBA over hard surfaces (e.g., pavement) and 7.5 dBA over soft surfaces (e.g., grass) for each doubling of the distance. For example, if a noise source produces a noise level of 89 dBA at a reference distance of 50 feet, then the noise level would be 83 dBA at a distance of 100 feet from the noise source, 77 dBA at a distance of 200 feet, and so on. Noise generated by a mobile source will decrease by approximately 3 dBA over hard surfaces and 4.5 dBA over soft surfaces for each doubling of the distance.



SOURCE: Cowan, James P., *Handbook of Environmental Acoustics.*

FIGURE 4.7-1

A-WEIGHTED DECIBEL SCALE

Vibration Characteristics and Effects

Characteristics of Vibration. Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration can be a serious concern, causing buildings to shake and rumbling sounds to be heard. In contrast to noise, vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of vibration are trains and construction activities, such as blasting, pile driving, pile drilling, and heavy earth-moving equipment.

Vibration Definitions. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings and is usually measured in inches per second. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (Vdb) is commonly used to measure RMS. The Vdb acts to compress the range of numbers required to describe vibration.

Effects of Vibration. High levels of vibration may cause physical personal injury or damage to buildings. However, vibration levels rarely affect human health. Instead, most people consider vibration to be an annoyance that can affect concentration or disturb sleep. In addition, high levels of vibration can damage fragile buildings or interfere with equipment that is highly sensitive to vibration (e.g., electron microscopes).

Perceptible Vibration Changes. In contrast to noise, ground vibration is not a phenomenon that most people experience every day. The background vibration velocity level in residential areas is usually 50 RMS or lower, well below the threshold of perception for humans which is around 65 RMS.[1] Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible ground vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If the roadway is smooth, the vibration from traffic is rarely perceptible.

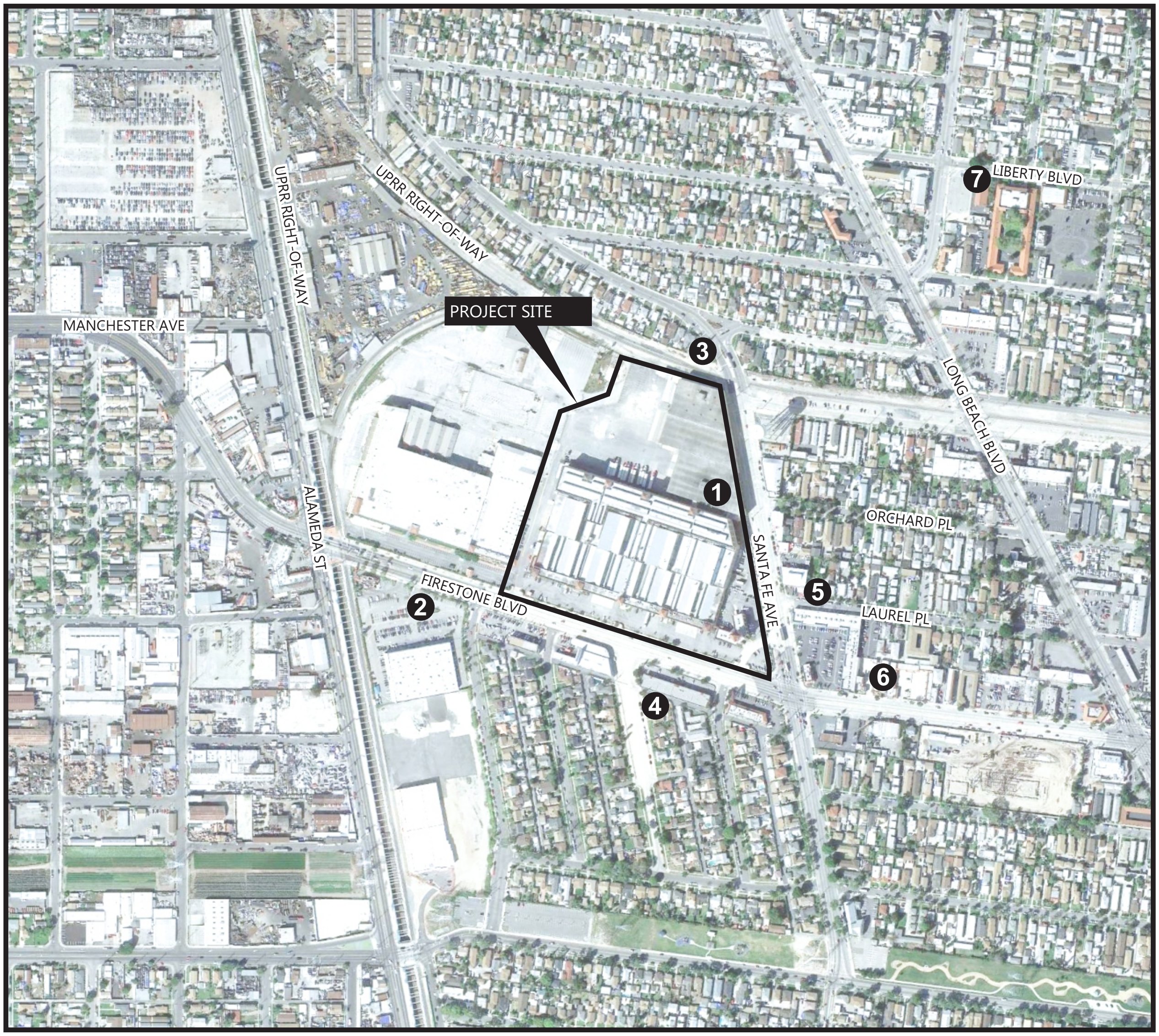
EXISTING SETTING

Noise

Based on field observation, the existing noise environment in the vicinity of the project area is controlled primarily vehicular traffic on local roadways, and to a lesser extent by occasional aircraft flyovers, and other typical urban noise. Ambient noise measurements were taken using a SoundPro DL Sound Level Meter between 11:15 a.m. and 2:10 p.m. on February 7, 2013 to determine existing ambient daytime off-peak noise levels in the project vicinity. As discussed in Section 4.13 Transportation and Traffic, traffic volumes have not significantly changed in the project area since 2013. Therefore, the 2013 readings remain valid for establishing existing conditions. These noise levels are used to provide a baseline for evaluating construction and operational noise impacts. Noise monitoring locations are shown in **Figure 4.7-2**. As shown in **Table 4.7-1**, existing ambient sound levels range between 56.6 and 69.5 dBA L_{eq}.

In addition to the ambient noise measurements, the existing traffic noise on local roadways in the surrounding area near the proposed project site was calculated. Using existing traffic volumes provided by the project traffic consultant and the Federal Highway Administration (FHWA) RD-77-108 noise calculation formulas, the CNEL was calculated for various roadway segments near the project site. Existing mobile noise levels are shown in **Table 4.7-2**. Mobile noise levels in the project area range from 68.3 to 71.3 dBA CNEL. Modeled vehicle noise levels are typically lower than the noise measurements along similar roadway segments as modeled noise levels do not take into account additional noise sources (e.g., sirens, horns, helicopters, etc.).

[1]FTA, *Transit Noise and Vibration Impact Assessment*, May 2006.



LEGEND:

Project Site

Noise Monitoring Locations

1. Proposed Firestone Education Center
2. ELAC South Gate Educational Center - 2340 Firestone Boulevard
3. Single-Family Residence - 8569 Santa Fe Avenue
4. Single-Family Residence - 8822 Firestone Plaza
5. Single-Family Residence - 2709 Laurel Place
6. Mirage Inn - 2724 Firestone Boulevard
7. Liberty Boulevard Elementary School - 2727 Liberty Boulevard

Approx. Scale

0 300 600 Feet

N

SOURCE: TAHA, 2016.

FIGURE 4.7-2

NOISE MONITORING LOCATIONS

TABLE 4.7-1: EXISTING NOISE LEVELS		
Key to Figure 4.7-2	Noise Monitoring Location	Sound Level (dBA, L_{eq})
1	Proposed Firestone Education Center	68.8
2	ELAC South Gate Educational Center	68.1
3	Single-Family Residences - 8569 Santa Fe Ave.	64.9
4	Single-Family Residences - 8822 Firestone Plaza	57.3
5	Single-Family Residences - 2709 Laurel Pl.	56.6
6	Mirage Inn - 2724 Firestone Blvd.	69.5
7	Liberty Boulevard Elementary School	57.6
SOURCE: TAHA, 2015.		

TABLE 4.7-2: EXISTING MOBILE SOURCE NOISE LEVELS	
Roadway Segment	Estimated CNEL (dBA)
Santa Fe Ave. from Ardmore Ave. to Orchard Pl.	68.4
Santa Fe Ave. from Orchard Pl. to Firestone Blvd.	67.8
Firestone Blvd. from Calden Ave. to Truba Ave.	68.8
Firestone Blvd. from Truba Ave. to Long Beach Blvd.	71.1
SOURCE: TAHA, 2015.	

Vibration

Similar to the environmental setting for noise, the vibration environment is dominated by traffic from nearby roadways. Heavy trucks can generate vibrations that depends on vehicle type, weight, and pavement conditions. As heavy trucks typically operate on major streets, existing vibration in the project vicinity is largely related to heavy truck traffic on the surrounding roadway network. Field observations indicate that truck vibration levels from adjacent roadways are not perceptible at the project site.

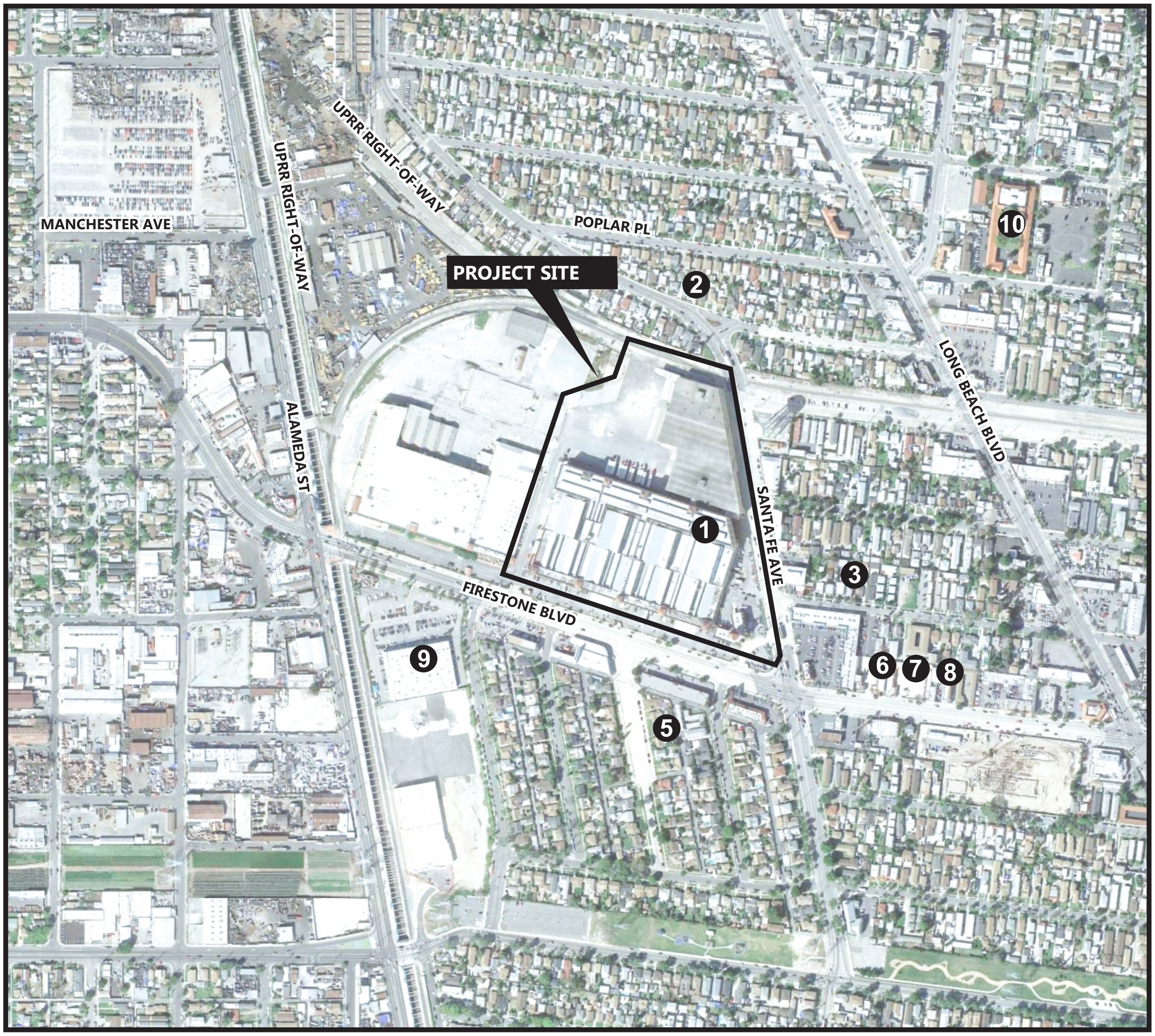
Sensitive Receptors

Noise- and vibration-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise- and vibration-sensitive and may warrant unique measures for protection from intruding noise. Sensitive receptors near the project site are shown in **Figure 4.7-3** and include the following:

- Single- and multi-family residences located approximately 100 to the north
- Single-family residences located approximately 200 to the east
- Redeemer Lutheran Church and School located approximately 770 feet to the northeast
- Single-family residences located approximately 795 to the south
- Mirage Inn located approximately 800 feet to the southeast
- Sunrise Inn located approximately 810 feet to the southeast
- South Gate Educational Center located approximately 910 feet to the southwest
- Plaza Motel located approximately 1,010 feet to the southeast
- Liberty Boulevard Elementary School located approximately 1,170 feet to the northeast

The above sensitive receptors represent the nearest sensitive receptors to the site with the potential to be impacted by the proposed project. Additional sensitive receptors are located further from the project site in the surrounding community and would be less affected by the proposed project than the above sensitive receptors.

In addition to the off-site sensitive receptors, the planned educational facility is a land use sensitive to high noise levels.



LEGEND:

Project Site

Noise Sensitive Receptors

1. Proposed Firestone Education Center
2. Single-Family Residences Located to the North
3. Single-Family Residences Located to the East
4. Redeemer Lutheran Church
5. Single-Family Residences Located to the South
6. Mirage Inn
7. Sunrise Inn
8. Plaza Motel
9. South Gate Educational Center
10. Liberty Boulevard Elementary School

Approx. Scale

0 300 600 Feet

SOURCE: TAHA, 2016.

taha

taha 2014-075

2015 South Gate Educational Center Master Plan
Supplemental Draft Environmental Impact Report

LOS ANGELES COMMUNITY COLLEGE DISTRICT

FIGURE 4.7-3

NOISE SENSITIVE RECEPTOR LOCATIONS

REGULATORY FRAMEWORK

Noise

Los Angeles Community College District (LACCD). The Baseline Design Goals and Standards state that,

> *"[C]lassrooms should be spaces where listening conditions are excellent so that students can learn. Three factors are important in achieving a good listening environment. The first is correct room acoustics, specifically avoiding the speech-blurring effects of reverberation. The second is good isolation of sounds from elsewhere, so as to avoid distraction from competing conversations in adjacent classrooms or interfering sound from street or air traffic. The third factor is adequately low levels of background sound from heating and ventilation systems equipment. Especially for students farthest from the teacher, ventilation-system noise often masks the intelligibility of the spoken word. All three factors are addressed in good classroom designs.*
>
> *Speech intelligibility, critical for an effective presentation, is directly related to the acoustics of the room and the Noise Criteria (NC) rating (background noise in the room). The best sound system cannot improve upon poor acoustics so it is essential to start with a relatively quiet room and good acoustics. LACCD has established an NC 25 A-weighted for new construction and an NC 30 A-weighted for renovations."*

An NC rating of 25 is equivalent to 35 dBA and an NC rating of 30 is equivalent to 40 dBA.

City of South Gate Municipal Code (SGMC). The City of South Gate maintains a comprehensive Noise Ordinance within its SGMC that establishes interior and exterior noise level standards. The City has adopted a number of policies that are directed at controlling or mitigating environmental noise effects. The City's Noise Ordinance (SGMC Chapter 11.29, Noise Emissions) establishes the daytime and nighttime noise standards shown in **Table 4.7-3**. The Ordinance is designed to control unnecessary, excessive, and annoying sounds generated from a stationary source impacting an adjacent property. It differentiates between environmental and nuisance noise. Environmental noise is measured under a time average period while nuisance noise cannot exceed the established Noise Ordinance levels at any time. Chapter 11.29.160 (Maximum permissible sound levels by receiving land use) prohibits any person within the City to make, cause, or allow noise that is in excess of the specified levels presented in **Table 4.7-3**, except as expressly provided otherwise. At the boundary line between a residential property and a commercial and manufacturing property, the noise level of the quieter zone is required to be used.

TABLE 4.7-3: SOUTH GATE NOISE ORDINANCE STANDARDS

	Noise Standards	
Noise Zone	**Noise Level (dBA) /a, b/**	**Time Period**
Noise Sensitive Area	45	Anytime
Residential Properties	50	7:00 a.m. – 10:00 p.m.
	40	10:00 p.m. – 7:00 a.m.
Commercial Properties	55	Anytime
Industrial Properties	65	Anytime

/a/ As directed in the Code, the exterior noise limit is the higher of the values shown in the table or the actual measured ambient noise level (adjusted by the duration correction adjustment shown in the footnote 2), when measured at the property boundary of land occupied by human beings at the time of the noise emission.
/b/ The sound level limits are for sound which lasts longer than 30 minutes in a one-hour period. The time duration allowances shown below shall be added to the limit levels above, for sound levels lasting less than one hour.

Duration (less than)	Allowance
30 min/hour	+3 dBA
15 min/hour	+6 dBA
10 min/hour	+8 dBA
5 min/hour	+11 dBA

SOURCE: City of South Gate Municipal Code, website *http://www.codepublishing.com/CA/southgate/*, accessed November 26, 2013.

City of South Gate General Plan Noise Element (Noise Element). The Noise Element examines noise sources in the City with a view toward identifying and appraising the potential for noise conflicts and problems and identifies ways to reduce existing and potential noise impacts. The Noise Element addresses noise that affects the community at large, rather than noise associated with site-specific conditions. California Government Code Section 53094 includes provisions for school districts to exempt classroom facilities from local zoning regulations. Objectives and policies of the City of South Gate General Plan related to noise and vibration are identified in **Table 4.7-4**.

The State of California has adopted noise standards in areas of regulation not preempted by the federal government. State standards regulate noise levels of motor vehicles, sound transmission through buildings, occupational noise control, and noise insulation. The California Department of Health Services exterior standards related to land use and noise compatibility. **Table 4.7-5** is the primary tool that allows the City to ensure integrated planning for compatibility between land uses and outdoor noise.

The Noise Element states that, "[T]he City of South Gate does not have a significance threshold to assess noise impacts during construction for CEQA determinations of noise impacts. Construction noise is a short-term temporary event, occurs mostly during daytime hours (such as 6:00 a.m. to 3:00 p.m.), and is considered a common necessity for new development. Notwithstanding, it was decided that a significant impact would occur if construction activities were to exceed the noise standards expressed in the City's Noise Ordinance, 5 dBA above the ambient noise levels or the City's noise limits for the adjacent land use category, whichever is greater. The City of South Gate Department of Building and Safety enforces noise ordinance provisions relative to equipment, and the Police Department enforces provisions relative to noise generated by people."

Vibration

Los Angeles Community College District (LACCD). LACCD has not established vibration standards.

City of South Gate Municipal Code (SGMC). Chapter 11.29.180 (Specific prohibitions) of the SGMC prohibits the operation of any device that creates a vibration which is above the vibration perception threshold of an individual situated on adjacent or abutting property which is zoned for any use other than manufacturing. The vibration perception threshold shall be deemed to be a motion velocity of 0.01 inches per second over a range of 1 to 100 Hertz. This standard is relevant to operational vibration.

Federal Transit Administration (FTA). Although not directly related to the proposed project, the FTA has published guidance for assessing impacts from vibration. According to the FTA, engineered timber and masonry buildings (no plaster) can be exposed to ground-borne vibration levels of 0.3 inches per second without experiencing structural damage.[2] Building extremely susceptible to vibration damage (e.g., historic buildings) can be exposed to ground-borne vibration levels of 0.12 inches per second without experiencing structural damage.

[2]Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

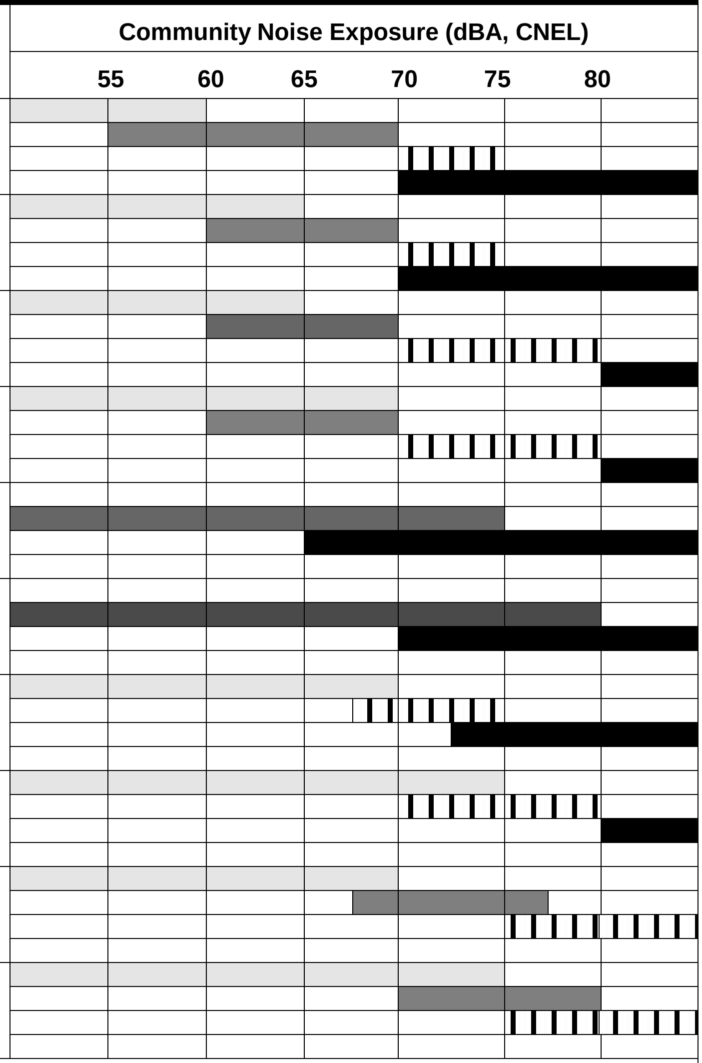
TABLE 4.7-4: APPLICABLE GENERAL PLAN OBJECTIVES AND POLICIES RELATED TO NOISE AND VIBRATION

Objective/Policy	Objective/Policy Description
NOISE ELEMENT	
Objective N1.1	Minimize noise levels from construction and maintenance equipment, vehicles, and activities.
Policy P.1	Construction activities will be prohibited between the hours of 7:00 p.m. to 8:00 a.m. Monday through Saturday and on Sundays and Federal holidays.
Policy P.2	Construction noise reduction methods will be employed to the maximum extent feasible. These measures may include, but not limited to, shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied sensitive receptor areas, and use of electric air compressors and similar power tools, rather than diesel equipment.
Policy P.3	Prior to approval of project plans and specifications by the City, project applicants and/or construction contractors will identify construction equipment and noise reducing measures, and the anticipated noise reduction.
Object N 2.1	Ensure noise impacts are considered in land use planning decisions.
Policy P.1	The City will adhere to the noise standards identified in Table 4.9-3.
Policy P.2	The City will incorporate noise considerations into land use planning decisions and future City land use plans by establishing acceptable limits of noise for various land uses throughout the community.
Policy P.3	The City should fully integrate noise considerations into land use planning decisions to prevent new noise/land use conflicts.
Policy P.4	The City will require that acoustical analysis be incorporated into the environmental review process for the purposes of identifying potential noise impacts and noise abatement procedures.
Policy P.6	The City will require that all new non-residential development will demonstrate that ambient noise levels will not exceed an exterior noise level of 65 dBA CNEL.
Policy P.7	New development projects will provide buffers and/or appropriate mitigation measures to reduce potential noise sources on noise-sensitive land uses.
Policy P.8	The City should avoid locating noise-sensitive land uses in existing and future noise-impacted areas.
Policy P.9	The City will work to ensure acceptable noise levels are maintained near residential areas, schools, hospitals, convalescent homes, churches, and other noise sensitive areas.
Objective N 3.1	Improve ambient noise conditions in sensitive land use areas.
Policy P.1	The City will identify and work with property owners to reduce or eliminate excessive or loud noise near noise sensitive areas to meet the noise standards in the SGMC.
Policy P.3	The City should encourage the use of noise absorbing materials in existing and future development to reduce interior noise impacts to sensitive land uses.
Objective N 3.3	Minimize noise impacts on residential or other noise-sensitive land uses located adjacent to non-residential uses.
Policy P.1	Truck deliveries to non-residential uses abutting residential or noise sensitive uses will be limited to the hours between 7:00 a.m. and 10:00 p.m.
Policy P.2	New non-residential projects adjacent to residential uses will be required to incorporate noise reducing features into the project design to minimize impacts to nearby residential uses and other noise sensitive land uses.
Policy P.5	New buildings being developed adjacent to existing and/or planned residential uses or other noise-sensitive land uses will be required to site and operate heating, ventilating, and air conditioning generators in a manner that limits adverse noise impacts to the greatest extent feasible.
Policy P.6	Wherever feasible, parking areas for new or redeveloped non-residential uses should be buffered and shielded by, but not limited to, walls, fences, and/or adequate landscaping.
Policy P.7	The City should encourage existing noise sensitive uses, including schools, libraries, health care facilities, and residential uses in areas where existing or future noise levels exceed 65 dBA CNEL to incorporate fences, walls, landscaping, and/or other noise buffers and barriers, where appropriate and feasible.
Policy P.8	The City should encourage school districts or other educational facilities to locate outdoor activity areas, such as play grounds and sport fields, away from residential areas.

SOURCE: City of South Gate, *South Gate General Plan 2035.*

TABLE 4.7-5: LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS

Land Use Category
Residential - Low Density Single-Family, Duplex, Mobile Homes
Residential - Multi-Family
Transient Lodging - Motels, Hotels
Schools, Libraries, Churches, Hospitals, Nursing Homes
Auditoriums, Concert Halls, Amphitheaters
Sports Arena, Outdoor Spectator Sports
Playgrounds, Neighborhood Parks
Golf Courses, Riding Stables, Water Recreation, Cemeteries
Office Buildings, Business Commercial and Professional
Industrial, Manufacturing, Utilities, Agriculture



Normally Acceptable - Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Conditionally Acceptable - New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply system or air conditionally will normally suffice.

Normally Unacceptable - New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable - New construction or development should generally not be undertaken.

SOURCE: State of California, Office of Planning and Research, *General Plan Guidelines*, October 2003.

THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the State CEQA Guidelines, the proposed project would have a significant impact related to noise and vibration if it would:

- Create levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, or result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- Expose people to or generate excessive ground-borne vibration or ground-borne noise levels;
- Create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; and/or
- Create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

The City of South Gate has not established quantitative significance thresholds to determine construction and operational noise impact. However, based on the Noise Element of the City of South Gate General Plan for construction noise and the typical community response to increased noise levels, the following specific significant thresholds are relevant to the proposed project.

Construction Noise. The proposed project would have a significant impact related to construction activity if:

- Construction activities would exceed the ambient noise level by 5 dBA L_{eq} or more at a noise sensitive use.

Operational Noise. The proposed project would have a significant impact related to operational activity if:

- Classroom interior noise levels exceed 35 dBA L_{eq}; and/or
- Operational activity increases ambient noise levels of 5 dBA L_{eq} or more at a noise sensitive use.

Construction Vibration. The proposed project would have a significant impact related to vibration if:

- Engineered timber and masonry buildings would be exposed to vibration levels that exceed 0.3 inches per second PPV; and/or
- Historic buildings would be exposed to vibration levels that exceed 0.12 inches per second.

Operational Vibration. The proposed project would have a significant impact related to vibration if:

- The proposed project would expose individuals situated on adjacent or abutting property, which is zoned for any use other than manufacturing, to a vibration level of 0.01 inches per second.

IMPACTS

METHODOLOGY

The noise and vibration analysis considers construction and operational sources. The noise level during the construction period at each receptor location was calculated by (1) making a distance adjustment to the construction source sound level and (2) logarithmically adding the adjusted construction noise source level to the ambient noise level. The noise level (i.e., mobile noise source) during the operational period was calculated using FHWA RD-77-108 noise calculation formulas. Construction vibration levels are estimated using equipment reference levels and propagation formulas provide by the FTA. Operational vibration is qualitatively discussed based on guidance in the FTA Transit Noise and Vibration Impact Assessment.

CONSTRUCTION

Noise

Construction of the proposed project would result in temporary increases in ambient noise levels in the project area on an intermittent basis depending on the construction phase and associated equipment. The increase in noise levels would likely result in a temporary annoyance to nearby sensitive receptors during the construction period. Noise levels would fluctuate depending on the construction phase, equipment type and duration of use, distance between the noise source and receptor, and presence or absence of noise attenuation barriers.

Construction activities typically require the simultaneous use of numerous pieces of noise-generating equipment. Typical noise levels from various types of equipment that may be used during construction are listed in **Table 4.7-6**. The table shows noise levels at distances of 50 and 100 feet from the construction noise source.

TABLE 4.7-6: MAXIMUM NOISE LEVELS OF COMMON CONSTRUCTION MACHINES

	Noise Level (dBA)	
Noise Source	**50 Feet /a/**	**100 Feet /a/**
Front Loader	80	74
Trucks	89	83
Cranes (derrick)	88	82
Jackhammers	90	84
Generators	77	71
Back Hoe	84	78
Tractor	88	82
Scraper/Grader	87	81
Paver	87	81
Impact Pile Driving	101	95
Auger Drilling	77	71

/a/ Assumes a 6-dBA drop-off rate for noise generated by a "point source" and traveling over hard surfaces. Actual measured noise levels of the equipment listed in this table were taken at distances of ten and 30 feet from the noise source.
SOURCE: USEPA, *Noise from Construction Equipment and Operations, Building Equipment and Home Appliances*, PB 206717, 1971.

The noise levels shown in **Table 4.7-7** take into account the likelihood that more than 1 piece of construction equipment would be in operation at the same time and lists the typical overall noise levels that would be expected for each phase of construction. The highest noise levels are expected to occur during the grading/excavation and finishing phases of construction. A typical piece of noisy equipment is assumed to be active for 40 percent of the 8-hour workday (consistent with the USEPA studies of construction noise), generating a noise level of 89 dBA Leq at a reference distance of 50 feet.

TABLE 4.7-7: OUTDOOR CONSTRUCTION NOISE LEVELS

Construction Phase	Noise Level At 50 Feet (dBA)
Ground Clearing	84
Grading/Excavation	89
Foundations	78
Structural	85
Finishing	89

SOURCE: USEPA, *Noise from Construction Equipment and Operations, Building Equipment and Home Appliances*, PB 206717, 1971.

Table 4.7-8 presents the estimated noise levels at a representative sample of sensitive receptors based on a noise source of 89 dBA L_{eq}. Typical construction activity using multiple pieces of equipment would increase in ambient noise levels of 18.1 dBA and 15.5 L_{eq} at the single- and multi-family residences to the north and single-family residences to the east, respectively. Construction noise levels would exceed the 5-dBA significance threshold at residential land uses north and east of the project site. Therefore, without mitigation, the proposed project would result in a significant impact related to construction noise.

TABLE 4.7-8: CONSTRUCTION NOISE LEVELS - UNMITIGATED

Sensitive Receptor	Distance (feet) /a/	Maximum Construction Noise Level (dBA) /b/	Existing Ambient Noise Level (dBA, L_{eq}) /c/	New Ambient Noise Level (dBA, Leq) /d/	Increase /e/
Single- and Multi-Family Residences to the North of the Project Site	100	83.0	64.9	83.0	**18.1**
Single-Family Residences to the East of the Project Site	200	72.0	56.6	72.1	**15.5**
Redeemer Lutheran Church and School	770	45.2	57.6	57.8	0.2
Single-Family Residences to the South of the Project Site	795	45.0	57.3	57.5	0.2
Mirage Inn	802	44.9	69.5	69.5	0.0
Sunrise Inn	810	44.8	69.5	69.5	0.0
South Gate Educational Center	911	43.8	68.1	68.1	0.0
Plaza Motel	1,010	42.9	69.5	69.5	0.0
Liberty Boulevard Elementary School	1,165	41.7	57.6	57.7	0.1

/a/ Distance of noise source from receptor.
/b/ Construction noise source's sound level at receptor location, with distance and building adjustment.
/c/ Pre-construction activity ambient sound level at receptor location.
/d/ New sound level at receptor location during the construction period, including noise from construction activity.
/e/ An incremental noise level increase of 5 dBA or more would result in a significant impact.
SOURCE: TAHA, 2015.

Vibration

Construction activity can generate varying degrees of vibration, depending on the construction procedure and the construction equipment used. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of a construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels.

In most cases, the primary concern regarding construction vibration relates to damage. Activities that can result in damage include demolition and drilling in close proximity to sensitive structures. Typical vibration levels associated with construction equipment are provided in **Table 4.7-9**. Heavy equipment (e.g., a large bulldozer) generates vibration levels of 0.089 inches per second at a distance of 25 feet.

TABLE 4.7-9: VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT

Equipment	PPV at 25 feet (Inches/Second)
Caisson Drilling	0.089
Large Bulldozer	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer	0.003

SOURCE: FTA, *Transit Noise and Vibration Impact Assessment*, May 2006.

The nearest residential structure to the proposed project site would be approximately 100 feet to the north. The maximum vibration level at this distance would be 0.011 inches per second PPV. Construction vibration would not exceed the 0.3 inches per second PPV damage threshold at any residential structure surrounding the proposed project site. Therefore, the proposed project would result in a less-than-significant impact related to construction vibration at nearby residences.

Building 2 and the HON buildings are eligible for listing in the California Register. **Table 4.7-10** presents the estimated vibration levels related to building damage at the identified historic buildings. It is not anticipated that construction-related vibration at the HON buildings would exceed the 0.12 inches per second damage threshold for building extremely susceptible to building damage. The proposed project includes demolition of a bridge attached to Building 2 and a new steel landing for the building. Construction equipment would be located adjacent to Building 2, and activity within 20 feet of the building would potentially exceed the 0.12 inches per second damage threshold. Building 2 warrants protection from construction vibration due the historic designation. Therefore, without mitigation, the proposed project would result in a significant impact related to construction vibration.

TABLE 4.7-10: CONSTRUCTION VIBRATION

Sensitive Receptor	Distance (Feet)	PPV (Inches/Second)
Building 2	20	0.124
HON Buildings	75	0.011
SOURCE: TAHA, 2015.		

OPERATIONS

Noise

Mobile Source Noise. The proposed project would generate new vehicle trips to and from the site associated with the 9,000-student anticipated to enroll at the proposed SGEC. The proposed project would generate 2,780 net new trips per weekday. To ascertain mobile noise impacts, future roadway noise levels were calculated based upon the proximity to noise sensitive uses and with the most increases in traffic volume from the proposed project to represent the worst case conditions. Results of the analysis are summarized in **Table 4.7-11**. Under Existing With Proposed Project conditions, the greatest project-related noise increase would be 0.4 dBA CNEL and would occur along Santa Fe Avenue between Orchard Place and Firestone Boulevard. Under Future With Proposed Project conditions, the greatest project-related noise increase would be 1.1 dBA CNEL and would occur along two roadway segments: Santa Fe Avenue between Ardmore Avenue and Orchard Place and Santa Fe Avenue between Orchard Place and Firestone Boulevard. The roadway noise increase attributed to the proposed project would be less than 3-dBA CNEL under both of the analyzed scenarios for all roadway segments. As a result, traffic activity would not audibly increase noise levels. Therefore, the proposed project would result in a less-than-significant impact related to mobile noise.

TABLE 4.7-11: MOBILE SOURCE NOISE

	Estimated dBA, CNEL					
Roadway Segment	Existing	Existing With Project	Increase	Future Without Project	Future With Project	Increase
Santa Fe Ave. from Ardmore Ave. to Orchard Pl.	68.4	68.5	0.1	69.1	69.3	0.2
Santa Fe Ave. from Orchard Pl. to Firestone Blvd.	67.8	68.2	0.4	67.8	68.9	1.1
Firestone Blvd. from Calden Ave. to Truba Ave.	68.8	68.6	-0.2	70.0	69.8	-0.2
Firestone Blvd. from Truba Ave. to Long Beach Blvd.	71.1	71.1	0.0	72.3	72.3	0.0
SOURCE: TAHA, 2015.						

Parking Noise. Noise sources associated with parking includes car alarms, car horns, slamming of car doors, engine revs, and tire squeals. Instantaneous noise events such as car alarm and horn noise would generate sound levels as high as 83 dBA at a distance of 25 feet and would be audible at sensitive receptors located north of the project site. However, car alarm and horn noise would be short-term and intermittent. Automobile movements would comprise the most continuous noise source. Automobile movements would generate a noise level of approximately 58.1 dBA L_{eq} at a distance of 50 feet.[3] The greatest parking-related noise increase would be 0.2 dBA L_{eq} and would occur at the nearest residential structure located approximately 100 feet to the north. The parking-related noise increase attributed to the proposed project would be less than 5 dBA L_{eq} increment at all sensitive receptors within close proximity to the proposed parking structure. Therefore, the proposed project would result in a less-than-significant impact related to parking structure activity.

Outdoor Activity. The proposed project would include a large open space area at the center of the campus developed as a place for students to gather. The open space area would include active and passive recreation space, amenities for performances and ceremonies, public art, and greenery and shade. The open space area would not include unusually loud sources of noise and would be located central to the project site. The open space area would be screened from the view of sensitive receptors by the new building. Based on the passive land uses associated with the open space area and the central location, open space area-related activity would generate noise levels less than 5 dBA and would not be audible at nearby residences. Therefore, the proposed project would result in a less-than-significant impacts related to outdoor activity noise.

Mechanical Equipment. The proposed project would require building mechanical equipment (e.g., HVAC equipment). The mechanical equipment would be located on the rooftop of the southern portion of the new building. Mechanical equipment (e.g., HVAC equipment) typically generates noise levels of approximately 60 dBA L_{eq} at 50 feet. The nearest residential land uses is located approximate 300 feet to the east of the mechanical equipment operation. The nearest residences would experience a mechanical equipment-related noise level of 61.7 dBA L_{eq}, which is an increase of 0.1 dBA L_{eq} from the ambient noise level. This incremental noise level increase would not be audible at the nearest residential land uses and would be less than the 5-dBA significance threshold. Therefore, the proposed project would result in a less-than-significant impacts related to mechanical equipment noise.

Land Use Compatibility/Interior Noise Levels. The proposed project would include new classroom facilities on the project site. It is important that new school land uses are located in noise compatible environments and comply with LACCD requirement of 35 dBA L_{eq} interior noise level for classrooms. Classroom activities at the new building has the potential to be disrupted by vehicular traffic along Santa Fe Avenue. The existing ambient noise level near the project site is 68.8 dBA L_{eq}. Typical building construction (e.g., single-glazed windows) provide a minimum noise reduction of approximately 24 dBA.[4] The interior noise levels at the classroom would be 44.8 dBA L_{eq}, and would exceed the 35 dBA L_{eq} significance threshold. However, it is LACCD policy that classrooms are constructed such that interior noise levels do not exceed a Noise Criteria rating of 25 (equivalent to 35 dBA L_{eq}). Construction techniques implemented by LACCD (i.e., double-paned windows) would provide a noise reduction approximately up to 44 dBA.[5] Implementation of noise reducing components will ensure that classroom noise levels do not exceed 35 dBA L_{eq}. Therefore, the proposed project would result in less-than-significant impacts related to land use compatibility.

A 35-foot wide driveway separates the project site from the HON site immediately west of the project site. The HON site was most recently utilized as a furniture manufacturing facility. This facility has since closed and is currently in the process of being decommissioned. The HON site would not generate significant noise

[3]The reference parking noise level is based on a series of one-hour noise measurements completed 50 feet from vehicles accessing a multi-level parking structure.

[4]Federal Highway Administration, *Noise Reduction Design Procedure*, March 6, 2008.

[5]*Ibid.*

levels at the project site. In addition, the Alameda Corridor is located approximately 1,000 feet west of the project. Based on field observation, train activity in the rail trench is not audible at the project site.

The northern portion of the project site is located adjacent to the UPPR. These tracks are used infrequently and periodically (less than five trains per week based on field observations) and are not a substantial source of noise. There is an at-grade crossing near the Santa Fe/Ardmore Avenues intersection. Trains are required to sound audible warning devices (usually a horn) at all at-grade crossings. Warning devices typically reach an instantaneous noise level of at least 96 dBA. As a result, exterior noise levels on the project site would reach approximately 90 dBA at the nearest location to the train and interior noise levels may exceed noise standards for a very short period. Train noise would result in a less-than-significant impact because of the short-term duration and the infrequency of the noise source. In addition, the LACCD Baseline Design Guidelines and Standards would ensure that interior noise levels are acceptable for a learning environment.

Vibration

The primary sources of operational-related vibration would include passenger vehicle circulation within the proposed parking structure and surface parking lot, on-site delivery truck activity, and off-site traffic traveling on roadways in the vicinity of the proposed project site. Vehicular movements would generate similar vibration levels as existing traffic condition. The proposed project would not include significant stationary sources of ground-borne vibration, such as heavy equipment operations. As a result, the proposed project operations would not increase the existing vibration levels at the new building and sensitive receptors. Educational facilities may experience vibration generated by heavy-duty truck activity at nearby land uses. However, rubber-tired on-road vehicles rarely generate perceptible vibration at any distance. Therefore, the proposed project would result in a less-than-significant impacts related to operational vibration.

CUMULATIVE IMPACTS

Noise. Cumulative construction noise impacts are a localized impact. Construction activities for the proposed project may overlap with the construction of nearby related projects. As project-related construction noise levels exceed the 5-dBA significance threshold, it is anticipated that combined project and related project construction noise levels would exceed the 5-dBA significance threshold. Implementation of Mitigation Measures **N1** through **N6**, as described below would assist in the reduction of construction noise levels. However, construction activity would still exceed the 5-dBA significance threshold at sensitive receptors. Therefore, impacts related to construction noise would be cumulatively considerable, and a significant cumulative impact would occur.

When calculating future traffic impacts, the traffic consultant took all related projects into consideration. Thus, the future traffic results without and with the proposed project already account for the cumulative impacts of the proposed project in combination with the related projects. Since noise impacts are generated directly from the traffic analysis results, future with project noise impacts described below reflect cumulative impacts, and the proposed project would not result in significant operational noise impacts. Therefore, impacts related to operational noise would not be cumulatively considerable.

Vibration. Although there could be concurrent construction activities occurring at the related project sites and at the proposed project site, the vibration levels from each piece of construction equipment would not be additive due to the rapid rate that vibration levels attenuate. Furthermore, the likelihood of multiple pieces of equipment impacting the ground surface with the same vibration characteristics and operating simultaneously is low. Therefore, impacts related to construction vibration would not be cumulatively considerable.

The predominant vibration source near the project site is heavy trucks traveling on the local roadways. Neither the proposed project nor related projects would substantially increase heavy-duty vehicle traffic near the project site and would not cause a substantial increase in heavy-duty trucks on local roadways. Therefore, impacts related to operational vibration would not be cumulatively considerable.

MITIGATION MEASURES

CONSTRUCTION

N1 All construction equipment shall be equipped with muffler devices.

N2 Grading and construction contractors shall use rubber-tired equipment as opposed to tracked equipment.

N3 Construction equipment shall be electric- and hydraulic-powered rather than diesel and pneumatic-powered.

N4 The construction contractor shall locate construction staging areas away from noise-sensitive uses.

N5 Haul routes shall be located on major arterial roads within non-residential areas.

N6 A “noise disturbance coordinator” shall be established. The disturbance coordinator shall be responsible for responding to local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall be required to implement reasonable measures such that the complaint is resolved. All notices that are sent to residential units within 500 feet of the construction site and all signs posted at the construction site shall list the telephone number for the disturbance coordinator.

N7 Prior to commencement of construction activity, a qualified structural engineer licensed in California shall survey the existing foundation and other structural aspects of Building 2. The survey shall provide a shoring design to protect the identified land uses from potential damage. The qualified structural engineer shall submit a pre-construction survey letter establishing baseline conditions at the historic buildings. These baseline conditions shall be forwarded to the lead agency and to the mitigation monitor prior to issuance of any foundation only or building permit. At the conclusion of vibration causing activities, the qualified structural engineer shall issue a follow-on letter describing damage, if any, to the historic buildings. The letter shall include recommendations for any repair, as may be necessary, in conformance with the Secretary of the Interior Standards. Repairs to shall be undertaken and completed in conformance with all applicable codes including the California Historical Building Code (Part 8 of Title 24) prior to issuance of any temporary or permanent certificate of occupancy for the new building.

OPERATIONS

No impacts related to noise and vibration would occur. No mitigation measures are required.

SIGNIFICANCE OF IMPACTS AFTER MITIGATION

CONSTRUCTION

Noise

Implementation of Mitigation Measure **N1** would reduce construction noise levels by 3 dBA. Noise level reductions attributable to Mitigation Measures **N2** through **N6**, although not easily quantifiable, would ensure that any construction noise complaints are remedied. **Table 4.7-12** presents the mitigated noise levels at the impacted residential land uses. Construction activity would still exceed the significance threshold at residential land uses north and east of the proposed project site. Therefore, the proposed project would result in a significant and unavoidable impact related to construction noise.

TABLE 4.7-12: CONSTRUCTION NOISE LEVELS - MITIGATED

Sensitive Receptor	Distance (feet) /a/	Maximum Construction Noise Level (dBA) /b/	Existing Ambient Noise Level (dBA, L_{eq}) /c/	New Ambient Noise Level (dBA, L_{eq}) /d/	Increase /e/
Single- and Multi-Family Residences to the North of the Project Site	100	80.0	64.9	80.1	**15.2**
Single-Family Residences to the East of the Project Site	200	69.0	56.6	69.2	**12.6**

/a/ Distance of noise source from receptor.
/b/ Construction noise source's sound level at receptor location, with distance and building adjustment.
/c/ Pre-construction activity ambient sound level at receptor location.
/d/ New sound level at receptor location during the construction period, including noise from construction activity.
/e/ An incremental noise level increase of 5 dBA or more would result in a significant impact.
SOURCE: TAHA, 2015.

Vibration

Implementation of Mitigation Measure **N7** would ensure that the adjacent historic structures would not be irreparably damaged by construction-related vibration. Impacts related to construction vibration would be less than significant with mitigation.

OPERATIONS

Impacts related to noise and vibration were determined to be less than significant without mitigation.

4.8 TRANSPORTATION AND TRAFFIC

This section provides an overview of transportation and traffic conditions in the project area and evaluates the construction and operational impacts associated with the 2015 South Gate Educational Center Master Plan (proposed project). Topics addressed include the circulation system, congestion management program, vehicle and pedestrian site access, and public transit, bicycle, and pedestrian facilities.

A comprehensive Traffic Impact Study was previously prepared by LLG for the 2013 Master Plan and was the basis of the transportation and traffic analysis presented in the Subsequent EIR prepared for the 2013 Master Plan. The 2013 Master Plan and Subsequent Environmental Impact Report (EIR) were approved and certified on May 7, 2014. The Traffic Impact Study prepared for the 2013 Master Plan evaluated potential impacts at 31 study intersections in association with an enrollment increase to a maximum of 9,000 students. The study concluded that the 2013 Master Plan would result in significant traffic impacts to the surrounding street system and identified traffic mitigation measures to reduce the certain traffic impacts to less-than-significant levels. The purpose of the Supplemental Traffic Assessment prepared for the 2015 South Gate Educational Center Master Plan was to determine whether any additional traffic impacts and corresponding mitigation measures may result. Since the 2015 Master Plan would continue to accommodate up to a maximum of 9,000 students, the corresponding analysis findings and conclusions from the Traffic Impact Study prepared for the 2013 Master Plan remain valid, except as evaluated and updated herein. The Supplemental Traffic Assessment prepared for the 2015 Master Plan and the Traffic Impact Study prepared for the 2013 Master Plan are both included in Appendix E of this Supplemental Draft EIR.

EXISTING SETTING

Circulation System

The project site is located at the northwestern corner of the Firestone Boulevard/Santa Fe Avenue intersection at 2525 Firestone Boulevard. The existing South Gate Education Center (SGEC), which has an enrollment of 4,912 students and would be vacated, is located across from (south) and just west of the project site at 2340 Firestone Boulevard.

Roadway Classifications. The City of South Gate utilizes the roadway categories recognized by regional, State, and federal transportation agencies. There are four categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided roadways with the lowest capacity. The roadway categories are summarized as follows:

- **Freeways** are limited-access and high speed travel ways included in the state and federal highway systems. Their purpose is to carry regional through-traffic. Access is provided by interchanges with typical spacing of one mile or greater. No local access is provided to adjacent land uses. The Glenn Anderson Freeway (I-105), Long Beach Freeway (I-710) and Harbor Freeway (I-110) are located approximately two to three miles to the south, east, and west, respectively, of the project site.
- **Arterial** roadways are major streets that primarily serve through-traffic and provide access to abutting properties as a secondary function. Arterials are generally designed with two to six travel lanes and their major intersections are signalized. This roadway type is divided into two categories: primary and secondary arterials. Primary arterials are typically four-or-more lane roadways and serve both local and regional through-traffic. Secondary arterials are typically two-to-four lane streets that service local and commute traffic.
- **Collector** roadways are streets that provide access and traffic circulation within residential and non-residential (e.g., commercial and industrial) areas. Collector roadways connect local streets to arterials

and are typically designed with two through travel lanes (i.e., one through travel lane in each direction) that may accommodate on-street parking. They may also provide access to abutting properties.

- **Local** roadways distribute traffic within a neighborhood, or similar adjacent neighborhoods, and are not intended for use as a through-street or a link between higher capacity facilities such as collector or arterial roadways. Local streets are fronted by residential uses and do not typically serve commercial uses.

A review of the characteristics (e.g., street classification, number of travel lanes, etc.) of important roadways within the vicinity of the project site and study area is summarized in **Table 4.8-1**.

Supplemental Traffic Analysis Study Area

The Traffic Impact Study prepared for the 2013 Master Plan evaluated a total of 31 study intersections in the vicinity of the project site. Because the maximum student enrollment would remain at 9,000 students as previously analyzed, the corresponding methodologies, analyses, findings and conclusions from the Traffic Impact Study prepared for the 2013 Master Plan remain valid. The primary difference between the proposed 2015 Master Plan and the approved 2013 Master Plan is that Buildings 1 and 3 are now proposed for demolition, and surface parking would be provided throughout the project site instead of a parking structure. As the site access and circulation updates would only result in a slightly different assignment of project trips at the driveways, the following four study intersections located immediately adjacent to the project site have been identified for evaluation: [1]

- Intersection No. 7 Project Driveway-Calden Avenue/Firestone Boulevard
- Intersection No. 8 Santa Fe Avenue/Ardmore Avenue
- Intersection No. 9 Santa Fe Avenue-Project Driveway/Orchard Place
- Intersection No. 10 Santa Fe Avenue/Firestone Boulevard

The existing roadway configurations and intersection controls at the four study intersections are displayed in **Figure 4.8-1**. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in **Figures 4.8-2** and **4.8-3**, respectively.

Congestion Management Program

The CMP Traffic Impact Assessment (TIA) guidelines require that intersection monitoring locations must be examined if the proposed project will add 50 or more trips during either the AM or PM weekday peak hours. Additionally, the CMP TIA guidelines require that freeway monitoring locations must be examined if the proposed project will add 150 or more trips (in either direction) during either the weekday AM or PM peak hours. The nearest CMP intersections include Alameda Street/Firestone Boulevard and Atlantic Avenue/Firestone Boulevard. The nearest CMP freeway monitoring locations in the study area include CMP Station No. 1043, I-105 Freeway west of I-710 and east of Harris Avenue, CMP Station No. 1046, I-110 Freeway at Manchester Avenue; and CMP Station No. 1080, I-710 Freeway north of Firestone Boulevard.

[1] For ease of referencing, the updated tables and figures included in Supplemental Traffic Study correspond to the same numbering scheme as the Traffic Study prepared for the 2013 FEC Master Plan.

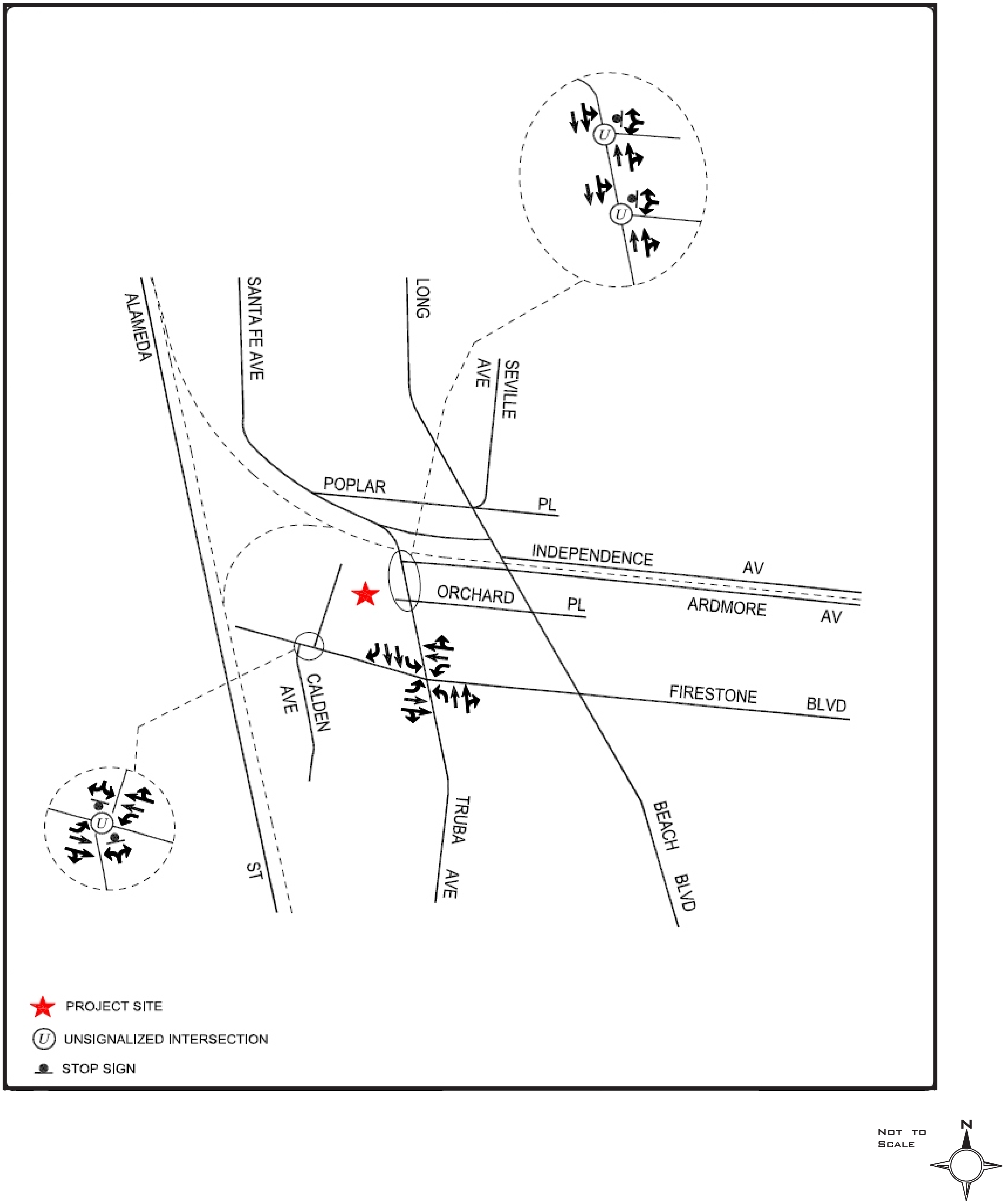
TABLE 4.8-1: EXISTING ROADWAY DESCRIPTIONS

Primary Street Segments	Classification	Number of Lanes		Median Types /a/	Parking Restrictions /b/		Speed Limit
		NB/EB	SB/WB		NB/EB	SB/WB	
ALAMEDA STREET							
From Nadeau St. to Firestone Blvd.	Primary Arterial	2	2	DY	NPAT	NS 6:30 a.m. – 8:00 a.m.	40
From Firestone Blvd. to 92nd St./Southern Ave.	Primary Arterial	2	2	DY	NPAT	NS 6:30 a.m. – 8:00 a.m.	40
From 92nd St./Southern Ave. to Tweedy Blvd.	Primary Arterial	2	2	DY	NPAT	NSAT	40
CALDEN AVENUE							
From Firestone Blvd. to Southern Ave.	Local	1	1	None	NP M-R 4:00 p.m. – 10:00 p.m. (permit) NP T 8:00 a.m. – 3:30 p.m.	NP W 8:00 a.m. – 3:30 p.m.	25
SANTA FE AVENUE							
From Nadeau St. to Ardmore Ave.	Collector	1	1	DY/RM	PA	PA	35
From Ardmore Ave. to Southern Ave.	Collector	2	2	DY	PA NP W 3:00 a.m. – 8:00 a.m.	PA NP 8:00 a.m. – 4:30 p.m.	35
TRUBA AVENUE							
From Southern Ave. to Tweedy Blvd.	Collector	1	1	None	NP T 8:00 a.m. – 3:30 p.m.	PA / TANP 10:00 p.m. – 6:00 a.m. nightly	35
PACIFIC BOULEVARD							
From Broadway to Poplar Pl.	Primary Arterial	2	2	DY	PA	PA	35
LONG BEACH BOULEVARD							
From Poplar Pl to Tweedy Blvd.	Primary Arterial	2	2	DY	2hr 7:00 a.m. – 6:00 p.m.	2hr 7:00 a.m. – 6:00 p.m.	35
STATE STREET							
From Santa Ana St. to Southern Ave.	Secondary Arterial	2	2	DY	NP W 3:00a.m. – 8:00 a.m. 2hr 7:00 a.m. – 6:00 p.m.	NP R 3:00 a.m. – 8:00 a.m. 2hr 7:00 a.m. – 6:00 p.m.	35
CALIFORNIA AVENUE							
From Santa Ana St. to Southern Ave.	Secondary Arterial	2	2	DY	PA	PA	35
INDEPENDENCE AVENUE							
From Long Beach Blvd. to Otis St.	Collector	1	1	DY	NSAT	PA	35
ARDMORE AVENUE							
From Santa Fe Ave. to Otis St.	Collector	1	1	DY	PA	NSAT	35
ORCHARD PLACE							
From Santa Fe Ave. to Mountain View Ave.	Local	1	1	None	NSAT	NP W 3:00 a.m. – 8:00 a.m.	25

TABLE 4.8-1: EXISTING ROADWAY DESCRIPTIONS

Primary Street Segments	Classification	Number of Lanes		Median Types /a/	Parking Restrictions /b/		Speed Limit
		NB/EB	SB/WB		NB/EB	SB/WB	
FIRESTONE BOULEVARD							
From Elm St. to Ivy St.	Primary Arterial	3	3	DY/2LT	NS 7:00 a.m. – 9:00 a.m., 4:00 p.m. – 6:00 p.m., 1hr 9:00 a.m. – 4:00 p.m.	NS 7:00 a.m. – 9:00 a.m., 4:00 p.m. – 6:00 p.m., 1hr 9:00 a.m. – 4:00 p.m.	35
From Ivy St. to Alameda St.	Primary Arterial	3	3	DY	NS 7:00 a.m. – 9:00 a.m., 4:00 p.m. – 6:00 p.m., 1hr 9:00 a.m. – 4:00 p.m.	NS 7:00 a.m. – 9:00 a.m., 4:00 p.m. – 6:00 p.m., 1hr 9:00 a.m. – 4:00 p.m.	35
From Alameda St. to Atlantic Ave.	Primary Arterial	2	2	DY/2LT	NSAT 2hr 9:00 a.m.- 6:00 p.m.	NSAT 2hr 9:00 a.m. – 6:00 p.m.	35
From Atlantic Ave. to Rayo Ave.	Primary Arterial	3	3	DY/2LT	NP 6:00 a.m. – 9:00 a.m., 3:00 p.m. – 6:00 p.m., 2hr 9:00 a.m. – 3:00 p.m.	NP 6:00 a.m. – 9:00 a.m., 3:00 p.m. – 6:00 p.m., 2hr 9:00 a.m. – 3:00 p.m.	35
From Rayo Ave. to Garfield Ave.	Primary Arterial	3	3	DY	NSAT	NSAT	35
SOUTHERN AVENUE							
From Alameda St. to California Ave.	Collector	1	1	DY	PA	NSAT	25
TWEEDY AVENUE							
From Alameda St. to California Ave.	Secondary Arterial	2	2	DY	PA	PA	30

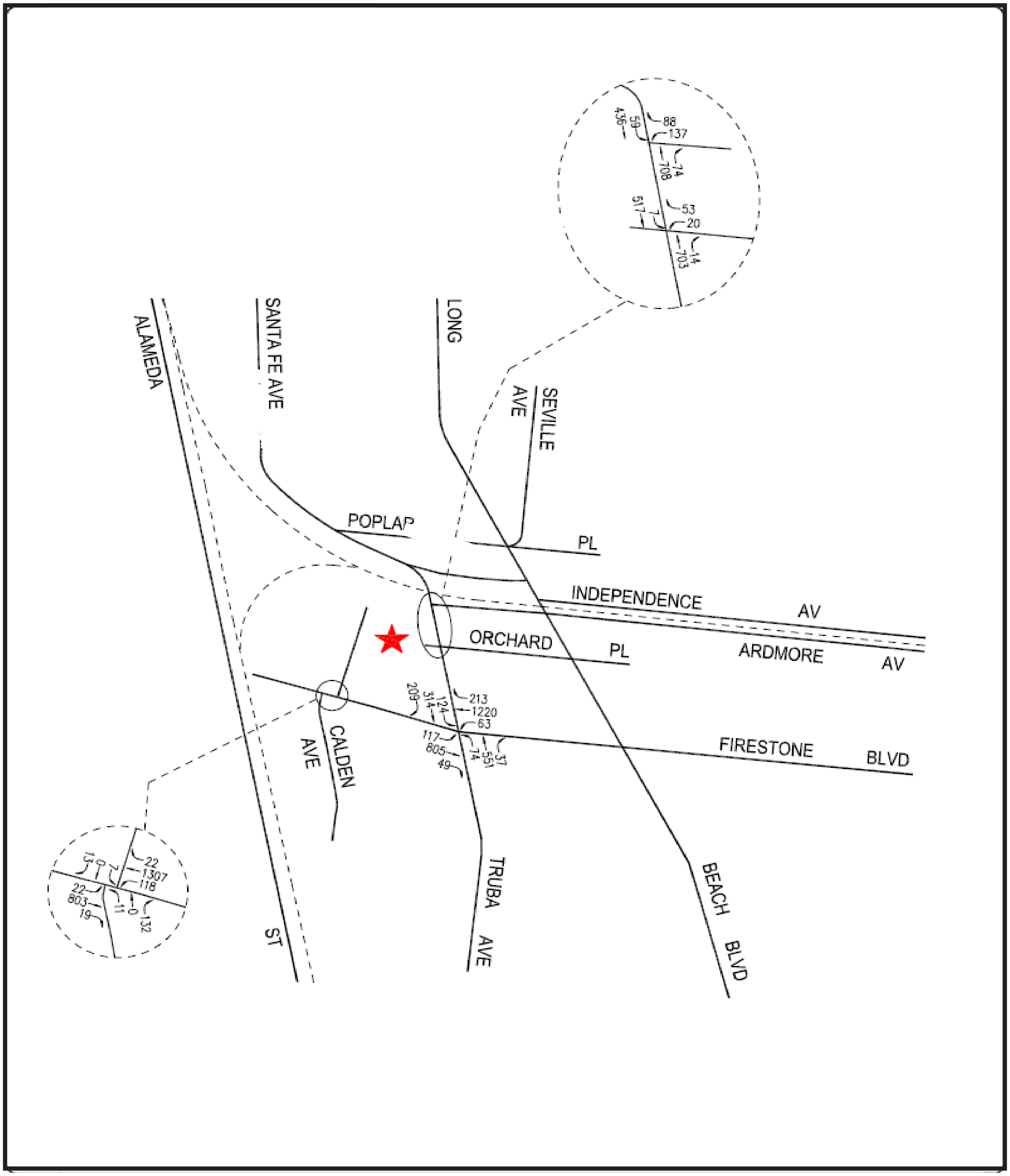
Note: NB: Northbound; SB: Southbound; WB: Westbound; EB: Eastbound
/a/ Median Types include Double Yellow (DY), Raised Median (RM), and Two-way Left Turn Pocket (2LT)
/b/Parking restrictions include Tow-Away No Stopping Any Time (TANSAT), No Stopping Any Time (NSAT), No Parking Any Time (NPAT), Red Curb (RC), No Parking (NP), Metered Parking (MP), Change in Parking Restrictions (/), No Parking Restrictions (None), No Stopping (NS), Parking Available (PA), Green Curb (GC), Truck Speed – 25 mph (TS), Tow-Away No Parking (TANP).
SOURCE: Linscott, Law & Greenspan, Engineers, *Traffic Impact Study 2013 Firestone Education Center*, November 21, 2013.



SOURCE: Linscott, Law & Greenspan, engineers 2015, TAHA, 2016.

FIGURE 4.8-1

EXISTING ROADWAY CONFIGURATIONS AND INTERSECTION CONTROLS

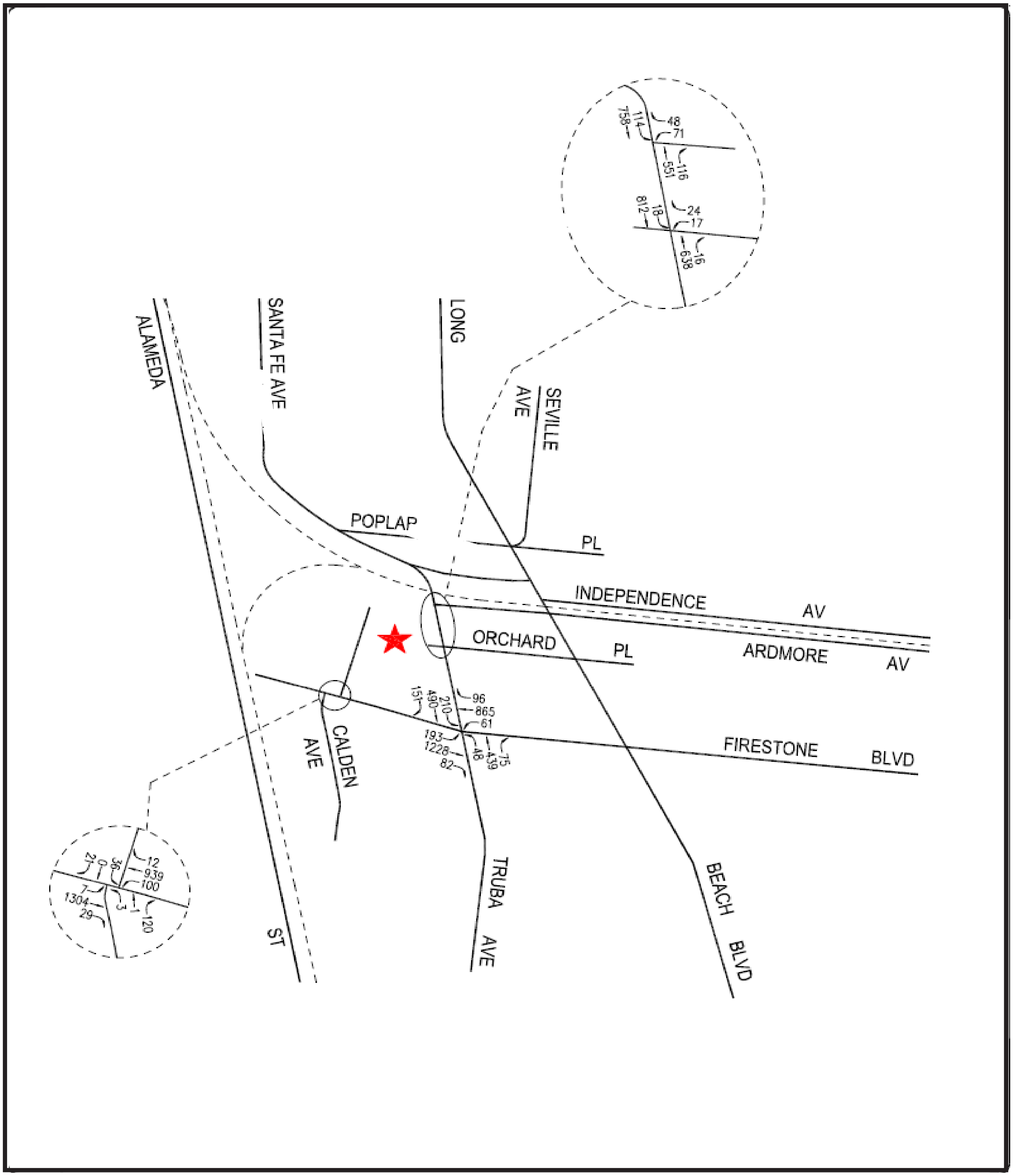


Not to Scale

SOURCE: Linscott, Law & Greenspan, engineers 2015, TAHA, 2016.

FIGURE 4.8-2

EXISTING WEEKDAY AM PEAK HOUR TRAFFIC VOLUMES



SOURCE: Linscott, Law & Greenspan, engineers 2015, TAHA, 2016.

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LOS ANGELES COMMUNITY COLLEGE DISTRICT

FIGURE 4.8-3

EXISTING WEEKDAY PM PEAK HOUR TRAFFIC VOLUMES

Vehicle and Pedestrian Site Access

The approximately 18.5-acre project site is currently occupied with four two- to four-story buildings (referred to as Buildings 1, 2, 3 and 4). Primary vehicular access to Buildings 1, 3, and 4 is presently provided via one driveway on the north side of Firestone Boulevard, east of Calden Avenue. This driveway provides shared vehicular access with the adjacent HON site to the west (i.e., a former furniture manufacturing facility). The property line between these two sites bisects the midpoint of the driveway and runs generally in a north-south direction. An agreement was previously executed between the owners of both sites which provides for shared use as well as the share in the maintenance costs of this driveway. The existing project site access driveway on Firestone Boulevard is unsignalized and accommodates full access turning movements (i.e., left-turn and right-turn ingress and egress turning movements). In addition to the primary access driveway on Firestone Boulevard, secondary driveways are provided along the west side of Santa Fe Avenue, just south of Orchard Place and opposite Laurel Place. Vehicular access to Building 2 is separately provided via one driveway along the north side of Firestone Boulevard and one driveway along the west side of Santa Fe Avenue.

Public Transit, Bicycle, or Pedestrian Facilities

Bus Transit Services. Public bus transit service within the vicinity of the project study area is provided by Metro. A summary of the existing transit service including the transit routes, destinations, and peak hour headways is presented in **Table 4.8-2**.

Metro Blue Line Light Rail. The Metro Rail system is comprised of the Metro Blue, Green, Red, Purple, and Gold Lines. The project study area is currently served by the Metro Blue Line. The nearest Metro Blue Line Station to the project site is the Firestone Station, located approximately one mile to the west of the project site near the Graham Avenue/Firestone Boulevard intersection. Students, faculty and staff of the proposed project can use the Metro Blue Line train service to access the site via a single transfer to existing bus/transit service along Firestone Boulevard or use alternative modes of transportation (e.g., bicycling and walking). The Metro Blue Line currently provides headway of 10 trains per hour in each direction during the weekday morning and afternoon peak commute hours.

Pedestrian and Bicycle Facilities. Sidewalks are provided along all key roadways in the project vicinity and pedestrian crosswalks are provided at signalized intersections near the project site. There are no bicycle facilities (i.e., Class I, II, or III facilities) currently provided in the immediate vicinity of the project site.

REGULATORY FRAMEWORK

Federal

There are no federal transportation or traffic regulations applicable to the proposed project.

State

Congestion Management Program (CMP). To address the increasing public concern that traffic congestion is impacting the quality of life and economic vitality of the State of California, the CMP was enacted by Proposition 111. The intent of the CMP is to provide the analytical basis for transportation decisions through the State Transportation Improvement Program (STIP) process. The Los Angeles County Metropolitan Transportation Authority (Metro), the local CMP agency, has established an approach to implement the statutory requirements of the CMP. The approach includes designating a highway network that includes all State highways and principal arterials within the County and monitoring the network's congestion.

TABLE 4.8-2: EXISTING TRANSIT ROUTES

Route	Destinations	Roadway(s) Near Site	No. of Buses/Trains During Peak Hour		
			Direction /a/	**AM**	**PM**
Metro Route 60	Compton to Downtown Los Angeles via Lynwood, South Gate and Vernon	Pacific Blvd., Long Beach Blvd., Broadway, Independence Ave., Southern Ave., Firestone Blvd., Tweedy Blvd.	NB	5	5
			SB	5	6
Metro Route 115	Playa del Rey to Norwalk via Westchester, Inglewood, Los Angeles, Florence, South Gate, Downey	Firestone Blvd., Fir Ave., Ivy St., Alameda St., Calden Ave., Santa Fe Ave., Long Beach Blvd., Garden View Ave., State St., California Ave., Otis Ave., Alexander Ave, Atlantic Ave, Rayo Ave	EB	6	7
			WB	5	5
Metro Route 117	LAX to Downey via Inglewood, Los Angeles, Watts, South Gate	Tweedy Blvd., Alameda St., Long Beach Blvd., State St., California Ave., Otis Ave., Alexander Ave., Atlantic Ave.	EB	3	3
			WB	3	3
Metro Route 251	Lynwood to Cypress Park via Huntington Park, Boyle Heights, Lincoln Park	State St., Santa Ana St., Firestone Blvd., California Ave., Tweedy Blvd.	NB	3	3
			SB	3	3
Metro Route 254	Watts to Boyle Heights via Los Angeles, Huntington Park Vernon	Santa Fe Ave., Nadeau St.	NB	1	1
			SB	2	1
Metro Route 260	Compton to Altadena via Lynwood, Maywood, East Los Angeles, Alhambra, Pasadena	Atlantic Ave., Firestone Blvd.	NB	5	4
			SB	4	5
Metro Route 611	Cudahy to Maywood via Huntington Park, Florence, Los Angeles, Vernon	Santa Ana St., State St.	EB	2	2
			WB	2	2
Metro Route 612	Willowbrook to Lynwood via Watts, South Gate, Huntington Park, Bell	Firestone Blvd., Santa Fe Ave., Tweedy Blvd.	EB	2	2
			WB	2	2
Metro Rapid 760	Lynwood to Downtown Los Angeles via South Gate, Huntington Park	Pacific Blvd., Santa Ana St., Firestone Blvd., Tweedy Blvd., Long Beach Blvd.	NB	7	4
			SB	5	5
Metro Rapid 762	Compton to Pasadena via Lynwood, East Los Angeles, Alhambra	Atlantic Blvd., Firestone Blvd.	NB	3	2
			SB	3	3
Metro Blue Line 801	Long Beach to 7th St./Metro Center via Carson, Compton, Willowbrook, Watts, Florence, Los Angeles	Firestone Blvd. Station	NB	10	10
			SB	10	10
The Gate	Get Around Town Express-City of South Gate	Santa Fe Ave., Firestone Blvd., Ardmore Ave., California Ave., Southern Ave., Atlantic Ave., Tweedy Blvd.	WB	3	3
			TOTAL	**94**	**91**

/a/ NB: Northbound; SB: Southbound; WB: Westbound; EB: Eastbound
SOURCE: Linscott, Law & Greenspan, Engineers, *Traffic Impact Study 2013 Firestone Educational Center Master*, November 21, 2013.

Local

City of South Gate General Plan 2035 Mobility Element (Mobility Element). The Mobility Element sets forth the plan for mobility and circulation within the City of South Gate. One of the visions for the City is to put people first by calming traffic where appropriate, and encouraging alternative modes of transportation such as walking, bicycling, and use of public transit. The following key elements of the Mobility Element pertain to the roadways in the immediate vicinity of the project site:

- Firestone Boulevard is classified as a Boulevard (Primary Arterial) and ultimately will be constructed to provide a roadway cross section width of between 80 and 86 feet on a right-of-way cross section width of between 104 and 116 feet. In the case of Firestone Boulevard, an overall roadway width of between 80 and 86 feet on a right-of-way width of between 104 and 116 feet (i.e., between 40-foot and 43-foot ½ roadway width and between 52-foot and 58-foot ½ right-of-way width) is envisioned. Based on the existing Firestone Boulevard ½ roadway width of 37 feet and ½ right-of-way width of 50 feet, this would ultimately require between three-feet and six-feet of widening and between two-feet and eight-feet of dedication along both sides. Once the corresponding roadway dedications and widening occur, three travel lanes in each direction with associated raised median islands and left-turn lanes could be constructed.

- Santa Fe Avenue is classified as a Street (Collector) and ranges from between 80 and 84 feet of overall right-of-way (with roadway width ranges between 56 and 60 feet). As noted in the Mobility Element this cross section provides for two lanes in each direction along with installation of bicycle lanes in lieu of on-street parking where appropriate (i.e., Santa Fe Avenue is designated for implementation of a Class II – Bike Lane between Independence/Ardmore Avenues and Southern Avenue).

THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the State CEQA Guidelines, the proposed project would have a significant impact related to transportation/traffic if it would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- Result in inadequate emergency access; and/or
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

City of South Gate Intersection Impact Criteria and Thresholds. The relative impact of the added project traffic volumes to be generated by the proposed project during the weekday AM and PM peak hours was evaluated based on analysis of future operating conditions at the study intersections without and with the proposed project. The significance of the potential impacts of project-generated traffic at each study intersection was identified using guidelines provided by the City of South Gate. According to the City of South Gate's methodology for calculating the level of impact due to traffic generated by the proposed project, a significant transportation impact is determined based on the criteria presented in **Table 4.8-3**.

TABLE 4.8-3: CITY OF SOUTH GATE INTERSECTION IMPACT THRESHOLD CRITERIA

Final volume-to-capacity	Level of Service (LOS)	Project Related Increase in volume-to-capacity
> 0.900	E or F	Equal to or greater than 0.02

SOURCE: Linscott, Law & Greenspan, Engineers, *Traffic Impact Study 2013 Firestone Educational Center Master Plan*, November 21, 2013.

IMPACTS

CONSTRUCTION

As discussed in Chapter 3.0 Project Description, construction activities would occur in three phases and are anticipated to begin in January or February 2016. Phase 1 would include the demolition of Buildings 1, 3, and 4 and the bridge connecting Buildings 1 and 2. During Phase l, approximately 3,400 loads of construction debris are anticipated to be hauled off-site (load = 10 cubic yards). In addition, approximately 95,000 cubic yards of soil would be imported to the site. Phase 2 would include the construction of off-site improvements, including but not limited to, the construction of new walkways along Santa Fe Avenue, new site driveways, new traffic signals on Santa Fe Avenue and Firestone Boulevard, street restriping and other traffic-related improvements. Phase 3 would include the construction of the underground utility infrastructure, a new surface parking lot, a new approximately 100,000-square-foot building and various other on-site campus amenities.

Circulation System

Construction activity may affect adjacent streets, including Firestone Boulevard and Santa Fe Avenue and may require the temporary closure of the sidewalks adjacent to the project site. In addition, construction of the proposed project would result in truck trips along roadway segments near the project site. However, the majority of the construction workers are expected to arrive and depart the project site during off-peak hours, and the effects of construction activity would be localized and temporary in nature. All construction activities, including the installation of the new signalized intersections, would be coordinated with the City of South Gate affected City departments in advance of the start of work to minimize traffic impacts to the greatest extent practicable and appropriate noticing would be implemented before and during the construction period. Therefore, impacts related to circulation system would be less than significant.

Congestion Management Program

Construction of the proposed project would result in an increase in truck trips along roadway segments near the project site. In general, the majority of the construction workers are expected to arrive and depart the project site during off-peak hours. As a result, construction activities are not expected to add more than 50 trips at the identified CMP intersections within the vicinity of the project site during the AM and PM peak hours. Similarly, construction of the proposed project would not add 150 or more trips during either the weekday AM or PM peak hours to the CMP freeway monitoring locations within the vicinity of the project site. Therefore, impacts related to the CMP would be less than significant.

Vehicle and Pedestrian Site Access

Construction activity may affect Firestone Boulevard and Santa Fe Avenue and could require the temporary closure of the sidewalks adjacent to the project site. However, as discussed above, all construction activities would be coordinated with the City of South Gate and affected City departments in advance of start of work to ensure public safety, and appropriate noticing would be implemented before and during construction. Therefore, impacts related to vehicle and pedestrian site access would be less than significant.

Public Transit, Bicycle, or Pedestrian Facilities

As discussed above, construction of the proposed project would result in an increase in truck trips along roadway segments near the project site and may require the temporary closure of the sidewalks adjacent to the project site. However, all construction activities would be coordinated with the City of South Gate affected City departments and Metro in advance of start of work to ensure safety and minimize impacts to transit, bicycle, and pedestrian facilities to the greatest extent practicable. Therefore, impacts related to public transit, bicycle, or pedestrian facilities would be less than significant.

OPERATIONS

Circulation System

Traffic Forecasting Methodology. In order to estimate the traffic impact characteristics of the proposed project, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic project volumes on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the proposed project is isolated by comparing operational (i.e., level of service [LOS]) conditions at selected key intersections using expected future traffic volumes with and without forecast project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated and the significance of the project's impacts identified.

Project Traffic Generation. The project traffic generation forecasts, including the methodologies and assumptions, previously were fully evaluated in the approved 2013 Master Plan project traffic study. As part of the proposed 2015 Master Plan, Buildings 1 and 3 are also proposed for demolition (in addition to Building 4). As traffic associated with Buildings 1 and 3 would no longer be generated to/from the project site under the "With Project" conditions, the following project trip generation forecasts has been appropriately revised to reflect this update:

- **Existing Uses To Be Removed/Vacated**. The project trip generation forecasts also include trip generation credits for the existing SGEC to be vacated and the existing warehouse Buildings 1, 3, and 4 which will be demolished in order to accommodate the proposed project. As stated in the traffic study, traffic volume forecasts for the existing SGEC were based on driveway traffic counts and on-street observations conducted at the SGEC facility. Traffic volume forecasts for the warehouse use trip generation credit were developed based on the AM and PM peak period traffic counts conducted at the existing project driveway located along the north side of Firestone Boulevard (just east of Calden Avenue) and the two existing project driveways located along the west side of Santa Fe Avenue (between Orchard Place and Laurel Place). Trip rates per thousand square feet of floor area derived from the occupied floor area in Buildings 1, 3, and 4 were then subsequently applied to determine the existing use trip generation credit. It should be noted that the existing use trip generation credit for Buildings 1 and 3 reflects only the leased and occupied floor area of these buildings at the time when the off-site intersection traffic counts were conducted.

  By comparing the trip rates provided in the ITE *Trip Generation Manual*[2] publication (ITE Land Use Code 150, Warehousing) with the observed (derived) warehouse trip rates, it can be concluded that the observed trip rates are 49 percent, 36 percent, and 43 percent lower than the applicable ITE trip rates for the AM peak hour, PM peak hour, and daily conditions, respectively. The difference in the observed rates versus the ITE rates is likely attributable to the current economy and the urban context of the site. As a result, use of the observed trip rates in general will result in a more conservative (lower) trip generation credit for the warehouse use.

[2] Institute of Transportation Engineers *Trip Generation Manual*, 9th Edition, 2012.

The traffic generation forecast for the proposed project is summarized in the attached **Table 4.8-4**. As presented, the proposed project is expected to generate 240 net new vehicle trips (193 inbound trips and 47 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 159 net new vehicle trips (128 inbound trips and 31 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 2,126 net new daily trip ends during a typical weekday (1,063 inbound trips and 1,063 outbound trips).

TABLE 4.8-4: PROJECT TRIP GENERATION

Land Use	Size	Daily Trip Ends Volumes/a/	AM Peak Hour Volumes /a/			PM Peak Hour Volumes /a/		
			In	Out	Total	In	Out	Total
PROPOSED PROJECT								
Firestone Education Center /b/	9,000 Students	7,110	540	171	711	333	261	594
EXISTING USES TO BE REMOVED/VACATED								
Existing South Gate Education Center /c/	(4,912) Students	(3,880)	(293)	(95)	(388)	(183)	(142)	(325)
Warehouse (Buildings 1/3) /d, e/	(320,397 GSF	(654)	(32)	(17)	(49)	(13)	(52)	(65)
Warehouse (Building 4)	(220,550) GSF	(450)	(22)	(12)	(34)	(9)	(36)	(45)
	Subtotal	*(4,984)*	*(347)*	*(124)*	*(471)*	*(205)*	*(230)*	*(435)*
	Net Increase	**2,126**	**193**	**47**	**240**	**128**	**31**	**159**

/a/Trips are one-way traffic movements, entering or leaving.
/b/ Traffic volume forecasts for the proposed project were developed based on the AM and PM peak period traffic counts conducted at the existing South Gate Education Center located across from the project site at 2340 Firestone Boulevard (with 4,912 students). The traffic counts were conducted on Tuesday, November 13, 2012 and Thursday, November 15, 2012 from 7:00 to 9:00 am and from 4:00 to 6:00 pm and also included observations of nearby on-street usage as well as the driveways at the two remote parking lots near Southern Avenue. The traffic counts were then adjusted upward to reflect a typical peak attendance day (i.e., occurs on Wednesdays). Daily trips are calculated based on the assumption that the number of peak hour (AM) trips represents 10% of the daily traffic volumes. Refer to Appendix C of the traffic impact study for the detail traffic count data collection. Thus, the following trip generation rates are determined for the Firestone Education Center:
- Daily Trip Rate: 0.790 trips/student; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.079 trips/student; 76% inbound/24% outbound
- PM Peak Hour Trip Rate: 0.066 trips/student; 56% inbound/44% outbound

/c/ Based on driveway and on-street traffic counts conducted at the existing South Gate Education Center (see also footnote /b/).
/d/ Buildings 1, 3, and 4 are proposed to be demolished as part of the proposed project. Traffic volume forecasts were developed based on the AM and PM peak period traffic counts conducted at the existing site driveways serving the tenants in Buildings 1, 3, and 4 (i.e., located on the north side of Firestone Boulevard and the west side of Santa Fe Avenue). The traffic counts were conducted on a typical weekday from 7:00 to 9:00 am and from 4:00 to 6:00 pm. Based on tenant information provided by the project applicant, a total of 504,878 square feet of floor area was leased and occupied at the time of the driveway traffic counts. Daily trips are calculated based on the assumption that the number of peak hour (PM) trips represents 10% of the daily traffic volumes. Refer to Appendix C of the traffic impact study for the detail traffic count data collection. Thus, based on the current building occupancy, the following trip generation rates are determined for warehousing use:
- Daily Trip Rate: 2.040 trips/1,000 square feet; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.153 trips/1,000 square feet; 66% inbound/34% outbound
- PM Peak Hour Trip Rate: 0.204 trips/1,000 square feet; 20% inbound/80% outbound

/e/ At the time when the off-site intersection traffic counts were conducted, a total of 320,397 square feet of floor area associated with Buildings 1 and 3 was leased and occupied.
SOURCE: Linscott, Law & Greenspan, Engineers, *2015 Firestone Education Center Master Plan – Supplemental Traffic Assessment*, May 6, 2016.

It should be noted that by comparison to the approved 2013 Master Plan, the overall project site traffic generation is reduced. This is due to the proposed demolition of Buildings 1 and 3 and accounting for their corresponding traffic which would no longer be generated to/from the project site in the future under the proposed project.

Project Traffic Distribution and Assignment. Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic corridors (i.e., Firestone Boulevard, Santa Fe Avenue);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Ingress/egress availability at the project site (existing and future); and
- Existing South Gate Education Center student population zip code data.

The forecast project traffic distribution percentages at the four study intersections for the proposed project are displayed in **Figure 4.8-4**. The forecast net new weekday AM and PM peak hour project traffic volumes at the study intersections are presented in **Figures 4.8-5** and **4.8-6**, respectively. The net new project traffic volume assignments reflect the traffic distribution characteristics, the project traffic generation forecasts, and the existing and proposed site generation and access characteristics.

Existing Conditions. As indicated in **Table 4.8-5**, two of the four study intersections analyzed are operating at LOS D or better during the weekday AM and PM peak hours under existing conditions. The remaining two study intersections are operating at LOS E or F during the peak hours.

Existing With Project Conditions. As shown in **Table 4.8-5**, application of the City of South Gate's significant impact threshold criteria in the existing with project scenario indicates that the proposed project is expected to result in significant impacts at two of the four study intersections during weekday conditions. Incremental but not significant impacts are noted at the remaining two study intersections as presented in **Table 4.8-5**. The following two study intersections analyzed in this supplemental traffic assessment are expected to be significantly impacted during the AM and/or PM peak hours in the existing with project conditions:

- Intersection No.7 Santa Fe Avenue/Project Driveway-Orchard Place (AM/PM peak hours)
- Intersection No.10 Santa Fe Avenue/Firestone Boulevard (AM peak hour)

Year 2031 Without Project Conditions. As presented in **Table 4.8-5**, one of the four study intersections analyzed in this supplemental traffic assessment is expected to continue operating at LOS D or better during the year 2031 weekday AM and PM peak hours with the addition of ambient traffic growth and traffic due to the related projects. The remaining three study intersections are expected to operate at LOS E or F during the peak hours with the addition of ambient traffic and traffic due to the related projects.

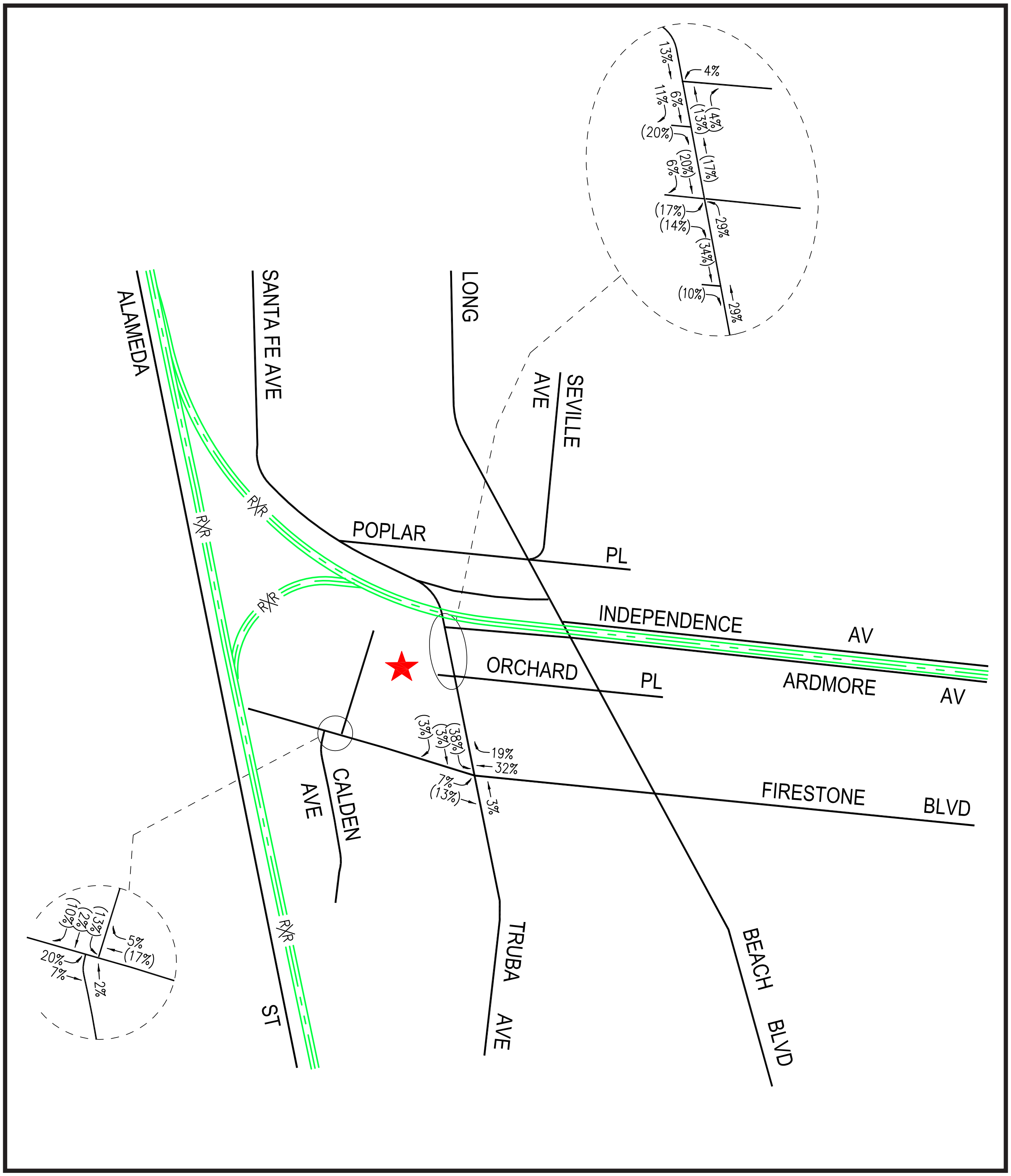
Year 2031 With Project Conditions. The year 2031 with project traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in **Figures 4.8-7** and **4.8-8**, respectively. As shown in **Table 4.8-5**, application of the City of South Gate's significant impact threshold criteria in the year 2031 with project scenario indicates that the proposed project is expected to result in significant impacts at two of the four study intersections analyzed in this supplemental traffic assessment during weekday conditions. The two study intersections anticipated to be significantly impacted during the AM and PM peak hours in the year 2031 with project condition are as follows:

- Intersection No.7 Santa Fe Avenue/Project Driveway-Orchard Place (AM/PM peak hours)
- Intersection No.10 Santa Fe Avenue/Firestone Boulevard (AM/PM peak hour)

Incremental but not significant impacts are noted at the remaining two study intersections. Nonetheless, without mitigation, the proposed project would result in significant impacts under Year 2031 With Proposed Project Conditions.

Analysis of Interim Firestone Boulevard Access Scheme

Consistent with the approved 2013 Master Plan project traffic study, due to the offset between the existing shared access driveway and Calden Avenue, the lack of LACCD ownership to the west of the site's westerly property line (i.e., the area across from Calden Avenue), and the approved Calden Avenue/Firestone Boulevard traffic signal installation, the supplemental traffic assessment also includes an analysis of an interim condition in which the existing shared access point along the north side of Firestone Boulevard will remain and be signalized and operated in conjunction with the Calden Avenue/Firestone Boulevard traffic signal (i.e., in an offset configuration). Based on coordination with the City, under the interim condition, all vehicular turning movements would continue to be allowed at the joint traffic signal and the existing shared access driveway would accommodate both LACCD-related traffic as well as traffic associated with the further reuse of the adjacent HON site in the future (i.e., as manufacturing/warehousing uses under near-term conditions).



SOURCE: Linscott, Law & Greenspan, engineers 2015, TAHA, 2016.

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taha 2014-075

2015 South Gate Educational Center Master Plan
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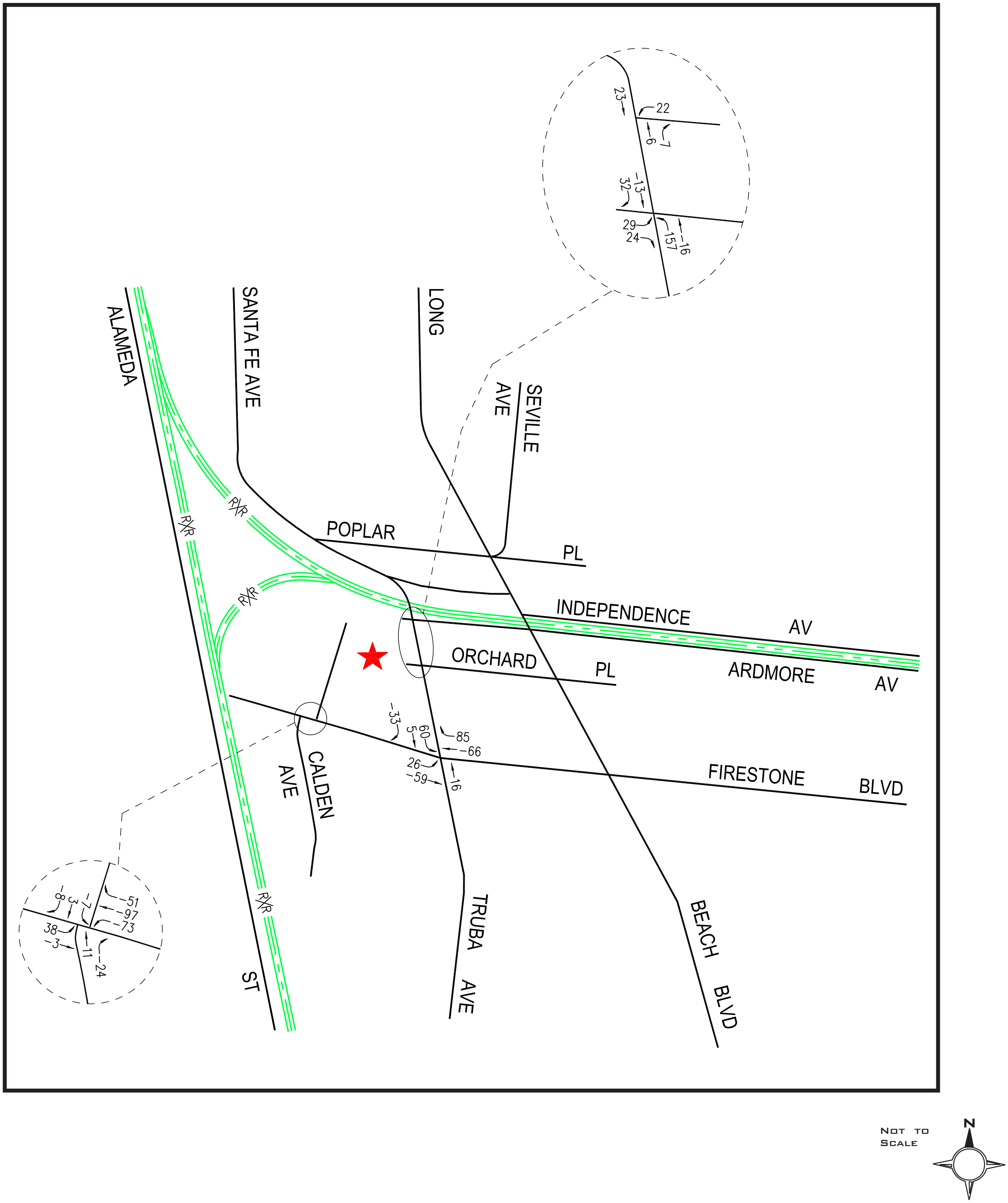
LOS ANGELES COMMUNITY COLLEGE DISTRICT

FIGURE 4.8-4

PROJECT TRIP DISTRIBUTION*:*



SOURCE: Linscott, Law & Greenspan, engineers 2015,TAHA, 2016.

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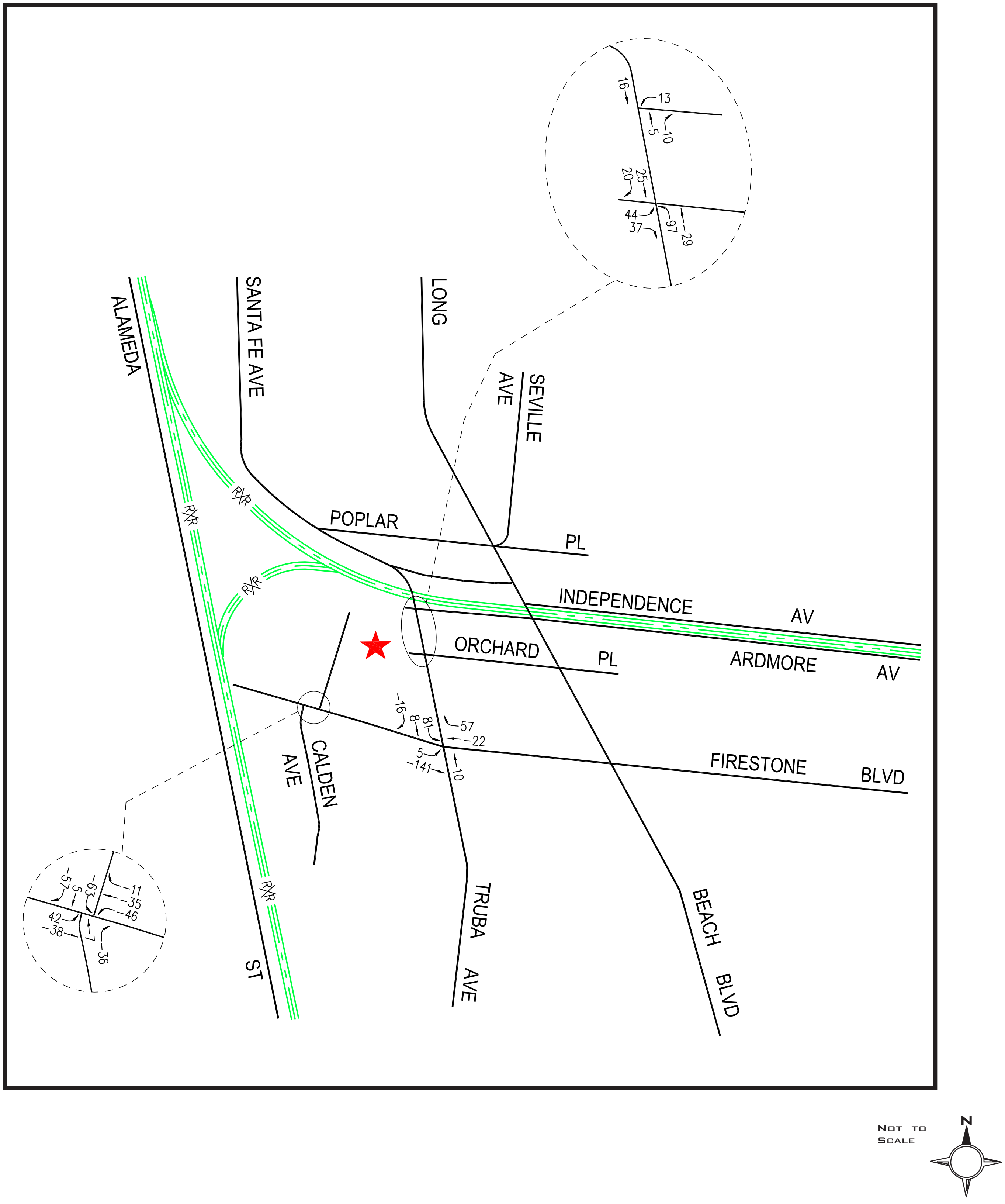
FIGURE 4.8-5

NET NEW WEEKDAY AM PEAK HOUR TRAFFIC VOLUMES



SOURCE: Linscott, Law & Greenspan, engineers 2015,TAHA, 2015.

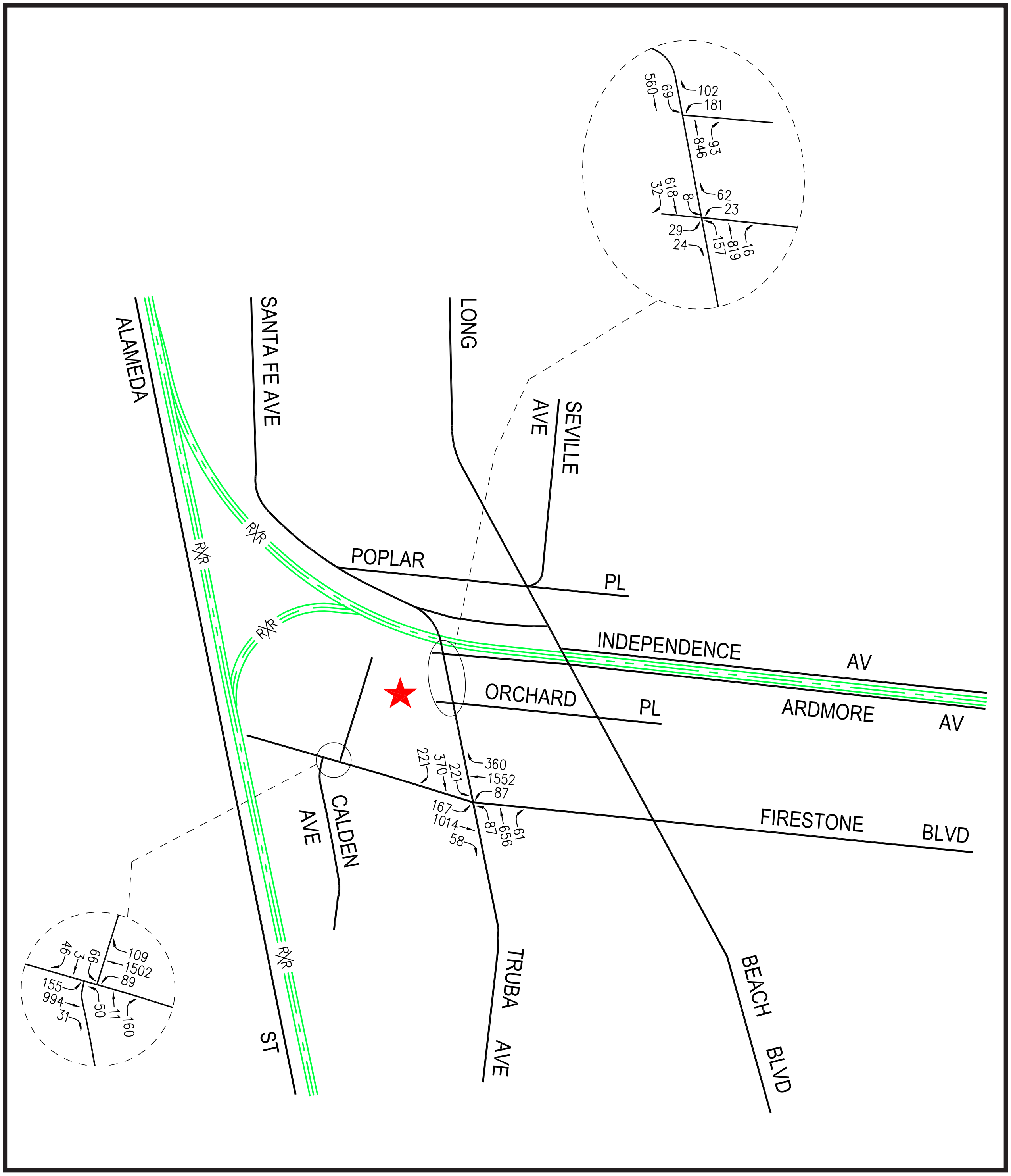
FIGURE 4.8-6

NET NEW WEEKDAY PM PEAK
HOUR TRAFFIC VOLUMES

TABLE 4.8-5: SUMMARY OF VOLUME-TO-CAPACITY RATIOS DELAY AND LEVEL OF SERVICE WEEKDAY AM AND PM PEAK HOURS

		Existing		Existing With Project				Year 2031 Future Pre-Project w/ AG & Rel. Projects		Year 2031 Future With Project Buildout				Year 2031Future With Project Mitigation			
Intersection	**Peak Hour**	**V/C or Delay**	**LOS**	**V/C or Delay**	**LOS**	**Change V/C**	**Signif. Impact**	**V/C or Delay**	**LOS**	**V/C or Delay**	**LOS**	**Change V/C**	**Signif. Impact**	**V/C or Delay**	**LOS**	**Change V/C**	**Mitigated**
Project Driveway-Calden Ave./Firestone Blvd. /a/	AM	>50.0	F	>50.0	F	0.018	No	0.892	D	0.858	D	-0.032	No	0.860	D	-0.032	---
	PM	>50.0	F	>50.0	F	-0.068	No	0.969	E	0.892	D	-0.077	No	0.892	D	-0.077	---
	AM	0.623		0.641													
	PM	0.679		0.611													
Santa Fe Ave./Ardmore Ave. /a/	AM	>50.0	F	>50.0	F	0.018	No	>50.0	F	>50.0	F	0.017	No	>50.0	F	0.017	---
	PM	37.7	E	47.8	E	0.015	No	>50.0	F	>50.0	F	0.013	No	>50.0	F	0.013	---
	AM	0.522		0.540				0.596		0.613				0.613			
	PM	0.454		0.469				0.527		0.540				0.540			
Santa Fe Ave./Project Driveway-Orchard Place /a/	AM	14.2	B	31.7	D	0.063	No	17.0	C	46.5	E	0.062	Yes	0.472	A	0.048	Yes
	PM	16.4	C	>50.0	F	0.111	Yes	21.3	C	>50.0	F	0.108	Yes	0.544	A	0.101	Yes
	AM	0.374		0.437				0.424		0.486							
	PM	0.385		0.496				0.443		0.551							
Santa Fe Ave./Firestone Blvd.	AM	0.882	D	0.971	E	0.089	Yes	1.099	F	1.164	F	0.065	Yes	1.052	F	-0.047	Yes
	PM	0.839	D	0.899	D	0.060	No	1.108	F	1.137	F	0.029	Yes	1.118	F	0.010	Yes

Note: AG=Ambient Growth
/a/ Two-Way Stop Control Intersection. Reported values represent the delays associated with the most constrained approach to the intersection.
SOURCE: Linscott, Law & Greenspan, Engineers, *2015 Firestone Education Center Master Plan – Supplemental Traffic Assessment*, May 6, 2016.



Not to Scale

SOURCE: Linscott, Law & Greenspan, engineers 2015, TAHA, 2015.

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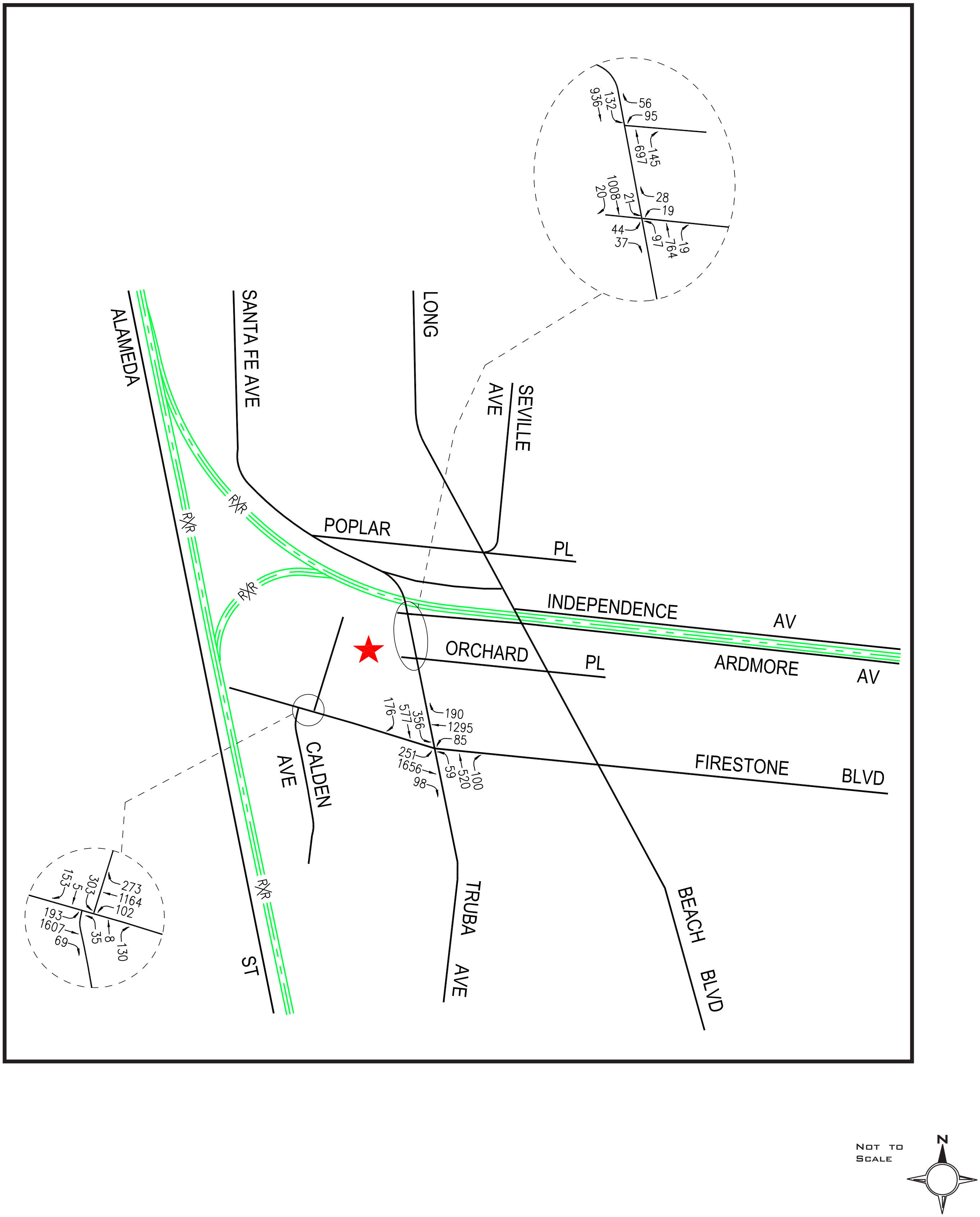
FIGURE 4.8-7

YEAR 2031 WITH PROJECT WEEKDAY
AM PEAK HOURTRAFFIC VOLUMES



SOURCE: Linscott, Law & Greespan, engineers 2015, TAHA, 2016.

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FIGURE 4.8-8

YEAR 2031 WITH PROJECT WEEKDAY
PM PEAK HOUR TRAFFIC VOLUMES

For purposes of the near-term analysis conditions it is assumed that half of the HON building floor area would be re-occupied as manufacturing use and the remaining half as warehousing use. In addition, the interim analysis condition focuses on year 2019 (i.e., approximately one year after the completion of project construction) but conservatively assumes project-related traffic based on the maximum student enrollment which is highly unlikely. As previously discussed in the 2013 Master Plan Traffic Study, the proposed facility is envisioned to initially have approximately 5,000 students in year 2019 and the maximum enrollment of 9,000 students would likely not be achieved until year 2031. Thus, incorporating project-related traffic based on the maximum student enrollment by year 2019 provides a very conservative assessment of traffic operations at this location. It should be noted that under the interim analysis condition, two exiting travel lanes (i.e., one left-turn only lane and one right-turn only lane) would be provided at the existing shared access point (i.e., southbound approach). This interim Firestone Boulevard access scheme analysis is provided for informational purposes only.

The following provides a summary of the anticipated intersection LOS employing the Intersection Capacity Utilization (ICU) methodology:

<u>Year 2019 Future With Project and Interim Firestone Boulevard Access Conditions:</u>

AM Peak Hour: *v/c* = 0.830, LOS D
PM Peak Hour: *v/c* = 0.816, LOS D

In addition to the intersection capacity analysis, the interim condition analysis also includes an operational evaluation of the Project Driveway-Calden Avenue/Firestone Boulevard intersection given signalization in the proposed offset configuration. The operational analysis has been prepared using the *Synchro 9* software. Specific elements such as the proposed lane configurations, lane widths, offset distance between the shared access driveway and Calden Avenue, storage lengths, crosswalk locations, posted speed limits, recommended traffic signal phasing, signal cycle length, traffic volumes, etc., have all been coded as part of the year 2019 future with project AM and PM peak hour Synchro networks. The following provides a summary of the anticipated intersection operations based on the Synchro analysis:

<u>Year 2019 Future With Project and Interim Firestone Boulevard Access Conditions:</u>

AM Peak Hour: Delay = 22.5 seconds/vehicle, LOS C
PM Peak Hour: Delay = 22.2 seconds/vehicle, LOS C

Based on the above analyses, the interim Firestone Boulevard access scheme (i.e., joint signalization of the Project Driveway-Calden Avenue/Firestone Boulevard intersection under an offset configuration) would accommodate the traffic volume forecasts under the Year 2019 Future With Project Conditions. Furthermore, it is important to note that the above interim access scheme analyses also do not assume the General Plan 2035 Mobility Element improvements (i.e., three through travel lanes in both the eastbound and westbound directions along Firestone Boulevard) which is consistent with the analysis prepared under year 2031 analysis conditions; however, they do reflect attainment by 2019 of the maximum student enrollment of 9,000 students. The intersection operations would further improve during the weekday AM and PM peak hours when the General Plan improvements are completed and implemented.

South Gate General Plan 2035 Roadway Classification

Based on the General Plan roadway classification, it is recommended that LACCD consider a roadway dedication of up to eight feet along the Firestone Boulevard project frontage. It may also be required by the City to provide up to six feet of physical roadway widening along the Building 1 project frontage to meet City General Plan standards. However, it is important to note that Building 2 is not planned to be part of the proposed project. As such, the surface parking area located south of Building 2 and along Firestone Boulevard would remain and continue to serve Building 2. Therefore, roadway widening along the Building 2 frontage along Firestone Boulevard is not recommended until the site is redeveloped.

As discussed below, right-of-way outside of LACCD ownership (e.g., the adjoining existing HON site as well as other sites and frontages along Firestone Boulevard) cannot be assumed to be acquired by the future year conditions analysis scenarios (e.g., by year 2031). Thus, the supplemental traffic assessment conservatively assumes that any mitigation measures involving the need for three travel lanes in either direction along Firestone Boulevard cannot be implemented prior to year 2035 (i.e., the future horizon year of the General Plan).

Based on previous discussions with the City of South Gate, the existing on-street parking along the east side of Santa Fe Avenue would likely remain while a bicycle lane may be installed along the west side of Santa Fe Avenue along the project frontage. It should be noted that the existing roadway width along the Santa Fe Avenue project frontage is approximately 74 feet which significantly exceeds the Mobility Element roadway standard. The existing roadway width of 74 feet will adequately accommodate one left-turn lane, two through travel lanes in each direction, parking along the east side of Santa Fe Avenue, and a Class II bike lane along the west side of Santa Fe Avenue. Alternatively, a Class II bike lane can also be provided along the east side of Santa Fe Avenue in lieu of on-street parking. No additional roadway dedication or widening is therefore required on Santa Fe Avenue.

Congestion Management Program

A significant transportation impact occurs when the proposed project increases traffic demand on a CMP facility by two percent of capacity ($v/c \geq 0.02$), causing or worsening LOS F ($v/c \geq 1.00$). The CMP impact criteria apply for analysis of both freeway and intersection monitoring locations.

Intersections. The CMP TIA guidelines require that intersection monitoring locations must be examined if the proposed project would add 50 or more trips during either the AM or PM weekday peak hours. The following CMP intersection monitoring locations in the project vicinity have been identified based on the corresponding forecast project-related trips assigned to the intersection during the AM and PM peak hours as summarized in **Table 4.8-6**.

TABLE 4.8-6: CMP TRAFFIC IMPACT ASSESSMENT

CMP Station	Location	Peak Hour	Forecast Project Trips	CMP Traffic Impact Assessment Threshold	CMP Traffic Impact Assessment Required?
No. 143	Alameda St./ Firestone Blvd.	AM	94	50	Required
		PM	70	50	Required
No. 144	Atlantic Ave./ Firestone Blvd.	AM	65	50	Required
		PM	48	50	N/A

SOURCE: Linscott, Law & Greenspan, Engineers, *Traffic Impact Study 2013 Firestone Educational Center Master Plan*, November 21, 2013.

As shown in **Table 4.8-5** and discussed in the Subsequent EIR and the Traffic Impact Study that was prepared for the 2013 Master Plan that was approved and certified on May 7, 2014, the proposed project is anticipated to add more than 50 trips at the identified CMP intersections during the AM and/or PM peak hours. The review of potential impacts at the two CMP monitoring intersections is based on the overall analysis prepared for the proposed project and application of the CMP threshold criteria. The application of the CMP threshold criteria to CMP Station 143: Alameda Street/Firestone Boulevard indicates that the proposed project is expected to result in a significant impact during the weekday PM peak hour. Incremental but not significant impacts are noted at CMP Station 144: Atlantic Avenue/Firestone Boulevard during both the weekday AM and PM peak hours. Nonetheless, without mitigation, the proposed project would result in a significant impact related to the CMP.

Freeways. The following CMP freeway monitoring locations in the study area have been identified:

CMP Station	Segment
No. 1043	I-105 Freeway west of I-710 & east of Harris Avenue
No. 1046	I-110 Freeway at Manchester Avenue
No. 1080	I-710 Freeway north of Firestone Boulevard

The CMP TIA guidelines require that freeway monitoring locations be examined if the proposed project will add 150 or more trips (in either direction) during either the weekday AM or PM peak hours. The proposed project will not add 150 or more trips (in either direction) during either the weekday AM or PM peak hours to the CMP freeway monitoring locations. Accordingly, no further review of potential impacts to CMP freeways is required, and the proposed project would result in less-than-significant impacts related to CMP freeway monitoring locations.

Vehicle and Pedestrian Site Access

The proposed site access scheme for the proposed project is displayed in Figure 3-3 in Chapter 3.0 Project Description. Primary vehicular access to the project site would be provided via two proposed signalized access points: one along the west side of Santa Fe Avenue opposite Orchard Place and one along the north side of Firestone Boulevard at the existing shared access driveway. A brief description of the primary site access scheme is provided below.

Santa Fe Avenue Proposed Signalized Driveway (Opposite Orchard Place). This access point is located along the west side of Santa Fe Avenue, opposite Orchard Place. This driveway is proposed to be signalized and would serve as the main vehicular access point to/from Santa Fe Avenue. Consistent with current practice and parking designs at other LACCD parking facilities, the proposed access points would not be gate-controlled (i.e., free flow inbound and outbound movements are anticipated). Thus, vehicular queuing back out onto Santa Fe Avenue towards the Union Pacific Railroad (UPRR) right-of-way (i.e., the railroad tracks are located approximately 500 feet north of the Orchard Place centerline) is not anticipated. Furthermore, it is anticipated that the majority of project traffic utilizing the proposed driveway on Santa Fe Avenue would originate from and be destined to the south, based on a detailed review of the existing SGEC student population zip code data and the locations of surrounding major traffic corridors. The proposed project site driveway along Santa Fe Avenue would be constructed to City of South Gate design standards.

Firestone Boulevard Proposed Signalized Driveway (east of Calden Avenue). This access point is located along the north side of Firestone Boulevard, approximately 135 feet east of Calden Avenue (as measured from the centerline of the driveway to the centerline of Calden Avenue). Based on information provided by the City of South Gate pursuant to the Conditions of Approval of the nearby Calden Court Apartments project, a traffic signal has been approved for installation at the intersection of Calden Avenue and Firestone Boulevard. In addition, if and when redevelopment of the adjacent HON site occurs, it is assumed that the Applicant of the HON project would be required to tie into the Calden Avenue/Firestone Boulevard traffic signal and construct the fourth leg of the intersection (i.e., in the area directly across from Calden Avenue which is under HON ownership). Under this analysis condition, the existing shared access point on Firestone Boulevard would likely be closed and the north leg of the signalized Calden Avenue/Firestone Boulevard intersection would facilitate vehicular access for both the redeveloped HON shopping center and the proposed project.

Due to the offset between the existing shared access driveway and Calden Avenue, the lack of LACCD ownership to the west of the site's westerly property line (i.e., the area across from Calden Avenue), and the approved Calden Avenue/Firestone Boulevard traffic signal installation, the supplemental traffic assessment includes an analysis of an interim condition in which the existing shared access point along the north side of Firestone Boulevard would remain and be signalized and operated in conjunction with the Calden Avenue/Firestone Boulevard traffic signal (i.e., in an offset configuration). Based on coordination with the

City, under the interim condition, all vehicular turning movements would continue to be allowed at the joint traffic signal and the existing shared access driveway will accommodate both LACCD-related traffic as well as traffic associated with the further reuse of the adjacent HON site in the future (i.e., as manufacturing/warehousing uses under near-term conditions).

In addition to the primary access points described above, two additional project driveways are proposed on Santa Fe Avenue while one additional project driveway is proposed along Firestone Boulevard for secondary access. The northerly project driveway on Santa Fe Avenue would be located north of Orchard Place and this driveway would be limited to right-turn ingress and right-turn egress movements only. The southerly project driveway on Santa Fe Avenue would be located south of Orchard Place and this driveway would be limited to right-turn egress movements only. The secondary project driveway proposed on Firestone Boulevard would be located opposite Firestone Place, and this driveway will be limited to right-turn ingress and right-turn egress movements only. The secondary access points are not proposed to be signalized.

Fire truck access to within 150 feet of all building exterior walls would be provided via the internal roadway, in compliance with Los Angeles County Fire Department (LACFD) requirements. If required by the overall configuration of the campus, fire truck turnarounds may be incorporated into campus open space. As such, the proposed project would provide adequate emergency access and would not substantially increase hazards due to a design feature or incompatible uses. Additionally, the proposed project would incorporate the requirements of the LACFD and the Los Angeles County Sheriff's Department (LASD) for emergency access, and driveways would be constructed to City of South Gate design standards. Therefore, the proposed project would result in less-than-significant impacts related to circulation hazards and emergency access.

Public Transit, Bicycle, or Pedestrian Facilities

The proposed project has been designed to encourage the use of public transit, and walking and bicycling as a transportation mode. A key concept and component of the General Plan is the introduction and operation of a local bus transit service with convenient bus transfer points that would circulate around the City connecting residential neighborhoods to key commercial, institutional, and recreational destinations. The City's General Plan Mobility Element designates Firestone Boulevard as a primary transit street. As discussed in the Existing Setting, there are many bus lines within the vicinity of the project study area. In addition, the closest Metro Blue Line Station, the Firestone Station, is located approximately one mile to the west. Students, faculty and staff can utilize the Blue Line service to access the project site via a single transfer to existing bus/transit service along Firestone Boulevard. LACCD also provides a shuttle between the main East Los Angeles College (ELAC) campus and the SGEC. While the student and employment population would increase due to the proposed project, potentially increasing demand for public transit, there is sufficient transit system capacity to absorb the needs of the new population and increased use of public transit is desired by both the LACCD and the City of South Gate.[3]

Walkability is a term for the extent to which walking is readily available as a safe, connected, accessible and pleasant mode of transport. There are five basic requirements that are widely accepted as key aspects of the walkability of urban areas that should be satisfied. The underlying principle is that pedestrians should not be delayed, diverted, or placed in danger. The five primary characteristics of walkability are as follows:[4]

- Connectivity: People can walk from one place to another without encountering major obstacles, obstructions, or loss of connectivity.
- Convivial: Pedestrian routes are friendly and attractive, and are perceived as such by pedestrians.
- Conspicuous: Suitable levels of lighting, visibility and surveillance over its entire length, with high quality delineation and signage.
- Comfortable: High quality and well-maintained footpaths of suitable widths, attractive landscaping and architecture, shelter and rest spaces, and a suitable allocation of road space to pedestrians.

[3]Linscott, Law & Greenspan, Engineers, *Traffic Impact Study Firestone Educational Center Master Plan*, November 21, 2013.
[4]*Ibid.*

- Convenient: Walking is a realistic travel choice, partly because of the impact of the other criteria set forth above, but also because walking routes are of a suitable length as a result of land use planning with minimal delays.

A review of the conceptual site plan and nearby pedestrian walkway network indicates that these five primary characteristics are accommodated as part of the proposed project. The pedestrian walkways and the adjacent sidewalks are designed to provide a friendly walking environment. The project site is adjacent to and accessible from nearby commercial uses (e.g., retail, restaurant, etc.) and other amenities along the Santa Fe Avenue and Firestone Boulevard corridors, as well as adjacent public bus transit stops. Metro transit stops are located adjacent to the project site with routes that serve the Santa Fe Avenue and Firestone Boulevard corridors which offer convenient pedestrian access into and out of the project site. Sidewalks are provided along all key roadways in the project vicinity and pedestrian crosswalks are provided at the existing signalized intersections near the project site. Additionally, crosswalks are also proposed to be provided at the two new signalized driveways to facilitate pedestrian access across Santa Fe Avenue and Firestone Boulevard.

The Mobility Element designates the project site as a future bicycle hub and identifies Santa Fe Avenue, adjacent to the project site, as a Class II – Bike Lane between Independence/Ardmore Avenues and Southern Avenue. However, no bicycle facilities are currently provided in the immediately vicinity of the project site. Regardless, the proposed project would provide bicycle racks and related amenities as required by the City. Given the educational nature of the proposed project, the focus on the encouragement of students to utilize public transportation and alternative modes of transportation (e.g., bicycling and walking), and the design team's effort to make the project consistent with and in support of the principles of the General Plan, bicycle integration has been carefully considered in the project's design. Accordingly, in consideration of the project site's location and proposed project design features, the proposed project would facilitate pedestrian activity, bicycle usage and use of public transit services. Therefore, the proposed project would result in less-than-significant impacts related to public transit, bicycle, or pedestrian facilities.

CUMULATIVE IMPACTS

The traffic analysis conducted for the proposed project includes regional growth and 46 related projects under future year conditions. Consequently, the project-level analysis provided above represents the cumulative traffic analysis. The proposed project would result in significant and unavoidable cumulative impacts at four study intersections in the City of South Gate and the County of Los Angeles. Therefore, impacts related to traffic and transportation would be cumulatively considerable and a significant cumulative impact would occur.

MITIGATION MEASURES

The following mitigation measures pertain to the four study intersections specifically evaluated in the supplemental traffic assessment prepared for the 2015 Master Plan. It should be noted that the corresponding findings and conclusions associated with the mitigation measures that were previously identified in the Subsequent EIR that was prepared for the 2013 Master Plan that was approved and certified on May 7, 2014 remain valid, except as discussed below.

CONSTRUCTION

Circulation System

Construction impacts related to the circulation system CMP, vehicle and pedestrian site access, and public transit, bicycle, or pedestrian facilities would be less than significant. No mitigation measures are required.

OPERATIONS

Circulation System

Intersection No. 7: Project Driveway-Calden Avenue/Firestone Boulevard. This location serves as one of five access points for students, faculty, staff and visitors. The driveway is currently 32 feet wide, is a shared access point for two entities (LACCD which owns the project site on the east side of the driveway and HON which owns the adjoining property to the west of the driveway) and is offset to the east of Calden Avenue. As shown in **Table 4.8-4** above, application of the City of South Gate's significant impact threshold criteria indicates that the proposed project is expected to result in incremental but not significant impacts at this intersection under the existing with project conditions and the Year 2031 with project conditions.

However, due to the City approved installation of a traffic signal at the Calden Avenue/Firestone Boulevard intersection as part of the Calden Court Apartments project and the City's requirement against restricting any vehicular turning movements, the City has directed that the shared access point (between LACCD and HON) at Firestone Boulevard also be signalized and integrated into the Calden Avenue/Firestone Boulevard traffic signal under a single signal controller. The City and LACCD have previously agreed that LACCD's fair share contribution to the joint traffic signal design and installation is 50 percent. As discussed and analyzed above, the near-term operation under the signalized offset configuration is anticipated to accommodate existing and future traffic, including the new SGEC facility at maximum enrollment, the Calden Court Apartments project at buildout, the full reuse of the HON site (as manufacturing/warehousing uses under interim conditions), other related development projects in the area, and regional traffic growth. Even though this study intersection is not anticipated to be significantly impacted by the proposed project utilizing the City of South Gate's significant impact threshold criteria, the City and LACCD have agreed to implement the joint traffic signal.

Based on recent clarification provided by the City of South Gate, the Calden Court Apartments project has fulfilled its conditions of approval requirements by finding its fair-share contribution towards the traffic signal and therefore is no longer involved in the design and construction of the signal. As discussed with the City, LACCD will likely be responsible for the design and construction of the joint traffic signal in order to facilitate all turning movements with the signal in an offset configuration and will receive partial reimbursement in the future. Appropriate roadway restriping and signage will be incorporated into the design. One left-turn only lane and one right-turn only lane will be provided at the joint LACCD/adjacent property access point (i.e., southbound approach of the offset intersection) such that vehicular access for both uses will be maintained. LACCD will work with the City to determine LACCD's appropriate fair-share amount at such time as the proposed project moves forward and in no case shall the contribution exceed 50 percent of the design and construction costs.

Intersection No. 8: Santa Fe Avenue/Project Driveway-Ardmore Avenue. The previous mitigation measure recommended for this location consisted of the installation of a traffic signal and the construction of the fourth leg of the intersection which would serve as the primary access point to the parking structure. However, as a parking structure is no longer planned to be a part of the proposed project, vehicular access opposite Ardmore Avenue is no longer being proposed. In addition, as shown in **Table 4.8-4** above, application of the City of South Gate's significant impact threshold criteria indicates that the proposed project is expected to result in incremental but not significant impacts at this intersection under the existing with project conditions and the year 2031 with project conditions. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the Santa Fe Avenue/Ardmore Avenue intersection.

Intersection No. 9: Santa Fe Avenue/Project Driveway-Orchard Place. This proposed access point is located along the west side of Santa Fe Avenue, opposite Orchard Place. The proposed project is expected to result in significant project impacts under the existing with project PM peak hour conditions and under the year 2031 with project AM and PM peak hour conditions. Mitigation for this location consists of the installation of a traffic signal and associated roadway restriping and signage to provide a northbound left-turn lane and a southbound left-turn lane.

Since eastbound and westbound through movements will not be permitted at this location based on coordination with the City, strict application of the traffic signal warrant analysis indicates that the peak hour warrant is not met. However, protected left-turn phases should be considered at a traffic signal when there are 50 or more left turning vehicles per hour in one direction with the product of the left-turn vehicles and the conflicting through traffic during the peak hour totals 100,000 or more. Based on a review of the future traffic volume forecast at the subject intersection, the northbound left-turn volumes are expected to exceed 50 vehicles during both the AM and PM peak hour. Furthermore, the product of the northbound left-turning vehicles and the conflicting southbound through and right-turning traffic will exceed 100,000 during the AM peak hour. This indicates that protected left-turn phasing for the northbound left-turn movement is warranted for consideration and by association suggests that a traffic signal installation is also warranted.

The above improvement can be accommodated within the existing Santa Fe Avenue roadway width. As discussed previously, the existing Santa Fe Avenue project frontage is approximately 74 feet wide which significantly exceeds the General Plan Mobility Element roadway width standards of between 56 and 60 feet for a Street (Collector) classification.

Adequate northbound left-turn storage along Santa Fe Avenue for entering (northbound) SGEC motorists would be provided. This design is expected to facilitate traffic flow along Santa Fe Avenue as well as to minimize any potential vehicle queuing into and out of the project driveway. This improvement is expected to reduce the project's significant impact to less than significant levels.

It should be noted that should the proposed project be approved, this mitigation would need to be formally designed and constructed prior to occupancy. At such time as the formal signal design process is initiated, the necessary coordination with the California Public Utilities Commission (CPUC) and/or Union Pacific Railroad (UPRR) would occur and details (i.e., such as the need for and design of traffic signal preemption given the proximity of the existing Santa Fe Avenue railroad crossing gates and control) woul be discussed and addressed as part of the traffic signal pre-design coordination effort.

TT1 LACCD shall install a traffic signal and associated roadway restriping and signage at the Santa Fe Avenue/Project Driveway-Orchard Place intersection to provide a northbound left-turn lane and a southbound left-turn lane.

Intersection No. 10: Santa Fe Avenue/Firestone Boulevard. The proposed project is expected to result in significant project impacts during the weekday AM peak hour under the existing with project conditions and the Year 2031 With Project Conditions. Mitigation for this intersection consists of the installation of an exclusive westbound right-turn only lane. Based on field measurements, the existing westbound combination through-right turn lane is 22 feet in width and thus, could be restriped to provide a 10-foot through lane with a 12-foot wide right-turn only lane for the westbound approach. Up to two on-street parking spaces would likely require removal along the north side of Firestone Boulevard. This improvement is expected to reduce the project's significant traffic impacts to less than significant levels.

It should be noted that the 2013 Master Plan Traffic Study also included the recommendation to install an eastbound right-turn only lane at this location as well as consideration to relocate the existing eastbound near-side bus stop to a far-side bus stop. However, based on this updated traffic impact analysis, the previously recommended eastbound improvement measures are no longer required to fully mitigate the proposed project impacts. Therefore, no eastbound improvement measures at this location are required or recommended as part of the 2015 Master Plan project.

TT2 LACCD shall install of an exclusive westbound right-turn only lane at the Santa Fe Avenue/Firestone Boulevard Intersection.

Congestion Management Program

No feasible mitigation measures were identified to reduce the significant impact identified at the Alameda Street/Firestone Boulevard intersection (CMP Station No. 143) during the PM peak hour to a less-than-significant level.

Vehicle and Pedestrian Site Access

Impacts related to vehicle and pedestrian site access would be less than significant. No mitigation measures are required.

Public Transit, Bicycle, or Pedestrian Facilities

Impacts related to public transit, bicycle, or pedestrian facilities would be less than significant. No mitigation measures are required.

SIGNIFICANCE OF IMPACTS AFTER MITIGATION

CONSTRUCTION

Impacts related to the circulation system, CMP, vehicle and pedestrian site access, and public transit, bicycle, or pedestrian facilities were determined to be less than significant without mitigation.

OPERATIONS

Circulation System

Intersection No. 9: Santa Fe Avenue/Project Driveway-Orchard Place. Mitigation Measure **TT1** would reduce the proposed project's significant AM and PM peak hour traffic impacts to less-than-significant levels at the Santa Fe Avenue/Project Driveway-Orchard Place intersection.

Intersection No. 10: Santa Fe Avenue/Firestone Boulevard. Mitigation Measure **TT2** would reduce the proposed project's significant AM and PM peak hour traffic impacts to less-than-significant levels at the Santa Fe Avenue/Firestone Boulevard intersection.

Congestion Management Program

As discussed in the Subsequent EIR and the Traffic Impact Study that was prepared for the 2013 Master Plan that was approved and certified on May 7, 2014, no feasible mitigation measures were identified to reduce the significant impact identified at the Alameda Street/Firestone Boulevard intersection (CMP Station No. 143) during the PM peak hour to a less-than-significant level. Therefore, the proposed project would result in a significant and unavoidable impact related to the CMP.

Vehicle and Pedestrian Site Access

Impacts related to vehicle and pedestrian site access were determined to be less than significant without mitigation.

Public Transit, Bicycle, or Pedestrian Facilities

Impacts related to public transit, bicycle, or pedestrian facilities were determined to be less than significant without mitigation.

5.0 OTHER CEQA CONSIDERATIONS

California Environmental Quality Act (CEQA) Guidelines Section 15126 requires that all phases of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. As part of this evaluation, the Environmental Impact Report (EIR) must also identify (1) significant environmental effects of the proposed project, (2) significant environmental effects that cannot be avoided if the proposed project is implemented, (3) significant irreversible environmental changes that would result from implementation of the proposed project, and (4) growth-inducing impacts of the proposed project.

5.1 SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT

Table 2-1 Summary of Project-Related Impacts and Mitigation Measures in Chapter 2.0 Summary and Sections 4.1 through 4.9 of this Supplemental Draft EIR disclose the proposed project's environmental effects, including the level of significance both before and after mitigation.

5.2 SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

CEQA Guidelines Section 15126.2(b) requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. Implementation of the proposed project would result in the following unavoidable significant and project-related and/or cumulative impacts:

- **Air Quality (Construction)**. Construction activity would result in a significant and unavoidable short-term regional NO_X impact. Mitigation measures are proposed to address this impact; however, no feasible mitigation measures were identified to reduce the significant impact to a less-than-significant level.
- **Cultural Resources (Historical Resources)**. The project site is part of a California Register-eligible Historic District, and Buildings 1, 2 and 3 are individually eligible for listing in the California Register. Building 4, the pedestrian bridge connecting Buildings 2 and 3, and the concrete wall/wrought iron fence with gate posts contribute to the California Register-eligible South Gate Historic District. The demolition of these historical resources would result in a significant and unavoidable impact. Mitigation measures are proposed to address these impacts; however, no feasible mitigation measures were identified to reduce the significant impact to a less-than-significant level.
- **Noise (Construction)**. Noise generated by construction of the proposed project would exceed the City's 5-dBA significance threshold at residential land uses north and east of the project site resulting in a significant and unavoidable short-term noise impact. Mitigation measures are proposed to address this impact; however, no feasible mitigation measures were identified to reduce the significant impact to a less-than-significant level.
- **Transportation and Traffic (Circulation System and Congestion Management Program)**. New vehicle trips resulting from the proposed project would create significant and unavoidable impacts related to the circulation system (i.e., intersection operations and Congestion Management Program [CMP]). Mitigation measures are proposed to address impacts related to the circulation system;

however, no feasible mitigation measures were identified to reduce all of the significant impacts to a less-than-significant level. No feasible mitigation measures were identified to reduce the significant impact related to the CMP (i.e., intersection) to a less-than-significant level.

5.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL EFFECTS

CEQA Guidelines Section 15126.2(c) requires a discussion of significant irreversible environmental effects that would be caused by the proposed project. Specifically, Section 15126.2(c) states:

> *Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irreversible commitments of resources should be evaluated to assure that such current consumption is justified.*

Generally, a project would result in significant irreversible environmental effects if any of the following would occur:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve a large commitment of nonrenewable resources;
- The project involves uses in which irreversible damage could result from potential environmental accidents associated with the project; or
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

The proposed project consists of the construction and operation of a new Los Angeles Community College District (LACCD) satellite community college campus. As discussed in Section 4.5 Hazards and Hazardous Materials, construction and operation of the proposed project would not create a significant hazard to the public. Therefore, the proposed project would not result in irreversible damage resulting from an environmental accident associated with the proposed project. Resources that would be permanently and continually consumed by operation of the proposed project include water, electricity, natural gas, and fossil fuels. However, in accordance with LACCD directives, the South Gate Educational Center (SGEC) would be designed and constructed using the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) - NC rating system, with the goal of reaching the highest certification level feasible. As part of achieving a LEED certification, the proposed project would implement energy and water efficiency features. These features would reduce the proposed projects consumption of resources and ensure that the proposed project would not result in the wasteful or inefficient use of resources. It is also possible that new technologies or systems will emerge or will become more cost-effective or user-friendly that will further reduce the project site’s reliance upon nonrenewable natural resources. Accordingly, the use of energy on-site would occur in an efficient manner and is justified as it would be consumed by a new satellite community college campus serving the community. Therefore, the proposed project would not result in any significant irreversible effects

5.4 EFFECTS DETERMINED NOT TO BE SIGNIFICANT

Agricultural Resources

The project site is currently developed with four buildings and surface parking. The surrounding area is also highly urbanized. There are no agricultural resources on the project site or in the surrounding area. Therefore, no impacts related to agricultural resources would occur.

Biological Resources

The project site is currently developed with four buildings and surface parking. The surrounding area is also highly urbanized. There are no biological resources on the project site or in the surrounding area. Therefore, no impacts related to biological resources would occur.

Geology and Soils

Compliance with seismic safety standards and approval of all construction and design plans by the Divisions of State Architect (DSA), as required by the Field Act, would ensure that the proposed project complies with all applicable building codes and requirements, reducing impacts associated with seismic hazards to the greatest extent feasible. Furthermore, implementation of Best Management Practices (BMPs) required as part of the National Pollutant Discharge Elimination System (NPDES) permit during construction would reduce soil erosion to the maximum extent possible. Therefore, impacts related to geology and soils would be less than significant.

Hydrology and Water Quality

Construction activities would be required to comply with NPDES, which requires the application of BMPs to reduce the potential for construction-induced water pollutant impacts. Further, the proposed project would be required to comply with the LACCD mandate that no stormwater shall leave the campus property; instead it will be collected and stored for re-use or infiltration on-site.[1] Accordingly, stormwater derived at the project site would not enter the City's storm drain system and the project site would not be a source of polluted runoff. Therefore, impacts related to surface water and groundwater quality would be less than significant.

Mineral Resources

The project site is currently developed with four buildings and surface parking. The surrounding area is also highly urbanized. In addition, the project site is not located within a City- or County-designated Mineral Resource Zone where significant mineral deposits are known to be present or within a mineral producing area. Therefore, no impacts related to mineral resources would occur.

Population and Housing

The proposed project does not include a housing or residential component. Rather, the proposed project would result in the operation of, a new LACCD satellite campus that would replace the existing South Gate Education Center (SGEC). The proposed project would accommodate up to 9,000 students. The timeframe for this level of enrollment is uncertain; however, it is assumed that student enrollment capacity would be met in 2031. The creation of a satellite college campus at the project site is desired by the City of South Gate and consistent with policies of the City's General Plan. Therefore, impacts related to population and housing would be less than significant.

[1]Firestone Education Center Master Plan Appendix, Civil Report, January 2011.

Public Services

Implementation of the proposed project would also not create the need for new or expanded school facilities to be constructed; rather the proposed project would address the existing demand for higher education. Likewise, the proposed project would not increase the residential population in the City thereby creating additional demand for public parks or libraries such that the City would need to expand existing or construct new park and recreation facilities to maintain an adequate level of service. Therefore, impacts related to schools and other public facilities would be less than significant

Utilities and Service Systems

The proposed project would increase the demand for water from the City's water system. Similarly, the proposed project would increase the volume of wastewater and solid wates generated at the project site. However, the proposed would be designed and constructed using the USGBC LEED certified. As part of achieving LEED certification, the proposed project would implement water efficiency design strategies to reduce potable water usage. Therefore, impacts related to utilities and service systems would be less than significant.

5.5 GROWTH INDUCING IMPACTS

CEQA Guidelines Section 15125.2(d) requires that growth inducing impacts of a proposed project be considered. Growth inducing impacts are characteristics of a project that could directly or indirectly foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. According to the CEQA Guidelines, such projects include those that would remove obstacles to population growth (e.g., a major expansion of a waste water treatment plant). In addition, as set forth in the CEQA Guidelines, increases in population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. The CEQA Guidelines also state that it must not be assumed that growth in an area is necessarily beneficial, detrimental or of little significance to the environment.

The proposed project would not directly induce population growth, but would create new jobs in the City. The proposed project would accommodate up to 9,000 students. To serve the projected student population, approximately 105 new jobs would be created by the proposed project. The existing 57 jobs associated with the existing SGEC that would be retained and relocated to the new SGEC. New jobs on the project site are anticipated in the City of South Gate General Plan and desired by the City. It is not anticipated that these new jobs would cause individuals to relocate to the City of South Gate, resulting in population growth, as these jobs can be filled by existing City of South Gate residents or residents of nearby communities. Therefore, the proposed project would not indirectly induce population growth.

The proposed project would result in a net increase in LACCD students and employees in the area. This increase in activity in the area would increase demand for commercial goods and services and community facilities. These demands could be met by existing businesses and community facilities in the area, and as the student enrollment capacity is reached, the demand for commercial goods and services may increase resulting in the need for new businesses. Therefore, the proposed project could foster economic growth.

6.0 PERSONS AND SOURCES CONSULTED

A number of technical reports and studies were utilized in the preparation of this Supplemental Draft EIR for the 2015 South Gate Educational Center Master Plan. These reports are referenced throughout this document where appropriate. In addition, this chapter documents all persons and sources that contributed in the preparation of this Supplemental Draft EIR and the previous Subsequent EIR prepared for the 2013 Master Plan.

6.1 PERSONS AND AGENCIES CONSULTED

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City of South Gate Public Works Department
Kev Tcharkhoutian, Telephone Conversation, January 2, 2011.

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Ryan Cornner, Associate Dean of Research, E-mail Correspondence, November 19, 2012.

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Los Angeles County Sheriff's Department Community College Bureau
Ralph J. Webb, Captain, Written Correspondence, February 2, 2011.

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Adriana Raza, Customer Service Specialist, Written Correspondence, December 28, 2010.

South Gate Education Center Library
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6.2 PREPARERS OF THIS EIR

Terry A. Hayes Associates Inc.
8522 National Boulevard, Suite 102
Culver City, CA 90232

CEO:	Terry Hayes, AICP
Senior Planner:	Kevin Ferrier
Senior Environmental Scientist:	Sam Silverman
Assistant Planners:	Kieran Bartholow

In association with:

Transportation and Traffic
Linscott, Law & Greenspan, Engineers
600 S. Lake Avenue, Suite 500
Pasadena, CA 91106
Contact: Alfred Ying, Senior Transportation Engineer
Clare Look-Jaeger, Principal

Cultural Resources
SWCA Environmental Consultants
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030
Contact: Steven Treffers, Architectural Historian

APPENDIX A

Notice of Preparation and
NOP Comments Letters

LOS ANGELES COMMUNITY COLLEGE DISTRICT

NOTICE OF PREPARATION OF A SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE 2015 FIRESTONE EDUCATION CENTER MASTER PLAN

To: All Interested Persons and Agencies
From: Los Angeles Community College District
Date: June 25, 2015
Re: **Notice of Preparation of a Supplemental Draft Environmental Impact Report for the 2015 Firestone Education Center Master Plan**

PURPOSE: In accordance with California Environmental Quality Act (CEQA) Guidelines Section 15082, the Los Angeles Community College District (LACCD), acting as the Lead Agency, has prepared this Notice of Preparation (NOP) to initiate early consultation and provide the opportunity for comment from public agencies, stakeholders, organizations, and interested individuals on the scope and content of the Supplemental Draft Environmental Impact Report (EIR) for the 2015 Firestone Education Center Master Plan.

PROJECT SITE: The 18.5-acre project site is located at 2525 Firestone Boulevard, on the northwest corner of the Firestone Boulevard/Santa Fe Avenue intersection in the southeastern portion of the County of Los Angeles within the City of South Gate. As shown in **Exhibit A**, the project site is bounded on the north by the Union Pacific Railroad right-of-way, on the east by Santa Fe Avenue, on the south by Firestone Boulevard, and on the west by a former furniture manufacturing facility. The project site and the adjacent site to the west comprise the former Firestone Tire and Rubber Plant. The project site is currently developed with four two- to four-story buildings (Buildings 1 through 4), as shown in **Exhibit B**. Currently, Building 3 is partially utilized as a warehouse for LACCD storage; Buildings 1, 2 and 4 are vacant. LACCD storage is planned for relocation from Building 3 to Building 2 in July 2015.

PROJECT BACKGROUND: A Program EIR for the Firestone Education Center (FEC) was first prepared and certified in December 2009. This allowed LACCD to acquire the project site with the intent of relocating and expanding the existing South Gate Educational Center (SGEC), a satellite campus of East Los Angles College (ELAC). Following certification of this Program EIR, a Master Plan was developed for the FEC, and Subsequent Draft and Final EIRs were prepared in December 2010 and August 2011, respectively. However, the 2011 FEC Master Plan and the Subsequent EIR were never approved or certified. Instead, the programming for the FEC was reduced to accommodate fewer students, and the Master Plan was updated. A new Subsequent EIR was then prepared for the updated 2013 FEC Master Plan. The 2013 FEC Master Plan was approved, and the Subsequent Final EIR was certified on May 7, 2014. LACCD is now proposing to update the 2013 FEC Master Plan, and the purpose of this Supplemental EIR is to evaluate the environmental effects of the proposed updates to the 2013 FEC Master Plan.

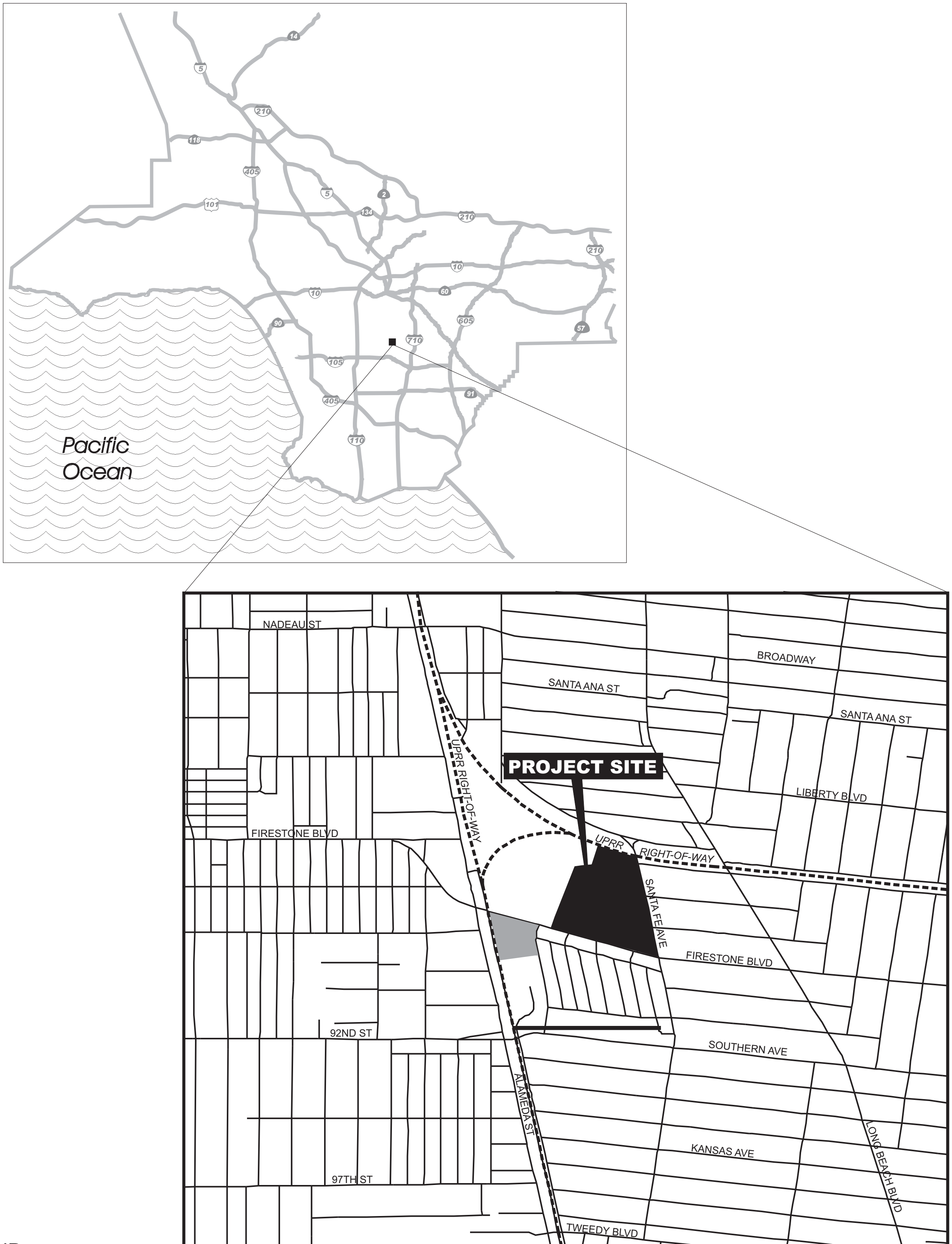
PROJECT DESCRIPTION: Consistent with the previous 2013 FEC Master Plan, the proposed 2015 FEC Master Plan consists of the construction and operation of a new LACCD satellite campus to replace the existing SGEC, provide expanded and improved educational facilities, and accommodate existing and projected student enrollment. The primary difference between the 2013 FEC Master Plan and the proposed 2015 FEC Master Plan is that Buildings 1 and 3 are now being proposed for demolition, and a parking structure is no longer being proposed to be constructed on-site. In lieu of the parking structure, additional surface parking would be provided on-site. New vehicular access and other on- and off-site circulation improvements are also being proposed. Consistent with 2013 FEC Master Plan, Building 2 would remain on-site, and Building 4 would be demolished and replaced with a new approximately 100,000-gross-square-foot, three-story building. A Conceptual Site Plan is provided as **Exhibit C**.

AREAS OF PROJECT IMPACT: A Supplemental EIR needs to contain only the information necessary to make the previous EIR adequate for the proposed project as revised. Therefore, the environmental effects resulting from the proposed project are limited to the following categories: Aesthetics, Air Quality, Cultural Resources, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Land Use and Planning, Noise and Vibration, and Transportation and Traffic. The Supplemental EIR will identify and analyze the significant impacts of the proposed project and recommend mitigation measures necessary to eliminate or substantially reduce any identified significant impacts.

HOW TO COMMENT: When submitting a comment, please include the name of a contact person in your agency or organization. Comments regarding the scope of the environmental analysis to be conducted for the proposed project may be submitted by mail, e-mail, or fax to the address below:

Thomas Hall, Director
Facilities Planning and Development
Los Angeles Community College District
770 Wilshire Boulevard, 6th Floor
Los Angeles, CA 90017
Fax: (213) 891-2490
E-mail: tom.hall@build-laccd.org

Please send comments at the earliest possible date. All comments must be received by July 25, 2015 for consideration.



LEGEND:

Project Site

Existing South Gate Education Center (To be vacated)

APPROXIMATE SCALE

0 750 1500 FEET

SOURCE: TAHA, 2015.

taha

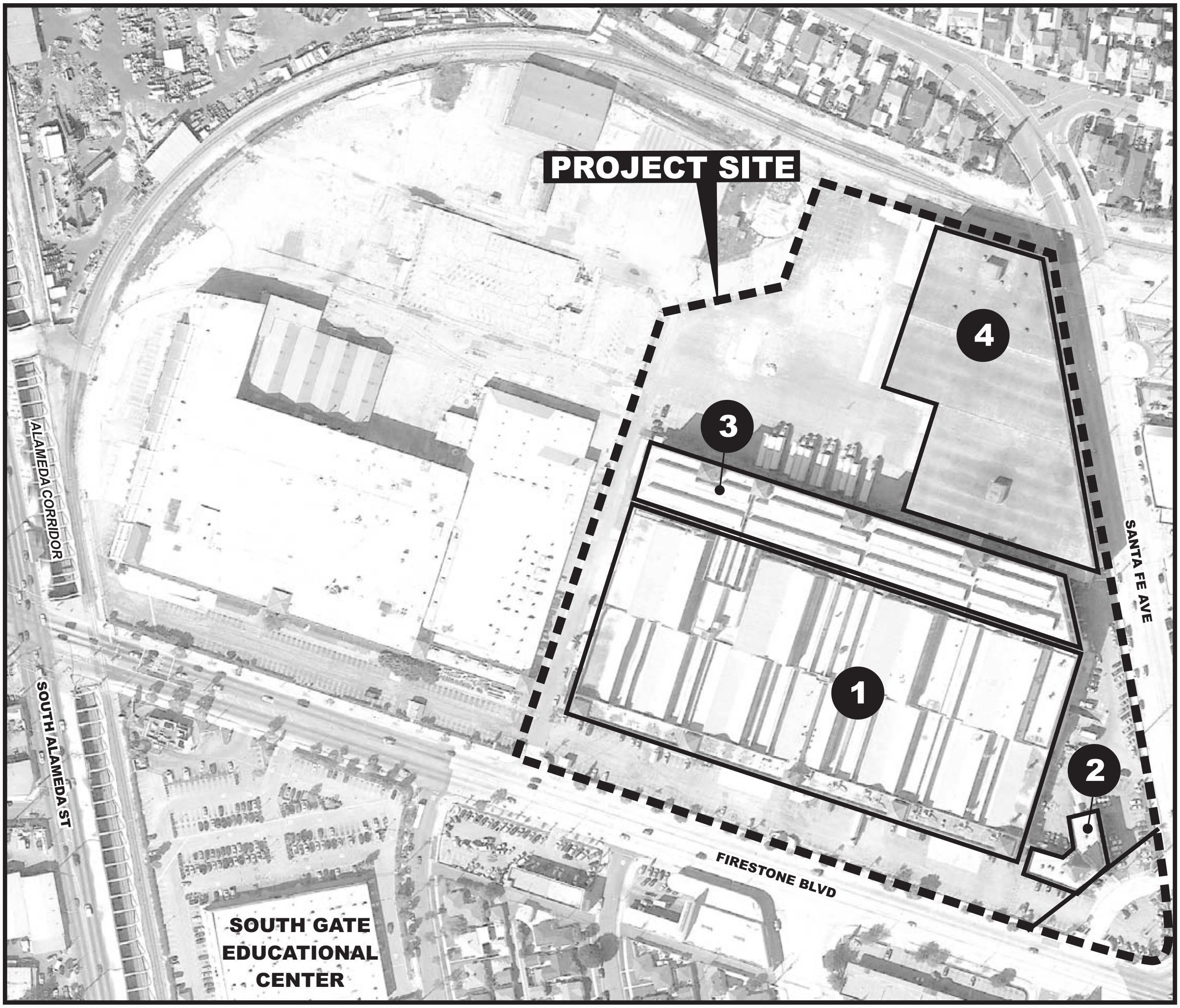
2015 Firestone Education Center Master Plan
Supplemental EIR Notice of Preparation

taha 2014-075

LOS ANGELES COMMUNITY COLLEGE DISTRICT

EXHIBIT A

REGIONAL LOCATION



LEGEND:

Existing Buildings

Project Site

N

APPROXIMATE SCALE

0 125 250 FEET

SOURCE: Google Earth and TAHA, 2015.

taha

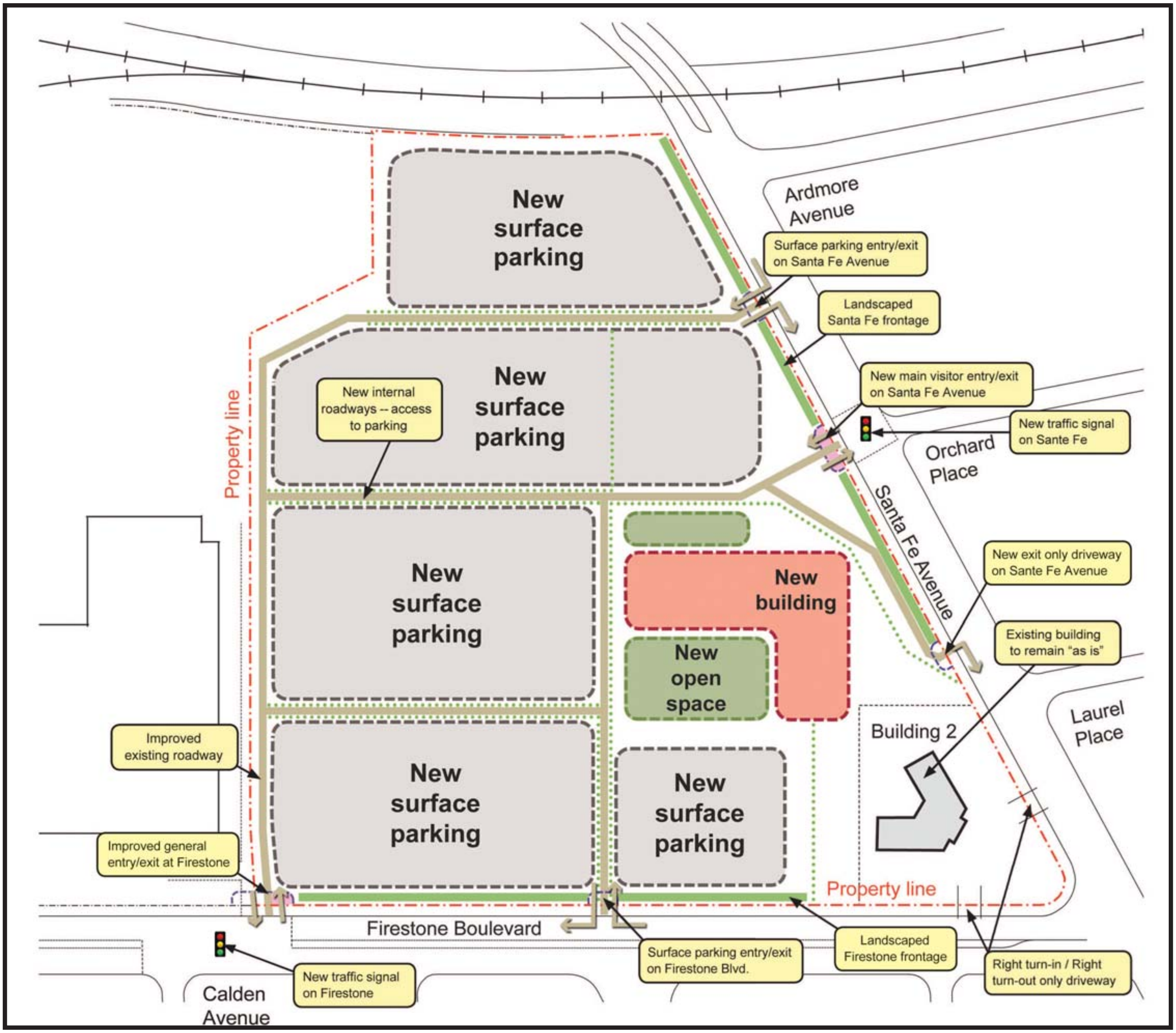
taha 2014-075

2015 Firestone Education Center Master Plan
Supplemental EIR Notice of Preparation

LOS ANGELES COMMUNITY COLLEGE DISTRICT

EXHIBIT B

PROJECT SITE



APPROXIMATE SCALE

0 100 200 FEET

SOURCE: HPI, 2015.

EXHIBIT C

CONCEPTUAL SITE PLAN

EDMUND G. BROWN JR.
GOVERNOR

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

KEN ALEX
DIRECTOR

Notice of Preparation

June 26, 2015

To: Reviewing Agencies

Re: 2015 Firestone Education Center Master Plan
SCH# 2010121044

Attached for your review and comment is the Notice of Preparation (NOP) for the 2015 Firestone Education Center Master Plan draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Thomas Hall
Los Angeles Community College District
770 Wilshire Boulevard, 6th Floor
Los Angeles, CA 90017

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

Document Details Report
State Clearinghouse Data Base

SCH# **2010121044**
Project Title 2015 Firestone Education Center Master Plan
Lead Agency Los Angeles Community College District

Type **NOP** Notice of Preparation

Description Note: Reference SCH# 2004101074
Consistent with the previous 2013 Firestone Education (FEC) Master Plan, the proposed 2015 FEC Master Plan consists of the development of a new LACCD satellite campus to replace the existing South Gate Educational Center and provide expanded and improved educational facilities. The primary difference between the 2013 FEC Master Plan and the proposed 2015 FEC Master Plan is that Buildings 1 and 3 are being proposed for demolition and a parking structure is no longer being proposed to be constructed on-site. In lieu of the parking structure, additional surface parking would be provided on-site. New vehicular access and other on- and off-site circulation improvements are also being proposed.

Lead Agency Contact

Name Thomas Hall
Agency Los Angeles Community College District
Phone 213 891 2119 ***Fax***
email
Address 770 Wilshire Boulevard, 6th Floor
City Los Angeles ***State*** CA ***Zip*** 90017

Project Location

County Los Angeles
City South Gate
Region
Cross Streets Santa Fe Avenue/Firestone Blvd.
Lat / Long 33° 57' 32" N / 118° 13' 14" W
Parcel No. 620-4034-900
Township 3S ***Range*** 12W ***Section*** ***Base***

Proximity to:

Highways I-105
Airports No
Railways UPRR, Alameda Coor.
Waterways No
Schools SGHS, Stanford ES, etc.
Land Use Z: Heavy Manufacturing
GP: Mixed Commercial/industrial, Subarea 1 South Gate College District

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Toxic/Hazardous; Traffic/Circulation; Landuse; Cumulative Effects; Other Issues

Reviewing Agencies Resources Agency; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Wildlife, Region 5; Native American Heritage Commission; Public Utilities Commission; California Highway Patrol; Caltrans, District 7; Air Resources Board; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 4

Date Received 06/26/2015 ***Start of Review*** 06/26/2015 ***End of Review*** 07/27/2015

Note: Blanks in data fields result from insufficient information provided by lead agency.

Print Form

Appendix C

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2010121044

Project Title: 2015 Firestone Education Center Master Plan

Lead Agency: Los Angeles Community College District
Contact Person: Thomas Hall
Mailing Address: 770 Wilshire Boulevard, 6th Floor
Phone: (213) 891-2119
City: Los Angeles Zip: 90017
County: Los Angeles

Project Location: County: Los Angeles City/Nearest Community: South Gate
Cross Streets: Santa Fe Avenue/Firestone Boulevard Zip Code: 90280
Longitude/Latitude (degrees, minutes and seconds): 33 ° 57 ′ 32 ″ N / 118 ° 13 ′ 14 ″ W Total Acres: 18.5
Assessor's Parcel No.: 620-4034-900 Section: S Twp.: T3S Range: 12W Base:
Within 2 Miles: State Hwy #: I-105 Waterways:
Airports: Railways: Alameda Coor., UPRR Schools: SGHS, Stanford ES

Document Type:

CEQA: [X] NOP [ ] Early Cons [ ] Neg Dec [ ] Mit Neg Dec [ ] Draft EIR [ ] Supplement/Subsequent EIR (Prior SCH No.) 2010121044 Other:
NEPA: [ ] NOI [ ] EA [ ] Draft EIS [ ] FONSI
Other: [ ] Joint Document [ ] Final Document [ ] Other:

Local Action Type:

[ ] General Plan Update [ ] General Plan Amendment [ ] General Plan Element [ ] Community Plan
[ ] Specific Plan [X] Master Plan [ ] Planned Unit Development [ ] Site Plan
[ ] Rezone [ ] Prezone [ ] Use Permit [ ] Land Division (Subdivision, etc.)
[ ] Annexation [ ] Redevelopment [ ] Coastal Permit [ ] Other:

RECEIVED
JUN 26 2015
STATE CLEARING HOUSE

Development Type:

[ ] Residential: Units Acres
[ ] Office: Sq.ft. Acres Employees
[ ] Commercial: Sq.ft. Acres Employees
[ ] Industrial: Sq.ft. Acres Employees
[X] Educational: Satellite Community College / 100,000 Sq. ft
[ ] Recreational:
[ ] Water Facilities: Type MGD
[ ] Transportation: Type
[ ] Mining: Mineral
[ ] Power: Type MW
[ ] Waste Treatment: Type MGD
[ ] Hazardous Waste: Type
[ ] Other:

Project Issues Discussed in Document:

[X] Aesthetic/Visual
[ ] Agricultural Land
[X] Air Quality
[X] Archeological/Historical
[ ] Biological Resources
[ ] Coastal Zone
[ ] Drainage/Absorption
[ ] Economic/Jobs
[ ] Fiscal
[ ] Flood Plain/Flooding
[ ] Forest Land/Fire Hazard
[ ] Geologic/Seismic
[ ] Minerals
[ ] Noise
[ ] Population/Housing Balance
[ ] Public Services/Facilities
[ ] Recreation/Parks
[ ] Schools/Universities
[ ] Septic Systems
[ ] Sewer Capacity
[ ] Soil Erosion/Compaction/Grading
[ ] Solid Waste
[X] Toxic/Hazardous
[X] Traffic/Circulation
[ ] Vegetation
[ ] Water Quality
[ ] Water Supply/Groundwater
[ ] Wetland/Riparian
[ ] Growth Inducement
[X] Land Use
[X] Cumulative Effects
[ ] Other: GHG Emmisions

Present Land Use/Zoning/General Plan Designation:
Zoning: Heavy Manufacturing / General Plan: Mixed Commercial/Industrial, Subarea 1 South Gate College District

Project Description: *(please use a separate page if necessary)*
Note: Reference SCH Nos. 2004101074 and 2010121044.
Consistent with the previous 2013 Firestone Education (FEC) Master Plan, the proposed 2015 FEC Master Plan consists of the development of a new LACCD satellite campus to replace the existing South Gate Educational Center and provide expanded and improved educational facilities. The primary difference between the 2013 FEC Master Plan and the proposed 2015 FEC Master Plan is that Buildings 1 and 3 are being proposed for demolition and a parking structure is no longer being proposed to be constructed on-site. In lieu of the parking structure, additional surface parking would be provided on-site. New vehicular access and other on- and off-site circulation improvements are also being proposed.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Revised 2010

NOP Distribution List County: Los Angeles SCH# 2010121044

Resources Agency

- [x] **Resources Agency**
  Nadell Gayou
- [ ] **Dept. of Boating & Waterways**
  Denise Peterson
- [ ] **California Coastal Commission**
  Elizabeth A. Fuchs
- [ ] **Colorado River Board**
  Lisa Johansen
- [ ] **Dept. of Conservation**
  Elizabeth Carpenter
- [ ] **California Energy Commission**
  Eric Knight
- [ ] **Cal Fire**
  Dan Foster
- [ ] **Central Valley Flood Protection Board**
  James Herota
- [x] **Office of Historic Preservation**
  Ron Parsons
- [x] **Dept of Parks & Recreation**
  Environmental Stewardship Section
- [ ] **California Department of Resources, Recycling & Recovery**
  Sue O'Leary
- [ ] **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- [x] **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou

Fish and Game

- [ ] **Depart. of Fish & Wildlife**
  Scott Flint
  Environmental Services Division
- [ ] **Fish & Wildlife Region 1**
  Curt Babcock
- [ ] **Fish & Wildlife Region 1E**
  Laurie Harnsberger
- [ ] **Fish & Wildlife Region 2**
  Jeff Drongesen
- [ ] **Fish & Wildlife Region 3**
  Charles Armor
- [ ] **Fish & Wildlife Region 4**
  Julie Vance
- [x] **Fish & Wildlife Region 5**
  Leslie Newton-Reed
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6**
  Tiffany Ellis
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6 I/M**
  Heidi Calvert
  Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Wildlife M**
  George Isaac
  Marine Region

Other Departments

- [ ] **Food & Agriculture**
  Sandra Schubert
  Dept. of Food and Agriculture
- [ ] **Depart. of General Services**
  Public School Construction
- [ ] **Dept. of General Services**
  Anna Garbeff
  Environmental Services Section
- [ ] **Delta Stewardship Council**
  Kevan Samsam
- [ ] **Housing & Comm. Dev.**
  CEQA Coordinator
  Housing Policy Division

Independent Commissions,Boards

- [ ] **Delta Protection Commission**
  Michael Machado
- [ ] **OES (Office of Emergency Services)**
  Marcia Scully
- [x] **Native American Heritage Comm.**
  Debbie Treadway
- [x] **Public Utilities Commission**
  Supervisor
- [ ] **Santa Monica Bay Restoration**
  Guangyu Wang
- [ ] **State Lands Commission**
  Jennifer Deleong
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Cal State Transportation Agency CalSTA

- [ ] **Caltrans - Division of Aeronautics**
  Philip Crimmins
- [ ] **Caltrans – Planning HQ LD-IGR**
  Terri Pencovic
- [x] **California Highway Patrol**
  Suzann Ikeuchi
  Office of Special Projects

Dept. of Transportation

- [ ] **Caltrans, District 1**
  Rex Jackman
- [ ] **Caltrans, District 2**
  Marcelino Gonzalez
- [ ] **Caltrans, District 3**
  Eric Federicks – South
  Susan Zanchi - North
- [ ] **Caltrans, District 4**
  Patricia Maurice
- [ ] **Caltrans, District 5**
  Larry Newland
- [ ] **Caltrans, District 6**
  Michael Navarro
- [x] **Caltrans, District 7**
  Dianna Watson
- [ ] **Caltrans, District 8**
  Mark Roberts
- [ ] **Caltrans, District 9**
  Gayle Rosander
- [ ] **Caltrans, District 10**
  Tom Dumas
- [ ] **Caltrans, District 11**
  Jacob Armstrong
- [ ] **Caltrans, District 12**
  Maureen El Harake

Cal EPA

Air Resources Board

- [x] All Other Projects
  Cathi Slaminski
  - [ ] Transportation Projects
    Nesamani Kalandiyur
  - [ ] Industrial/Energy Projects
    Mike Tollstrup
- [ ] **State Water Resources Control Board**
  Regional Programs Unit
  Division of Financial Assistance
- [ ] **State Water Resources Control Board**
  Karen Larsen – Asst Deputy
  Division of Drinking Water
- [ ] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] **State Water Resouces Control Board**
  Phil Crader
  Division of Water Rights
- [x] **Dept. of Toxic Substances Control**
  CEQA Tracking Center
- [ ] **Department of Pesticide Regulation**
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- [ ] **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] **RWQCB 3**
  Central Coast Region (3)
- [x] **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] **RWQCB 5S**
  Central Valley Region (5)
  - [ ] **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - [ ] **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
- [ ] **RWQCB 6**
  Lahontan Region (6)
  - [ ] **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- [ ] **RWQCB 7**
  Colorado River Basin Region (7)
- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [ ] **RWQCB 9**
  San Diego Region (9)
- [ ] **Other** ____________
- [ ] ____________
  Conservancy

Last Updated 6/23/2015

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

DARYL L. OSBY
FIRE CHIEF
FORESTER & FIRE WARDEN

July 16, 2015

Thomas Hall, Director
Los Angeles Community College District
Facilities Planning and Development
770 Wilshire Boulevard, 6th Floor
Los Angeles, CA 90017

Dear Mr. Hall:

NOTICE OF PREPARATION OF A SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT REPORT, "THE 2015 FIRESTONE EDUCATION CENTER MASTER PLAN", CONSISTS OF THE CONSTRUCTION AND OPERATION OF A NEW LACCD SATELLITE CAMPUS TO REPLACE THE EXISTING SGEC, PROVIDE EXPANDED AND IMPROVED EDUCATIONAL FACILITIES, AND ACCOMMODATE EXISITING AND PROJECTED STUDENT ENROLLMENT, 2525 FIRESTONE BOULEVARD, SOUTH GATE (FFER 201500122)

The Notice of Preparation of a Supplement Draft Environmental Impact Report has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION:

1. We have no comments at this time.

LAND DEVELOPMENT UNIT:

1. The Fire Prevention Division's Land Development Unit has no additional comments regarding this project. The conditions that were addressed in EIR 201400053, dated April 2014, have not been changed at this time.

2. Should any questions arise regarding subdivision, water systems, or access, please contact the County of Los Angeles Fire Department's Land Development Unit's Inspector Nancy Rodeheffer at (323) 890-4243.

3. The County of Los Angeles Fire Department's Land Development Unit appreciates the opportunity to comment on this project.

FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS:

1. The statutory responsibilities of the County of Los Angeles Fire Department's Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance. Potential impacts in these areas should be addressed.

HEALTH HAZARDOUS MATERIALS DIVISION:

1. The Health Hazardous Materials Division (HHMD) of the Los Angeles County Fire Department advises that the project site should be assessed and/or mitigated under environmental oversight by either the Los Angeles Regional Water Quality Board (LARWQCB) or the California Department of Toxic Substances Control (DTSC) and obtain a clearance letter and/or a "No Further Action" (closure) letter prior to the City's issuance of a grading permit.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,

KEVIN T. JOHNSON, ACTING CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

KTJ:ad

WATER RECLAMATION
SOLID WASTE MANAGEMENT

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

GRACE ROBINSON HYDE
Chief Engineer and General Manager

July 24, 2015

Ref File No.: 3364126

Mr. Thomas Hall, Director
Facilities Planning and Development
Los Angeles Community College District
770 Wilshire Boulevard, 6th Floor
Los Angeles, CA 90017

Dear Mr. Hall:

2015 Firestone Education Center Master Plan

The County Sanitation Districts of Los Angeles County (Districts) received a Notice of Preparation of a Draft Environmental Impact Report for the subject project on June 29, 2015. The proposed development is located within the jurisdictional boundaries of District No. 1. We offer the following comments regarding sewerage service:

1. The wastewater flow originating from the proposed project will discharge to local sewer lines, which are not maintained by the Districts, for conveyance to either or both the Districts' Alameda Street Extension Trunk Sewer, located in Alameda Street at Southern Avenue, or the Mountain View-Belle Vernon Relief Extension Trunk Sewer, located in Truba Avenue at Missouri Avenue. The 21–inch diameter Alameda Street Trunk Sewer has a design capacity of 5.4 million gallons per day (mgd) and conveyed a peak flow of 0.2 mgd when last measured in 2013. The 18–inch diameter Mountain View-Belle Vernon Relief Extension Trunk Sewer has a design capacity of 1.7 mgd and conveyed a peak flow of 0.2 mgd when last measured in 2013.

2. The wastewater generated by the proposed project will be treated at the Joint Water Pollution Control Plant located in the City of Carson, which has a design capacity of 400 mgd and currently processes an average flow of 263 mgd.

3. In order to estimate the volume of wastewater the project will generate, go to www.lacsd.org, Wastewater & Sewer Systems, click on Will Serve Program, and click on the Table 1, Loadings for Each Class of Land Use link for a copy of the Districts' average wastewater generation factors.

4. The Districts are empowered by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System for increasing the strength or quantity of wastewater attributable to a particular parcel or operation already connected. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the Sewerage System to accommodate the proposed project. Payment of a connection fee will be required before a permit to connect to the sewer is issued. For more information and a copy of the Connection Fee Information Sheet, go to www.lacsd.org,

Wastewater & Sewer Systems, click on Will Serve Program, and search for the appropriate link. For more specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at (562) 908-4288, extension 2727.

5. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the design capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CCA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise you that the Districts intend to provide this service up to the levels that are legally permitted and to inform you of the currently existing capacity and any proposed expansion of the Districts' facilities.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717.

Very truly yours,

Grace Robinson Hyde

Adriana R

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:ar

cc: M. Sullivan
J. Ganz

DOC: #3386336.D01

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
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July 1, 2015

Thomas Hall, Director
Facilities Planning and Development
Los Angele Community College District
770 Wilshire Boulevard, 6th Floor
Los Angeles, CA 90017

Notice of Preparation of a CEQA Document for the
2015 Firestone Education Center Master Plan

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The SCAQMD staff's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the draft CEQA document. Please send the SCAQMD a copy of the CEQA document upon its completion. Note that copies of the Draft EIR that are submitted to the State Clearinghouse are not forwarded to the SCAQMD. Please forward a copy of the Draft EIR directly to SCAQMD at the address in our letterhead. **In addition, please send with the draft EIR all appendices or technical documents related to the air quality and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files. These include original emission calculation spreadsheets and modeling files (not Adobe PDF files). Without all files and supporting air quality documentation, the SCAQMD will be unable to complete its review of the air quality analysis in a timely manner. Any delays in providing all supporting air quality documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis
The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. More recent guidance developed since this Handbook was published is also available on SCAQMD's website here: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993). SCAQMD staff also recommends that the lead agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: www.caleemod.com.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis.

The SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD staff requests that the lead agency quantify criteria pollutant emissions and compare the results to the recommended regional significance thresholds found here: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2. In addition to analyzing regional air quality impacts, the SCAQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LST's can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the proposed project, it is recommended that the lead agency perform a localized analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

In the event that the proposed project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the lead agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("*Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*") can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

In addition, guidance on siting incompatible land uses (such as placing homes near freeways) can be found in the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Perspective*, which can be found at the following internet address: http://www.arb.ca.gov/ch/handbook.pdf. CARB's Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process.

Mitigation Measures

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate these impacts. Pursuant to state CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Several resources are available to assist the Lead Agency with identifying possible mitigation measures for the project, including:

- Chapter 11 of the SCAQMD *CEQA Air Quality Handbook*
- SCAQMD's CEQA web pages at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies.
- CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* available here: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.
- SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook for controlling construction-related emissions
- Other measures to reduce air quality impacts from land use projects can be found in the SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. This document can be found at the following internet address: http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf?sfvrsn=4.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD's webpage (http://www.aqmd.gov).

The SCAQMD staff is available to work with the Lead Agency to ensure that project emissions are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at Bradlein@aqmd.gov or call me at (909) 396-2716.

Sincerely,

Barbara Radlein

Barbara Radlein
Program Supervisor
Planning, Rule Development & Area Sources

LAC150630-14
Control Number

APPENDIX B

Air Quality Data

Construction Emissions

Phase 1

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	220.55	1000sqft	5.00	220,550.00	0
Unrefrigerated Warehouse-No Rail	455.95	1000sqft	7.20	455,949.00	0
Unrefrigerated Warehouse-No Rail	366.37	1000sqft	6.30	366,371.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 31

Climate Zone 9 **Operational Year** 2019

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Off-road Equipment - project specific

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition - project specific

Grading - project

Land Use Change -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	1564305	0
tblConstructionPhase	NumDays	20.00	131.00
tblConstructionPhase	NumDays	30.00	22.00
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	PhaseEndDate	11/1/2016	9/30/2016
tblConstructionPhase	PhaseStartDate	10/1/2016	9/1/2016
tblGrading	MaterialImported	0.00	95,000.00
tblLandUse	LandUseSquareFeet	366,370.00	366,371.00
tblLandUse	LandUseSquareFeet	455,950.00	455,949.00
tblLandUse	LotAcreage	5.06	5.00
tblLandUse	LotAcreage	8.41	6.30
tblLandUse	LotAcreage	10.47	7.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	980.30	772.98
tblTripsAndVMT	HaulingTripNumber	11,875.00	0.00
tblTripsAndVMT	HaulingTripNumber	4,745.00	12,900.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	10.00	18.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblWater	IndoorWaterUseRate	241,163,687.50	190,161,500.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.6054	7.1067	5.4117	9.3300e-003	1.2106	0.2902	1.5008	0.4066	0.2688	0.6754	0.0000	857.5929	857.5929	0.1165	0.0000	860.0386
Total	**0.6054**	**7.1067**	**5.4117**	**9.3300e-003**	**1.2106**	**0.2902**	**1.5008**	**0.4066**	**0.2688**	**0.6754**	**0.0000**	**857.5929**	**857.5929**	**0.1165**	**0.0000**	**860.0386**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.6054	7.1067	5.4117	9.3300e-003	0.5532	0.2902	0.8434	0.1807	0.2688	0.4495	0.0000	857.5924	857.5924	0.1165	0.0000	860.0381
Total	**0.6054**	**7.1067**	**5.4117**	**9.3300e-003**	**0.5532**	**0.2902**	**0.8434**	**0.1807**	**0.2688**	**0.4495**	**0.0000**	**857.5924**	**857.5924**	**0.1165**	**0.0000**	**860.0381**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	54.31	0.00	43.80	55.55	0.00	33.44	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	3/31/2016	5	65	
2	Demolition	Demolition	4/1/2016	9/30/2016	5	131	
3	Grading	Grading	9/1/2016	9/30/2016	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 66

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	2	8.00	174	0.41
Grading	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	18.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	12,900.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3968	0.0000	0.3968	0.2160	0.0000	0.2160	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1026	1.1132	0.8383	7.8000e-004		0.0582	0.0582		0.0536	0.0536	0.0000	73.5383	73.5383	0.0222	0.0000	74.0041
Total	**0.1026**	**1.1132**	**0.8383**	**7.8000e-004**	**0.3968**	**0.0582**	**0.4551**	**0.2160**	**0.0536**	**0.2696**	**0.0000**	**73.5383**	**73.5383**	**0.0222**	**0.0000**	**74.0041**

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	2.8800e-003	0.0293	0.0378	7.0000e-005	2.0000e-003	4.6000e-004	2.4600e-003	5.7000e-004	4.3000e-004	1.0000e-003	0.0000	6.4056	6.4056	5.0000e-005	0.0000	6.4066
Worker	2.3500e-003	3.4500e-003	0.0359	8.0000e-005	6.4200e-003	5.0000e-005	6.4700e-003	1.7000e-003	5.0000e-005	1.7500e-003	0.0000	6.0131	6.0131	3.2000e-004	0.0000	6.0199
Total	**5.2300e-003**	**0.0328**	**0.0737**	**1.5000e-004**	**8.4200e-003**	**5.1000e-004**	**8.9300e-003**	**2.2700e-003**	**4.8000e-004**	**2.7500e-003**	**0.0000**	**12.4187**	**12.4187**	**3.7000e-004**	**0.0000**	**12.4265**

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					0.1548	0.0000	0.1548	0.0842	0.0000	0.0842	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1026	1.1132	0.8383	7.8000e-004		0.0582	0.0582		0.0536	0.0536	0.0000	73.5382	73.5382	0.0222	0.0000	74.0040
Total	**0.1026**	**1.1132**	**0.8383**	**7.8000e-004**	**0.1548**	**0.0582**	**0.2130**	**0.0842**	**0.0536**	**0.1378**	**0.0000**	**73.5382**	**73.5382**	**0.0222**	**0.0000**	**74.0040**

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	2.8800e-003	0.0293	0.0378	7.0000e-005	2.0000e-003	4.6000e-004	2.4600e-003	5.7000e-004	4.3000e-004	1.0000e-003	0.0000	6.4056	6.4056	5.0000e-005	0.0000	6.4066
Worker	2.3500e-003	3.4500e-003	0.0359	8.0000e-005	6.4200e-003	5.0000e-005	6.4700e-003	1.7000e-003	5.0000e-005	1.7500e-003	0.0000	6.0131	6.0131	3.2000e-004	0.0000	6.0199
Total	**5.2300e-003**	**0.0328**	**0.0737**	**1.5000e-004**	**8.4200e-003**	**5.1000e-004**	**8.9300e-003**	**2.2700e-003**	**4.8000e-004**	**2.7500e-003**	**0.0000**	**12.4187**	**12.4187**	**3.7000e-004**	**0.0000**	**12.4265**

3.3 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5135	0.0000	0.5135	0.0777	0.0000	0.0777	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2808	2.9905	2.2945	2.6100e-003		0.1501	0.1501		0.1399	0.1399	0.0000	242.9877	242.9877	0.0661	0.0000	244.3754
Total	**0.2808**	**2.9905**	**2.2945**	**2.6100e-003**	**0.5135**	**0.1501**	**0.6636**	**0.0777**	**0.1399**	**0.2177**	**0.0000**	**242.9877**	**242.9877**	**0.0661**	**0.0000**	**244.3754**

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	0.1148	1.8636	1.4086	4.7500e-003	0.1106	0.0281	0.1387	0.0303	0.0258	0.0562	0.0000	434.4092	434.4092	3.1100e-003	0.0000	434.4745
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9500e-003	5.8000e-003	0.0603	1.3000e-004	0.0108	9.0000e-005	0.0109	2.8600e-003	8.0000e-005	2.9500e-003	0.0000	10.0989	10.0989	5.4000e-004	0.0000	10.1103
Total	**0.1188**	**1.8694**	**1.4688**	**4.8800e-003**	**0.1214**	**0.0282**	**0.1495**	**0.0332**	**0.0259**	**0.0591**	**0.0000**	**444.5081**	**444.5081**	**3.6500e-003**	**0.0000**	**444.5848**

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					0.2002	0.0000	0.2002	0.0303	0.0000	0.0303	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2808	2.9905	2.2945	2.6100e-003		0.1501	0.1501		0.1399	0.1399	0.0000	242.9874	242.9874	0.0661	0.0000	244.3751
Total	**0.2808**	**2.9905**	**2.2945**	**2.6100e-003**	**0.2002**	**0.1501**	**0.3504**	**0.0303**	**0.1399**	**0.1703**	**0.0000**	**242.9874**	**242.9874**	**0.0661**	**0.0000**	**244.3751**

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	0.1148	1.8636	1.4086	4.7500e-003	0.1106	0.0281	0.1387	0.0303	0.0258	0.0562	0.0000	434.4092	434.4092	3.1100e-003	0.0000	434.4745
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9500e-003	5.8000e-003	0.0603	1.3000e-004	0.0108	9.0000e-005	0.0109	2.8600e-003	8.0000e-005	2.9500e-003	0.0000	10.0989	10.0989	5.4000e-004	0.0000	10.1103
Total	**0.1188**	**1.8694**	**1.4688**	**4.8800e-003**	**0.1214**	**0.0282**	**0.1495**	**0.0332**	**0.0259**	**0.0591**	**0.0000**	**444.5081**	**444.5081**	**3.6500e-003**	**0.0000**	**444.5848**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1675	0.0000	0.1675	0.0766	0.0000	0.0766	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0961	1.0897	0.7101	8.5000e-004		0.0529	0.0529		0.0487	0.0487	0.0000	79.7107	79.7107	0.0240	0.0000	80.2156
Total	**0.0961**	**1.0897**	**0.7101**	**8.5000e-004**	**0.1675**	**0.0529**	**0.2204**	**0.0766**	**0.0487**	**0.1253**	**0.0000**	**79.7107**	**79.7107**	**0.0240**	**0.0000**	**80.2156**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.8000e-004	9.9300e-003	0.0128	2.0000e-005	6.8000e-004	1.6000e-004	8.3000e-004	1.9000e-004	1.4000e-004	3.4000e-004	0.0000	2.1681	2.1681	2.0000e-005	0.0000	2.1684
Worker	8.8000e-004	1.3000e-003	0.0135	3.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2613	2.2613	1.2000e-004	0.0000	2.2639
Total	**1.8600e-003**	**0.0112**	**0.0263**	**5.0000e-005**	**3.0900e-003**	**1.8000e-004**	**3.2600e-003**	**8.3000e-004**	**1.6000e-004**	**1.0000e-003**	**0.0000**	**4.4294**	**4.4294**	**1.4000e-004**	**0.0000**	**4.4323**

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					0.0653	0.0000	0.0653	0.0299	0.0000	0.0299	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0961	1.0897	0.7101	8.5000e-004		0.0529	0.0529		0.0487	0.0487	0.0000	79.7106	79.7106	0.0240	0.0000	80.2155
Total	**0.0961**	**1.0897**	**0.7101**	**8.5000e-004**	**0.0653**	**0.0529**	**0.1183**	**0.0299**	**0.0487**	**0.0786**	**0.0000**	**79.7106**	**79.7106**	**0.0240**	**0.0000**	**80.2155**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.8000e-004	9.9300e-003	0.0128	2.0000e-005	6.8000e-004	1.6000e-004	8.3000e-004	1.9000e-004	1.4000e-004	3.4000e-004	0.0000	2.1681	2.1681	2.0000e-005	0.0000	2.1684
Worker	8.8000e-004	1.3000e-003	0.0135	3.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2613	2.2613	1.2000e-004	0.0000	2.2639
Total	**1.8600e-003**	**0.0112**	**0.0263**	**5.0000e-005**	**3.0900e-003**	**1.8000e-004**	**3.2600e-003**	**8.3000e-004**	**1.6000e-004**	**1.0000e-003**	**0.0000**	**4.4294**	**4.4294**	**1.4000e-004**	**0.0000**	**4.4323**

Phase 1_Tier 3 Mitigation

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	220.55	1000sqft	5.00	220,550.00	0
Unrefrigerated Warehouse-No Rail	455.95	1000sqft	7.20	455,949.00	0
Unrefrigerated Warehouse-No Rail	366.37	1000sqft	6.30	366,371.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Off-road Equipment - project specific

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition - project specific

Grading - project

Land Use Change -

Construction Off-road Equipment Mitigation - N

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	1564305	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	131.00
tblConstructionPhase	NumDays	30.00	22.00
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	PhaseEndDate	11/1/2016	9/30/2016
tblConstructionPhase	PhaseStartDate	10/1/2016	9/1/2016
tblGrading	MaterialImported	0.00	95,000.00
tblLandUse	LandUseSquareFeet	366,370.00	366,371.00
tblLandUse	LandUseSquareFeet	455,950.00	455,949.00
tblLandUse	LotAcreage	5.06	5.00
tblLandUse	LotAcreage	8.41	6.30
tblLandUse	LotAcreage	10.47	7.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	980.30	772.98
tblTripsAndVMT	HaulingTripNumber	11,875.00	0.00
tblTripsAndVMT	HaulingTripNumber	4,745.00	12,900.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	10.00	18.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblWater	IndoorWaterUseRate	241,163,687.50	190,161,500.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.6054	7.1067	5.4117	9.3300e-003	1.2106	0.2902	1.5008	0.4066	0.2688	0.6754	0.0000	857.5929	857.5929	0.1165	0.0000	860.0386
Total	**0.6054**	**7.1067**	**5.4117**	**9.3300e-003**	**1.2106**	**0.2902**	**1.5008**	**0.4066**	**0.2688**	**0.6754**	**0.0000**	**857.5929**	**857.5929**	**0.1165**	**0.0000**	**860.0386**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.2276	3.9319	4.2000	9.3300e-003	0.5532	0.1227	0.6759	0.1807	0.1204	0.3011	0.0000	857.5924	857.5924	0.1165	0.0000	860.0381
Total	**0.2276**	**3.9319**	**4.2000**	**9.3300e-003**	**0.5532**	**0.1227**	**0.6759**	**0.1807**	**0.1204**	**0.3011**	**0.0000**	**857.5924**	**857.5924**	**0.1165**	**0.0000**	**860.0381**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**62.41**	**44.67**	**22.39**	**0.00**	**54.31**	**57.73**	**54.97**	**55.55**	**55.23**	**55.42**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	3/31/2016	5	65	
2	Demolition	Demolition	4/1/2016	9/30/2016	5	131	
3	Grading	Grading	9/1/2016	9/30/2016	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 66

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	2	8.00	174	0.41
Grading	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	18.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	12,900.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3968	0.0000	0.3968	0.2160	0.0000	0.2160	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.1026	1.1132	0.8383	7.8000e-004		0.0582	0.0582		0.0536	0.0536	0.0000	73.5383	73.5383	0.0222	0.0000	74.0041
Total	**0.1026**	**1.1132**	**0.8383**	**7.8000e-004**	**0.3968**	**0.0582**	**0.4551**	**0.2160**	**0.0536**	**0.2696**	**0.0000**	**73.5383**	**73.5383**	**0.0222**	**0.0000**	**74.0041**

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	2.8800e-003	0.0293	0.0378	7.0000e-005	2.0000e-003	4.6000e-004	2.4600e-003	5.7000e-004	4.3000e-004	1.0000e-003	0.0000	6.4056	6.4056	5.0000e-005	0.0000	6.4066
Worker	2.3500e-003	3.4500e-003	0.0359	8.0000e-005	6.4200e-003	5.0000e-005	6.4700e-003	1.7000e-003	5.0000e-005	1.7500e-003	0.0000	6.0131	6.0131	3.2000e-004	0.0000	6.0199
Total	**5.2300e-003**	**0.0328**	**0.0737**	**1.5000e-004**	**8.4200e-003**	**5.1000e-004**	**8.9300e-003**	**2.2700e-003**	**4.8000e-004**	**2.7500e-003**	**0.0000**	**12.4187**	**12.4187**	**3.7000e-004**	**0.0000**	**12.4265**

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					0.1548	0.0000	0.1548	0.0842	0.0000	0.0842	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0190	0.3840	0.4563	7.8000e-004		0.0182	0.0182		0.0182	0.0182	0.0000	73.5382	73.5382	0.0222	0.0000	74.0040
Total	**0.0190**	**0.3840**	**0.4563**	**7.8000e-004**	**0.1548**	**0.0182**	**0.1729**	**0.0842**	**0.0182**	**0.1024**	**0.0000**	**73.5382**	**73.5382**	**0.0222**	**0.0000**	**74.0040**

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	2.8800e-003	0.0293	0.0378	7.0000e-005	2.0000e-003	4.6000e-004	2.4600e-003	5.7000e-004	4.3000e-004	1.0000e-003	0.0000	6.4056	6.4056	5.0000e-005	0.0000	6.4066
Worker	2.3500e-003	3.4500e-003	0.0359	8.0000e-005	6.4200e-003	5.0000e-005	6.4700e-003	1.7000e-003	5.0000e-005	1.7500e-003	0.0000	6.0131	6.0131	3.2000e-004	0.0000	6.0199
Total	**5.2300e-003**	**0.0328**	**0.0737**	**1.5000e-004**	**8.4200e-003**	**5.1000e-004**	**8.9300e-003**	**2.2700e-003**	**4.8000e-004**	**2.7500e-003**	**0.0000**	**12.4187**	**12.4187**	**3.7000e-004**	**0.0000**	**12.4265**

3.3 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5135	0.0000	0.5135	0.0777	0.0000	0.0777	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2808	2.9905	2.2945	2.6100e-003		0.1501	0.1501		0.1399	0.1399	0.0000	242.9877	242.9877	0.0661	0.0000	244.3754
Total	**0.2808**	**2.9905**	**2.2945**	**2.6100e-003**	**0.5135**	**0.1501**	**0.6636**	**0.0777**	**0.1399**	**0.2177**	**0.0000**	**242.9877**	**242.9877**	**0.0661**	**0.0000**	**244.3754**

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	0.1148	1.8636	1.4086	4.7500e-003	0.1106	0.0281	0.1387	0.0303	0.0258	0.0562	0.0000	434.4092	434.4092	3.1100e-003	0.0000	434.4745
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9500e-003	5.8000e-003	0.0603	1.3000e-004	0.0108	9.0000e-005	0.0109	2.8600e-003	8.0000e-005	2.9500e-003	0.0000	10.0989	10.0989	5.4000e-004	0.0000	10.1103
Total	**0.1188**	**1.8694**	**1.4688**	**4.8800e-003**	**0.1214**	**0.0282**	**0.1495**	**0.0332**	**0.0259**	**0.0591**	**0.0000**	**444.5081**	**444.5081**	**3.6500e-003**	**0.0000**	**444.5848**

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					0.2002	0.0000	0.2002	0.0303	0.0000	0.0303	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0621	1.2289	1.6549	2.6100e-003		0.0578	0.0578		0.0578	0.0578	0.0000	242.9874	242.9874	0.0661	0.0000	244.3751
Total	**0.0621**	**1.2289**	**1.6549**	**2.6100e-003**	**0.2002**	**0.0578**	**0.2580**	**0.0303**	**0.0578**	**0.0881**	**0.0000**	**242.9874**	**242.9874**	**0.0661**	**0.0000**	**244.3751**

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	0.1148	1.8636	1.4086	4.7500e-003	0.1106	0.0281	0.1387	0.0303	0.0258	0.0562	0.0000	434.4092	434.4092	3.1100e-003	0.0000	434.4745
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9500e-003	5.8000e-003	0.0603	1.3000e-004	0.0108	9.0000e-005	0.0109	2.8600e-003	8.0000e-005	2.9500e-003	0.0000	10.0989	10.0989	5.4000e-004	0.0000	10.1103
Total	**0.1188**	**1.8694**	**1.4688**	**4.8800e-003**	**0.1214**	**0.0282**	**0.1495**	**0.0332**	**0.0259**	**0.0591**	**0.0000**	**444.5081**	**444.5081**	**3.6500e-003**	**0.0000**	**444.5848**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1675	0.0000	0.1675	0.0766	0.0000	0.0766	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0961	1.0897	0.7101	8.5000e-004		0.0529	0.0529		0.0487	0.0487	0.0000	79.7107	79.7107	0.0240	0.0000	80.2156
Total	**0.0961**	**1.0897**	**0.7101**	**8.5000e-004**	**0.1675**	**0.0529**	**0.2204**	**0.0766**	**0.0487**	**0.1253**	**0.0000**	**79.7107**	**79.7107**	**0.0240**	**0.0000**	**80.2156**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.8000e-004	9.9300e-003	0.0128	2.0000e-005	6.8000e-004	1.6000e-004	8.3000e-004	1.9000e-004	1.4000e-004	3.4000e-004	0.0000	2.1681	2.1681	2.0000e-005	0.0000	2.1684
Worker	8.8000e-004	1.3000e-003	0.0135	3.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2613	2.2613	1.2000e-004	0.0000	2.2639
Total	**1.8600e-003**	**0.0112**	**0.0263**	**5.0000e-005**	**3.0900e-003**	**1.8000e-004**	**3.2600e-003**	**8.3000e-004**	**1.6000e-004**	**1.0000e-003**	**0.0000**	**4.4294**	**4.4294**	**1.4000e-004**	**0.0000**	**4.4323**

Mitigated Construction On-Site

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
	tons/yr										MT/yr					
Fugitive Dust					0.0653	0.0000	0.0653	0.0299	0.0000	0.0299	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0207	0.4056	0.5200	8.5000e-004		0.0179	0.0179		0.0179	0.0179	0.0000	79.7106	79.7106	0.0240	0.0000	80.2155
Total	**0.0207**	**0.4056**	**0.5200**	**8.5000e-004**	**0.0653**	**0.0179**	**0.0832**	**0.0299**	**0.0179**	**0.0477**	**0.0000**	**79.7106**	**79.7106**	**0.0240**	**0.0000**	**80.2155**

Mitigated Construction Off-Site

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
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.8000e-004	9.9300e-003	0.0128	2.0000e-005	6.8000e-004	1.6000e-004	8.3000e-004	1.9000e-004	1.4000e-004	3.4000e-004	0.0000	2.1681	2.1681	2.0000e-005	0.0000	2.1684
Worker	8.8000e-004	1.3000e-003	0.0135	3.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2613	2.2613	1.2000e-004	0.0000	2.2639
Total	**1.8600e-003**	**0.0112**	**0.0263**	**5.0000e-005**	**3.0900e-003**	**1.8000e-004**	**3.2600e-003**	**8.3000e-004**	**1.6000e-004**	**1.0000e-003**	**0.0000**	**4.4294**	**4.4294**	**1.4000e-004**	**0.0000**	**4.4323**

Phase 1_Concrete Crushing

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	220.55	1000sqft	5.00	220,550.00	0
Unrefrigerated Warehouse-No Rail	455.95	1000sqft	7.20	455,949.00	0
Unrefrigerated Warehouse-No Rail	366.37	1000sqft	6.30	366,371.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Off-road Equipment - project specific

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition - project specific

Grading - project

Land Use Change -

Construction Off-road Equipment Mitigation - mitigation

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	1564305	0
tblConstructionPhase	NumDays	20.00	131.00
tblConstructionPhase	NumDays	30.00	22.00
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	PhaseEndDate	11/1/2016	9/30/2016
tblConstructionPhase	PhaseStartDate	10/1/2016	9/1/2016
tblGrading	MaterialImported	0.00	95,000.00
tblLandUse	LandUseSquareFeet	366,370.00	366,371.00
tblLandUse	LandUseSquareFeet	455,950.00	455,949.00
tblLandUse	LotAcreage	5.06	5.00
tblLandUse	LotAcreage	8.41	6.30
tblLandUse	LotAcreage	10.47	7.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	980.30	772.98
tblTripsAndVMT	HaulingTripNumber	11,875.00	0.00
tblTripsAndVMT	HaulingTripNumber	4,745.00	9,500.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	10.00	18.00
tblTripsAndVMT	WorkerTripNumber	18.00	15.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblWater	IndoorWaterUseRate	241,163,687.50	190,161,500.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.6303	6.9703	5.3333	8.5300e-003	1.1815	0.3118	1.4933	0.3986	0.2910	0.6897	0.0000	782.5842	782.5842	0.1202	0.0000	785.1076
Total	**0.6303**	**6.9703**	**5.3333**	**8.5300e-003**	**1.1815**	**0.3118**	**1.4933**	**0.3986**	**0.2910**	**0.6897**	**0.0000**	**782.5842**	**782.5842**	**0.1202**	**0.0000**	**785.1076**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.6303	6.9702	5.3333	8.5300e-003	0.5240	0.3118	0.8359	0.1727	0.2910	0.4638	0.0000	782.5837	782.5837	0.1202	0.0000	785.1071
Total	**0.6303**	**6.9702**	**5.3333**	**8.5300e-003**	**0.5240**	**0.3118**	**0.8359**	**0.1727**	**0.2910**	**0.4638**	**0.0000**	**782.5837**	**782.5837**	**0.1202**	**0.0000**	**785.1071**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	55.64	0.00	44.03	56.67	0.00	32.76	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	4.0718	1.2000e-004	0.0134	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0259	0.0259	7.0000e-005	0.0000	0.0274
Energy	5.1200e-003	0.0465	0.0391	2.8000e-004		3.5400e-003	3.5400e-003		3.5400e-003	3.5400e-003	0.0000	1,351.8189	1,351.8189	0.0608	0.0133	1,357.2193
Mobile	1.6172	5.7947	20.8983	0.0639	4.3878	0.0893	4.4772	1.1742	0.0824	1.2566	0.0000	4,651.9956	4,651.9956	0.1671	0.0000	4,655.5048
Waste						0.0000	0.0000		0.0000	0.0000	156.9080	0.0000	156.9080	9.2730	0.0000	351.6408
Water						0.0000	0.0000		0.0000	0.0000	60.3295	708.5758	768.9053	6.2290	0.1531	947.1594
Total	**5.6941**	**5.8414**	**20.9508**	**0.0642**	**4.3878**	**0.0929**	**4.4808**	**1.1742**	**0.0860**	**1.2602**	**217.2374**	**6,712.4161**	**6,929.6536**	**15.7299**	**0.1664**	**7,311.5516**

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	4.0718	1.2000e-004	0.0134	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0259	0.0259	7.0000e-005	0.0000	0.0274
Energy	5.1200e-003	0.0465	0.0391	2.8000e-004		3.5400e-003	3.5400e-003		3.5400e-003	3.5400e-003	0.0000	1,351.8189	1,351.8189	0.0608	0.0133	1,357.2193
Mobile	1.6172	5.7947	20.8983	0.0639	4.3878	0.0893	4.4772	1.1742	0.0824	1.2566	0.0000	4,651.9956	4,651.9956	0.1671	0.0000	4,655.5048
Waste						0.0000	0.0000		0.0000	0.0000	156.9080	0.0000	156.9080	9.2730	0.0000	351.6408
Water						0.0000	0.0000		0.0000	0.0000	60.3295	708.5758	768.9053	6.2279	0.1528	947.0631
Total	**5.6941**	**5.8414**	**20.9508**	**0.0642**	**4.3878**	**0.0929**	**4.4808**	**1.1742**	**0.0860**	**1.2602**	**217.2374**	**6,712.4161**	**6,929.6536**	**15.7288**	**0.1661**	**7,311.4554**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.14	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	3/31/2016	5	65	
2	Demolition	Demolition	4/1/2016	9/30/2016	5	131	
3	Grading	Grading	9/1/2016	9/30/2016	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 66

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crushing/Proc. Equipment	1	8.00	85	0.78
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

Grading	Excavators	2	8.00	162	0.38
Grading	Graders	2	8.00	174	0.41
Grading	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	18.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	7	15.00	0.00	9,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3968	0.0000	0.3968	0.2160	0.0000	0.2160	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1026	1.1132	0.8383	7.8000e-004		0.0582	0.0582		0.0536	0.0536	0.0000	73.5383	73.5383	0.0222	0.0000	74.0041
Total	**0.1026**	**1.1132**	**0.8383**	**7.8000e-004**	**0.3968**	**0.0582**	**0.4551**	**0.2160**	**0.0536**	**0.2696**	**0.0000**	**73.5383**	**73.5383**	**0.0222**	**0.0000**	**74.0041**

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	2.8800e-003	0.0293	0.0378	7.0000e-005	2.0000e-003	4.6000e-004	2.4600e-003	5.7000e-004	4.3000e-004	1.0000e-003	0.0000	6.4056	6.4056	5.0000e-005	0.0000	6.4066
Worker	2.3500e-003	3.4500e-003	0.0359	8.0000e-005	6.4200e-003	5.0000e-005	6.4700e-003	1.7000e-003	5.0000e-005	1.7500e-003	0.0000	6.0131	6.0131	3.2000e-004	0.0000	6.0199
Total	**5.2300e-003**	**0.0328**	**0.0737**	**1.5000e-004**	**8.4200e-003**	**5.1000e-004**	**8.9300e-003**	**2.2700e-003**	**4.8000e-004**	**2.7500e-003**	**0.0000**	**12.4187**	**12.4187**	**3.7000e-004**	**0.0000**	**12.4265**

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					0.1548	0.0000	0.1548	0.0842	0.0000	0.0842	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1026	1.1132	0.8383	7.8000e-004		0.0582	0.0582		0.0536	0.0536	0.0000	73.5382	73.5382	0.0222	0.0000	74.0040
Total	**0.1026**	**1.1132**	**0.8383**	**7.8000e-004**	**0.1548**	**0.0582**	**0.2130**	**0.0842**	**0.0536**	**0.1378**	**0.0000**	**73.5382**	**73.5382**	**0.0222**	**0.0000**	**74.0040**

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	2.8800e-003	0.0293	0.0378	7.0000e-005	2.0000e-003	4.6000e-004	2.4600e-003	5.7000e-004	4.3000e-004	1.0000e-003	0.0000	6.4056	6.4056	5.0000e-005	0.0000	6.4066
Worker	2.3500e-003	3.4500e-003	0.0359	8.0000e-005	6.4200e-003	5.0000e-005	6.4700e-003	1.7000e-003	5.0000e-005	1.7500e-003	0.0000	6.0131	6.0131	3.2000e-004	0.0000	6.0199
Total	**5.2300e-003**	**0.0328**	**0.0737**	**1.5000e-004**	**8.4200e-003**	**5.1000e-004**	**8.9300e-003**	**2.2700e-003**	**4.8000e-004**	**2.7500e-003**	**0.0000**	**12.4187**	**12.4187**	**3.7000e-004**	**0.0000**	**12.4265**

3.3 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5135	0.0000	0.5135	0.0777	0.0000	0.0777	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3360	3.3452	2.5873	3.0700e-003		0.1792	0.1792		0.1690	0.1690	0.0000	282.4745	282.4745	0.0706	0.0000	283.9570
Total	**0.3360**	**3.3452**	**2.5873**	**3.0700e-003**	**0.5135**	**0.1792**	**0.6926**	**0.0777**	**0.1690**	**0.2467**	**0.0000**	**282.4745**	**282.4745**	**0.0706**	**0.0000**	**283.9570**

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	0.0845	1.3724	1.0373	3.5000e-003	0.0814	0.0207	0.1021	0.0223	0.0190	0.0414	0.0000	319.9138	319.9138	2.2900e-003	0.0000	319.9618
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9500e-003	5.8000e-003	0.0603	1.3000e-004	0.0108	9.0000e-005	0.0109	2.8600e-003	8.0000e-005	2.9500e-003	0.0000	10.0989	10.0989	5.4000e-004	0.0000	10.1103
Total	**0.0885**	**1.3782**	**1.0976**	**3.6300e-003**	**0.0922**	**0.0208**	**0.1130**	**0.0252**	**0.0191**	**0.0443**	**0.0000**	**330.0126**	**330.0126**	**2.8300e-003**	**0.0000**	**330.0721**

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					0.2002	0.0000	0.2002	0.0303	0.0000	0.0303	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3360	3.3452	2.5873	3.0700e-003		0.1792	0.1792		0.1690	0.1690	0.0000	282.4742	282.4742	0.0706	0.0000	283.9567
Total	**0.3360**	**3.3452**	**2.5873**	**3.0700e-003**	**0.2002**	**0.1792**	**0.3794**	**0.0303**	**0.1690**	**0.1993**	**0.0000**	**282.4742**	**282.4742**	**0.0706**	**0.0000**	**283.9567**

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	0.0845	1.3724	1.0373	3.5000e-003	0.0814	0.0207	0.1021	0.0223	0.0190	0.0414	0.0000	319.9138	319.9138	2.2900e-003	0.0000	319.9618
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9500e-003	5.8000e-003	0.0603	1.3000e-004	0.0108	9.0000e-005	0.0109	2.8600e-003	8.0000e-005	2.9500e-003	0.0000	10.0989	10.0989	5.4000e-004	0.0000	10.1103
Total	**0.0885**	**1.3782**	**1.0976**	**3.6300e-003**	**0.0922**	**0.0208**	**0.1130**	**0.0252**	**0.0191**	**0.0443**	**0.0000**	**330.0126**	**330.0126**	**2.8300e-003**	**0.0000**	**330.0721**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1675	0.0000	0.1675	0.0766	0.0000	0.0766	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0961	1.0897	0.7101	8.5000e-004		0.0529	0.0529		0.0487	0.0487	0.0000	79.7107	79.7107	0.0240	0.0000	80.2156
Total	**0.0961**	**1.0897**	**0.7101**	**8.5000e-004**	**0.1675**	**0.0529**	**0.2204**	**0.0766**	**0.0487**	**0.1253**	**0.0000**	**79.7107**	**79.7107**	**0.0240**	**0.0000**	**80.2156**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.8000e-004	9.9300e-003	0.0128	2.0000e-005	6.8000e-004	1.6000e-004	8.3000e-004	1.9000e-004	1.4000e-004	3.4000e-004	0.0000	2.1681	2.1681	2.0000e-005	0.0000	2.1684
Worker	8.8000e-004	1.3000e-003	0.0135	3.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2613	2.2613	1.2000e-004	0.0000	2.2639
Total	**1.8600e-003**	**0.0112**	**0.0263**	**5.0000e-005**	**3.0900e-003**	**1.8000e-004**	**3.2600e-003**	**8.3000e-004**	**1.6000e-004**	**1.0000e-003**	**0.0000**	**4.4294**	**4.4294**	**1.4000e-004**	**0.0000**	**4.4323**

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					0.0653	0.0000	0.0653	0.0299	0.0000	0.0299	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0961	1.0897	0.7101	8.5000e-004		0.0529	0.0529		0.0487	0.0487	0.0000	79.7106	79.7106	0.0240	0.0000	80.2155
Total	**0.0961**	**1.0897**	**0.7101**	**8.5000e-004**	**0.0653**	**0.0529**	**0.1183**	**0.0299**	**0.0487**	**0.0786**	**0.0000**	**79.7106**	**79.7106**	**0.0240**	**0.0000**	**80.2155**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.8000e-004	9.9300e-003	0.0128	2.0000e-005	6.8000e-004	1.6000e-004	8.3000e-004	1.9000e-004	1.4000e-004	3.4000e-004	0.0000	2.1681	2.1681	2.0000e-005	0.0000	2.1684
Worker	8.8000e-004	1.3000e-003	0.0135	3.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2613	2.2613	1.2000e-004	0.0000	2.2639
Total	**1.8600e-003**	**0.0112**	**0.0263**	**5.0000e-005**	**3.0900e-003**	**1.8000e-004**	**3.2600e-003**	**8.3000e-004**	**1.6000e-004**	**1.0000e-003**	**0.0000**	**4.4294**	**4.4294**	**1.4000e-004**	**0.0000**	**4.4323**

Phase 1_Concrete Crushing_Tier 3 Mitigation

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	220.55	1000sqft	5.00	220,550.00	0
Unrefrigerated Warehouse-No Rail	455.95	1000sqft	7.20	455,949.00	0
Unrefrigerated Warehouse-No Rail	366.37	1000sqft	6.30	366,371.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Off-road Equipment - project specific

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition - project specific

Grading - project

Land Use Change -

Construction Off-road Equipment Mitigation - mitigation

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	1564305	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	131.00
tblConstructionPhase	NumDays	30.00	22.00
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	PhaseEndDate	11/1/2016	9/30/2016
tblConstructionPhase	PhaseStartDate	10/1/2016	9/1/2016
tblGrading	MaterialImported	0.00	95,000.00
tblLandUse	LandUseSquareFeet	366,370.00	366,371.00

tblLandUse	LandUseSquareFeet	455,950.00	455,949.00
tblLandUse	LotAcreage	5.06	5.00
tblLandUse	LotAcreage	8.41	6.30
tblLandUse	LotAcreage	10.47	7.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	980.30	772.98
tblTripsAndVMT	HaulingTripNumber	11,875.00	0.00
tblTripsAndVMT	HaulingTripNumber	4,745.00	9,500.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	10.00	18.00
tblTripsAndVMT	WorkerTripNumber	18.00	15.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblWater	IndoorWaterUseRate	241,163,687.50	190,161,500.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.6303	6.9703	5.3333	8.5300e-003	1.1815	0.3118	1.4933	0.3986	0.2910	0.6897	0.0000	782.5842	782.5842	0.1202	0.0000	785.1076
Total	**0.6303**	**6.9703**	**5.3333**	**8.5300e-003**	**1.1815**	**0.3118**	**1.4933**	**0.3986**	**0.2910**	**0.6897**	**0.0000**	**782.5842**	**782.5842**	**0.1202**	**0.0000**	**785.1076**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.2065	3.6506	4.1121	8.5300e-003	0.5240	0.1300	0.6540	0.1727	0.1283	0.3010	0.0000	782.5837	782.5837	0.1202	0.0000	785.1071
Total	**0.2065**	**3.6506**	**4.1121**	**8.5300e-003**	**0.5240**	**0.1300**	**0.6540**	**0.1727**	**0.1283**	**0.3010**	**0.0000**	**782.5837**	**782.5837**	**0.1202**	**0.0000**	**785.1071**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**67.24**	**47.63**	**22.90**	**0.00**	**55.64**	**58.32**	**56.20**	**56.67**	**55.93**	**56.36**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	3/31/2016	5	65	
2	Demolition	Demolition	4/1/2016	9/30/2016	5	131	
3	Grading	Grading	9/1/2016	9/30/2016	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 66

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crushing/Proc. Equipment	1	8.00	85	0.78
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	2	8.00	174	0.41
Grading	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	18.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	7	15.00	0.00	9,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3968	0.0000	0.3968	0.2160	0.0000	0.2160	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1026	1.1132	0.8383	7.8000e-004		0.0582	0.0582		0.0536	0.0536	0.0000	73.5383	73.5383	0.0222	0.0000	74.0041
Total	**0.1026**	**1.1132**	**0.8383**	**7.8000e-004**	**0.3968**	**0.0582**	**0.4551**	**0.2160**	**0.0536**	**0.2696**	**0.0000**	**73.5383**	**73.5383**	**0.0222**	**0.0000**	**74.0041**

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	2.8800e-003	0.0293	0.0378	7.0000e-005	2.0000e-003	4.6000e-004	2.4600e-003	5.7000e-004	4.3000e-004	1.0000e-003	0.0000	6.4056	6.4056	5.0000e-005	0.0000	6.4066
Worker	2.3500e-003	3.4500e-003	0.0359	8.0000e-005	6.4200e-003	5.0000e-005	6.4700e-003	1.7000e-003	5.0000e-005	1.7500e-003	0.0000	6.0131	6.0131	3.2000e-004	0.0000	6.0199
Total	**5.2300e-003**	**0.0328**	**0.0737**	**1.5000e-004**	**8.4200e-003**	**5.1000e-004**	**8.9300e-003**	**2.2700e-003**	**4.8000e-004**	**2.7500e-003**	**0.0000**	**12.4187**	**12.4187**	**3.7000e-004**	**0.0000**	**12.4265**

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					0.1548	0.0000	0.1548	0.0842	0.0000	0.0842	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0190	0.3840	0.4563	7.8000e-004		0.0182	0.0182		0.0182	0.0182	0.0000	73.5382	73.5382	0.0222	0.0000	74.0040
Total	**0.0190**	**0.3840**	**0.4563**	**7.8000e-004**	**0.1548**	**0.0182**	**0.1729**	**0.0842**	**0.0182**	**0.1024**	**0.0000**	**73.5382**	**73.5382**	**0.0222**	**0.0000**	**74.0040**

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	2.8800e-003	0.0293	0.0378	7.0000e-005	2.0000e-003	4.6000e-004	2.4600e-003	5.7000e-004	4.3000e-004	1.0000e-003	0.0000	6.4056	6.4056	5.0000e-005	0.0000	6.4066
Worker	2.3500e-003	3.4500e-003	0.0359	8.0000e-005	6.4200e-003	5.0000e-005	6.4700e-003	1.7000e-003	5.0000e-005	1.7500e-003	0.0000	6.0131	6.0131	3.2000e-004	0.0000	6.0199
Total	**5.2300e-003**	**0.0328**	**0.0737**	**1.5000e-004**	**8.4200e-003**	**5.1000e-004**	**8.9300e-003**	**2.2700e-003**	**4.8000e-004**	**2.7500e-003**	**0.0000**	**12.4187**	**12.4187**	**3.7000e-004**	**0.0000**	**12.4265**

3.3 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5135	0.0000	0.5135	0.0777	0.0000	0.0777	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3360	3.3452	2.5873	3.0700e-003		0.1792	0.1792		0.1690	0.1690	0.0000	282.4745	282.4745	0.0706	0.0000	283.9570
Total	**0.3360**	**3.3452**	**2.5873**	**3.0700e-003**	**0.5135**	**0.1792**	**0.6926**	**0.0777**	**0.1690**	**0.2467**	**0.0000**	**282.4745**	**282.4745**	**0.0706**	**0.0000**	**283.9570**

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	0.0845	1.3724	1.0373	3.5000e-003	0.0814	0.0207	0.1021	0.0223	0.0190	0.0414	0.0000	319.9138	319.9138	2.2900e-003	0.0000	319.9618
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9500e-003	5.8000e-003	0.0603	1.3000e-004	0.0108	9.0000e-005	0.0109	2.8600e-003	8.0000e-005	2.9500e-003	0.0000	10.0989	10.0989	5.4000e-004	0.0000	10.1103
Total	**0.0885**	**1.3782**	**1.0976**	**3.6300e-003**	**0.0922**	**0.0208**	**0.1130**	**0.0252**	**0.0191**	**0.0443**	**0.0000**	**330.0126**	**330.0126**	**2.8300e-003**	**0.0000**	**330.0721**

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					0.2002	0.0000	0.2002	0.0303	0.0000	0.0303	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0713	1.4387	1.9382	3.0700e-003		0.0725	0.0725		0.0725	0.0725	0.0000	282.4742	282.4742	0.0706	0.0000	283.9567
Total	**0.0713**	**1.4387**	**1.9382**	**3.0700e-003**	**0.2002**	**0.0725**	**0.2727**	**0.0303**	**0.0725**	**0.1028**	**0.0000**	**282.4742**	**282.4742**	**0.0706**	**0.0000**	**283.9567**

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	0.0845	1.3724	1.0373	3.5000e-003	0.0814	0.0207	0.1021	0.0223	0.0190	0.0414	0.0000	319.9138	319.9138	2.2900e-003	0.0000	319.9618
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9500e-003	5.8000e-003	0.0603	1.3000e-004	0.0108	9.0000e-005	0.0109	2.8600e-003	8.0000e-005	2.9500e-003	0.0000	10.0989	10.0989	5.4000e-004	0.0000	10.1103
Total	**0.0885**	**1.3782**	**1.0976**	**3.6300e-003**	**0.0922**	**0.0208**	**0.1130**	**0.0252**	**0.0191**	**0.0443**	**0.0000**	**330.0126**	**330.0126**	**2.8300e-003**	**0.0000**	**330.0721**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1675	0.0000	0.1675	0.0766	0.0000	0.0766	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0961	1.0897	0.7101	8.5000e-004		0.0529	0.0529		0.0487	0.0487	0.0000	79.7107	79.7107	0.0240	0.0000	80.2156
Total	**0.0961**	**1.0897**	**0.7101**	**8.5000e-004**	**0.1675**	**0.0529**	**0.2204**	**0.0766**	**0.0487**	**0.1253**	**0.0000**	**79.7107**	**79.7107**	**0.0240**	**0.0000**	**80.2156**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.8000e-004	9.9300e-003	0.0128	2.0000e-005	6.8000e-004	1.6000e-004	8.3000e-004	1.9000e-004	1.4000e-004	3.4000e-004	0.0000	2.1681	2.1681	2.0000e-005	0.0000	2.1684
Worker	8.8000e-004	1.3000e-003	0.0135	3.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2613	2.2613	1.2000e-004	0.0000	2.2639
Total	**1.8600e-003**	**0.0112**	**0.0263**	**5.0000e-005**	**3.0900e-003**	**1.8000e-004**	**3.2600e-003**	**8.3000e-004**	**1.6000e-004**	**1.0000e-003**	**0.0000**	**4.4294**	**4.4294**	**1.4000e-004**	**0.0000**	**4.4323**

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					0.0653	0.0000	0.0653	0.0299	0.0000	0.0299	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0207	0.4056	0.5200	8.5000e-004		0.0179	0.0179		0.0179	0.0179	0.0000	79.7106	79.7106	0.0240	0.0000	80.2155
Total	**0.0207**	**0.4056**	**0.5200**	**8.5000e-004**	**0.0653**	**0.0179**	**0.0832**	**0.0299**	**0.0179**	**0.0477**	**0.0000**	**79.7106**	**79.7106**	**0.0240**	**0.0000**	**80.2155**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.8000e-004	9.9300e-003	0.0128	2.0000e-005	6.8000e-004	1.6000e-004	8.3000e-004	1.9000e-004	1.4000e-004	3.4000e-004	0.0000	2.1681	2.1681	2.0000e-005	0.0000	2.1684
Worker	8.8000e-004	1.3000e-003	0.0135	3.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2613	2.2613	1.2000e-004	0.0000	2.2639
Total	**1.8600e-003**	**0.0112**	**0.0263**	**5.0000e-005**	**3.0900e-003**	**1.8000e-004**	**3.2600e-003**	**8.3000e-004**	**1.6000e-004**	**1.0000e-003**	**0.0000**	**4.4294**	**4.4294**	**1.4000e-004**	**0.0000**	**4.4323**

Phase 2

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	18.50	Acre	18.50	805,860.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 31

Climate Zone 9 **Operational Year** 2019

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Needed to add landuse even though most work is being done offsite during this phase.

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition -

Grading - project

Land Use Change -

Construction Off-road Equipment Mitigation - project specific

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	36264	0
tblConstructionPhase	NumDays	300.00	262.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblTripsAndVMT	VendorTripNumber	132.00	10.00
tblTripsAndVMT	WorkerTripNumber	338.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.1412	1.5292	1.1727	1.1400e-003	2.6800e-003	0.0786	0.0813	7.6000e-004	0.0723	0.0731	0.0000	107.0019	107.0019	0.0298	0.0000	107.6267
2017	0.2708	2.9132	2.2550	2.2900e-003	5.3900e-003	0.1484	0.1538	1.5400e-003	0.1366	0.1381	0.0000	211.9639	211.9639	0.0599	0.0000	213.2211
Total	**0.4121**	**4.4425**	**3.4277**	**3.4300e-003**	**8.0700e-003**	**0.2270**	**0.2351**	**2.3000e-003**	**0.2088**	**0.2111**	**0.0000**	**318.9657**	**318.9657**	**0.0896**	**0.0000**	**320.8477**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.1412	1.5292	1.1727	1.1400e-003	2.6800e-003	0.0786	0.0813	7.6000e-004	0.0723	0.0731	0.0000	107.0017	107.0017	0.0298	0.0000	107.6265
2017	0.2708	2.9132	2.2550	2.2900e-003	5.3900e-003	0.1484	0.1538	1.5400e-003	0.1366	0.1381	0.0000	211.9636	211.9636	0.0599	0.0000	213.2208
Total	**0.4121**	**4.4424**	**3.4277**	**3.4300e-003**	**8.0700e-003**	**0.2270**	**0.2351**	**2.3000e-003**	**0.2088**	**0.2111**	**0.0000**	**318.9654**	**318.9654**	**0.0896**	**0.0000**	**320.8474**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Construction	Building Construction	9/1/2016	9/1/2017	5	262	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Construction	Rubber Tired Dozers	2	8.00	255	0.40
Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Construction	4	0.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1374	1.4899	1.1221	1.0400e-003		0.0780	0.0780		0.0717	0.0717	0.0000	98.4282	98.4282	0.0297	0.0000	99.0517
Total	**0.1374**	**1.4899**	**1.1221**	**1.0400e-003**		**0.0780**	**0.0780**		**0.0717**	**0.0717**	**0.0000**	**98.4282**	**98.4282**	**0.0297**	**0.0000**	**99.0517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.8600e-003	0.0393	0.0506	9.0000e-005	2.6800e-003	6.2000e-004	3.3000e-003	7.6000e-004	5.7000e-004	1.3400e-003	0.0000	8.5737	8.5737	6.0000e-005	0.0000	8.5750
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**3.8600e-003**	**0.0393**	**0.0506**	**9.0000e-005**	**2.6800e-003**	**6.2000e-004**	**3.3000e-003**	**7.6000e-004**	**5.7000e-004**	**1.3400e-003**	**0.0000**	**8.5737**	**8.5737**	**6.0000e-005**	**0.0000**	**8.5750**

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	0.1374	1.4899	1.1221	1.0400e-003		0.0780	0.0780		0.0717	0.0717	0.0000	98.4281	98.4281	0.0297	0.0000	99.0516
Total	**0.1374**	**1.4899**	**1.1221**	**1.0400e-003**		**0.0780**	**0.0780**		**0.0717**	**0.0717**	**0.0000**	**98.4281**	**98.4281**	**0.0297**	**0.0000**	**99.0516**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.8600e-003	0.0393	0.0506	9.0000e-005	2.6800e-003	6.2000e-004	3.3000e-003	7.6000e-004	5.7000e-004	1.3400e-003	0.0000	8.5737	8.5737	6.0000e-005	0.0000	8.5750
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.8600e-003**	**0.0393**	**0.0506**	**9.0000e-005**	**2.6800e-003**	**6.2000e-004**	**3.3000e-003**	**7.6000e-004**	**5.7000e-004**	**1.3400e-003**	**0.0000**	**8.5737**	**8.5737**	**6.0000e-005**	**0.0000**	**8.5750**

3.2 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	0.2638	2.8414	2.1585	2.1000e-003		0.1473	0.1473		0.1355	0.1355	0.0000	194.9974	194.9974	0.0598	0.0000	196.2521
Total	**0.2638**	**2.8414**	**2.1585**	**2.1000e-003**		**0.1473**	**0.1473**		**0.1355**	**0.1355**	**0.0000**	**194.9974**	**194.9974**	**0.0598**	**0.0000**	**196.2521**

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	7.1000e-003	0.0718	0.0965	1.9000e-004	5.3900e-003	1.1100e-003	6.5000e-003	1.5400e-003	1.0200e-003	2.5600e-003	0.0000	16.9664	16.9664	1.2000e-004	0.0000	16.9689
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.1000e-003**	**0.0718**	**0.0965**	**1.9000e-004**	**5.3900e-003**	**1.1100e-003**	**6.5000e-003**	**1.5400e-003**	**1.0200e-003**	**2.5600e-003**	**0.0000**	**16.9664**	**16.9664**	**1.2000e-004**	**0.0000**	**16.9689**

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	0.2638	2.8414	2.1585	2.1000e-003		0.1473	0.1473		0.1355	0.1355	0.0000	194.9972	194.9972	0.0598	0.0000	196.2519
Total	**0.2638**	**2.8414**	**2.1585**	**2.1000e-003**		**0.1473**	**0.1473**		**0.1355**	**0.1355**	**0.0000**	**194.9972**	**194.9972**	**0.0598**	**0.0000**	**196.2519**

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	7.1000e-003	0.0718	0.0965	1.9000e-004	5.3900e-003	1.1100e-003	6.5000e-003	1.5400e-003	1.0200e-003	2.5600e-003	0.0000	16.9664	16.9664	1.2000e-004	0.0000	16.9689
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.1000e-003**	**0.0718**	**0.0965**	**1.9000e-004**	**5.3900e-003**	**1.1100e-003**	**6.5000e-003**	**1.5400e-003**	**1.0200e-003**	**2.5600e-003**	**0.0000**	**16.9664**	**16.9664**	**1.2000e-004**	**0.0000**	**16.9689**

Phase 2_Tier 3 Mitigation

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	18.50	Acre	18.50	805,860.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Needed to add landuse even though most work is being done offsite during this phase.

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition -

Grading - project

Land Use Change -

Construction Off-road Equipment Mitigation - project specific

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	36264	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	300.00	262.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblTripsAndVMT	VendorTripNumber	132.00	10.00
tblTripsAndVMT	WorkerTripNumber	338.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.1412	1.5292	1.1727	1.1400e-003	2.6800e-003	0.0786	0.0813	7.6000e-004	0.0723	0.0731	0.0000	107.0019	107.0019	0.0298	0.0000	107.6267
2017	0.2708	2.9132	2.2550	2.2900e-003	5.3900e-003	0.1484	0.1538	1.5400e-003	0.1366	0.1381	0.0000	211.9639	211.9639	0.0599	0.0000	213.2211
Total	**0.4121**	**4.4425**	**3.4277**	**3.4300e-003**	**8.0700e-003**	**0.2270**	**0.2351**	**2.3000e-003**	**0.2088**	**0.2111**	**0.0000**	**318.9657**	**318.9657**	**0.0896**	**0.0000**	**320.8477**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.0293	0.5533	0.6613	1.1400e-003	2.6800e-003	0.0250	0.0276	7.6000e-004	0.0249	0.0257	0.0000	107.0017	107.0017	0.0298	0.0000	107.6265
2017	0.0582	1.1057	1.3249	2.2900e-003	5.3900e-003	0.0501	0.0555	1.5400e-003	0.0500	0.0515	0.0000	211.9636	211.9636	0.0599	0.0000	213.2208
Total	**0.0874**	**1.6590**	**1.9862**	**3.4300e-003**	**8.0700e-003**	**0.0751**	**0.0831**	**2.3000e-003**	**0.0749**	**0.0772**	**0.0000**	**318.9654**	**318.9654**	**0.0896**	**0.0000**	**320.8474**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**78.78**	**62.66**	**42.05**	**0.00**	**0.00**	**66.93**	**64.64**	**0.00**	**64.13**	**63.43**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Construction	Building Construction	9/1/2016	9/1/2017	5	262	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Construction	Rubber Tired Dozers	2	8.00	255	0.40

Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Construction	4	0.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1374	1.4899	1.1221	1.0400e-003		0.0780	0.0780		0.0717	0.0717	0.0000	98.4282	98.4282	0.0297	0.0000	99.0517
Total	**0.1374**	**1.4899**	**1.1221**	**1.0400e-003**		**0.0780**	**0.0780**		**0.0717**	**0.0717**	**0.0000**	**98.4282**	**98.4282**	**0.0297**	**0.0000**	**99.0517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.8600e-003	0.0393	0.0506	9.0000e-005	2.6800e-003	6.2000e-004	3.3000e-003	7.6000e-004	5.7000e-004	1.3400e-003	0.0000	8.5737	8.5737	6.0000e-005	0.0000	8.5750
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.8600e-003**	**0.0393**	**0.0506**	**9.0000e-005**	**2.6800e-003**	**6.2000e-004**	**3.3000e-003**	**7.6000e-004**	**5.7000e-004**	**1.3400e-003**	**0.0000**	**8.5737**	**8.5737**	**6.0000e-005**	**0.0000**	**8.5750**

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	0.0254	0.5140	0.6107	1.0400e-003		0.0244	0.0244		0.0244	0.0244	0.0000	98.4281	98.4281	0.0297	0.0000	99.0516
Total	**0.0254**	**0.5140**	**0.6107**	**1.0400e-003**		**0.0244**	**0.0244**		**0.0244**	**0.0244**	**0.0000**	**98.4281**	**98.4281**	**0.0297**	**0.0000**	**99.0516**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.8600e-003	0.0393	0.0506	9.0000e-005	2.6800e-003	6.2000e-004	3.3000e-003	7.6000e-004	5.7000e-004	1.3400e-003	0.0000	8.5737	8.5737	6.0000e-005	0.0000	8.5750
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.8600e-003**	**0.0393**	**0.0506**	**9.0000e-005**	**2.6800e-003**	**6.2000e-004**	**3.3000e-003**	**7.6000e-004**	**5.7000e-004**	**1.3400e-003**	**0.0000**	**8.5737**	**8.5737**	**6.0000e-005**	**0.0000**	**8.5750**

3.2 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	0.2638	2.8414	2.1585	2.1000e-003		0.1473	0.1473		0.1355	0.1355	0.0000	194.9974	194.9974	0.0598	0.0000	196.2521
Total	**0.2638**	**2.8414**	**2.1585**	**2.1000e-003**		**0.1473**	**0.1473**		**0.1355**	**0.1355**	**0.0000**	**194.9974**	**194.9974**	**0.0598**	**0.0000**	**196.2521**

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	7.1000e-003	0.0718	0.0965	1.9000e-004	5.3900e-003	1.1100e-003	6.5000e-003	1.5400e-003	1.0200e-003	2.5600e-003	0.0000	16.9664	16.9664	1.2000e-004	0.0000	16.9689
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.1000e-003**	**0.0718**	**0.0965**	**1.9000e-004**	**5.3900e-003**	**1.1100e-003**	**6.5000e-003**	**1.5400e-003**	**1.0200e-003**	**2.5600e-003**	**0.0000**	**16.9664**	**16.9664**	**1.2000e-004**	**0.0000**	**16.9689**

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	0.0511	1.0339	1.2284	2.1000e-003		0.0490	0.0490		0.0490	0.0490	0.0000	194.9972	194.9972	0.0598	0.0000	196.2519
Total	**0.0511**	**1.0339**	**1.2284**	**2.1000e-003**		**0.0490**	**0.0490**		**0.0490**	**0.0490**	**0.0000**	**194.9972**	**194.9972**	**0.0598**	**0.0000**	**196.2519**

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	7.1000e-003	0.0718	0.0965	1.9000e-004	5.3900e-003	1.1100e-003	6.5000e-003	1.5400e-003	1.0200e-003	2.5600e-003	0.0000	16.9664	16.9664	1.2000e-004	0.0000	16.9689
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.1000e-003**	**0.0718**	**0.0965**	**1.9000e-004**	**5.3900e-003**	**1.1100e-003**	**6.5000e-003**	**1.5400e-003**	**1.0200e-003**	**2.5600e-003**	**0.0000**	**16.9664**	**16.9664**	**1.2000e-004**	**0.0000**	**16.9689**

Phase 3

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	9,000.00	Student	6.00	100,000.00	0
Parking Lot	1,350.00	Space	12.50	544,500.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 31

Climate Zone 9 **Operational Year** 2019

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project specific

Off-road Equipment -

Off-road Equipment - project specific

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition -

Grading - project

Architectural Coating -

Land Use Change -

Construction Off-road Equipment Mitigation - project specific

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	300.00	522.00
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	10.00	24.00
tblConstructionPhase	PhaseEndDate	7/5/2019	6/3/2019
tblConstructionPhase	PhaseEndDate	7/5/2019	6/3/2019
tblConstructionPhase	PhaseStartDate	6/4/2019	5/1/2019
tblConstructionPhase	PhaseStartDate	6/4/2019	5/1/2019
tblLandUse	LandUseSquareFeet	392,870.13	100,000.00
tblLandUse	LandUseSquareFeet	540,000.00	544,500.00
tblLandUse	LotAcreage	9.02	6.00
tblLandUse	LotAcreage	12.15	12.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	106.00
tblTripsAndVMT	WorkerTripNumber	10.00	55.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.3673	2.8229	3.4146	6.3500e-003	0.4203	0.1442	0.5645	0.1537	0.1334	0.2871	0.0000	525.8022	525.8022	0.0609	0.0000	527.0806
2018	0.5015	3.7116	5.0325	0.0104	0.4732	0.1805	0.6537	0.1274	0.1673	0.2946	0.0000	835.4554	835.4554	0.0890	0.0000	837.3236
2019	1.5901	1.7022	2.3857	5.1000e-003	0.2216	0.0794	0.3010	0.0597	0.0739	0.1336	0.0000	403.4354	403.4354	0.0432	0.0000	404.3418
Total	**2.4589**	**8.2366**	**10.8328**	**0.0219**	**1.1151**	**0.4042**	**1.5192**	**0.3408**	**0.3746**	**0.7154**	**0.0000**	**1,764.6930**	**1,764.6930**	**0.1930**	**0.0000**	**1,768.7460**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.3673	2.8229	3.4146	6.3500e-003	0.3322	0.1442	0.4764	0.1052	0.1334	0.2387	0.0000	525.8020	525.8020	0.0609	0.0000	527.0804
2018	0.5015	3.7115	5.0325	0.0104	0.4732	0.1805	0.6537	0.1274	0.1673	0.2946	0.0000	835.4552	835.4552	0.0890	0.0000	837.3233
2019	1.5901	1.7022	2.3857	5.1000e-003	0.2216	0.0794	0.3010	0.0597	0.0739	0.1336	0.0000	403.4352	403.4352	0.0432	0.0000	404.3416
Total	**2.4589**	**8.2366**	**10.8328**	**0.0219**	**1.0269**	**0.4042**	**1.4310**	**0.2923**	**0.3746**	**0.6669**	**0.0000**	**1,764.6924**	**1,764.6924**	**0.1930**	**0.0000**	**1,768.7454**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**7.91**	**0.00**	**5.80**	**14.22**	**0.00**	**6.77**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/1/2017	6/1/2017	5	24	
2	Construction	Building Construction	6/2/2017	6/3/2019	5	522	
3	Paving	Paving	5/1/2019	6/3/2019	5	24	
4	Coating	Architectural Coating	5/1/2019	6/3/2019	5	24	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 174,503; Non-Residential Outdoor: 58,168 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Construction	Cranes	1	7.00	226	0.29
Construction	Forklifts	3	8.00	89	0.20
Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Coating	Air Compressors	3	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	10.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Construction	8	271.00	106.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	55.00	106.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Coating	3	54.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1445	0.0000	0.1445	0.0795	0.0000	0.0795	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0362	0.3897	0.2960	2.9000e-004		0.0202	0.0202		0.0186	0.0186	0.0000	26.7425	26.7425	8.1900e-003	0.0000	26.9146
Total	**0.0362**	**0.3897**	**0.2960**	**2.9000e-004**	**0.1445**	**0.0202**	**0.1647**	**0.0795**	**0.0186**	**0.0980**	**0.0000**	**26.7425**	**26.7425**	**8.1900e-003**	**0.0000**	**26.9146**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.7000e-004	9.8500e-003	0.0132	3.0000e-005	7.4000e-004	1.5000e-004	8.9000e-004	2.1000e-004	1.4000e-004	3.5000e-004	0.0000	2.3268	2.3268	2.0000e-005	0.0000	2.3272
Worker	4.3000e-004	6.4000e-004	6.6400e-003	2.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1861	1.1861	6.0000e-005	0.0000	1.1874
Total	**1.4000e-003**	**0.0105**	**0.0199**	**5.0000e-005**	**2.0600e-003**	**1.6000e-004**	**2.2200e-003**	**5.6000e-004**	**1.5000e-004**	**7.1000e-004**	**0.0000**	**3.5129**	**3.5129**	**8.0000e-005**	**0.0000**	**3.5146**

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					0.0564	0.0000	0.0564	0.0310	0.0000	0.0310	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0362	0.3897	0.2960	2.9000e-004		0.0202	0.0202		0.0186	0.0186	0.0000	26.7425	26.7425	8.1900e-003	0.0000	26.9146
Total	**0.0362**	**0.3897**	**0.2960**	**2.9000e-004**	**0.0564**	**0.0202**	**0.0766**	**0.0310**	**0.0186**	**0.0496**	**0.0000**	**26.7425**	**26.7425**	**8.1900e-003**	**0.0000**	**26.9146**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.7000e-004	9.8500e-003	0.0132	3.0000e-005	7.4000e-004	1.5000e-004	8.9000e-004	2.1000e-004	1.4000e-004	3.5000e-004	0.0000	2.3268	2.3268	2.0000e-005	0.0000	2.3272
Worker	4.3000e-004	6.4000e-004	6.6400e-003	2.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1861	1.1861	6.0000e-005	0.0000	1.1874
Total	**1.4000e-003**	**0.0105**	**0.0199**	**5.0000e-005**	**2.0600e-003**	**1.6000e-004**	**2.2200e-003**	**5.6000e-004**	**1.5000e-004**	**7.1000e-004**	**0.0000**	**3.5129**	**3.5129**	**8.0000e-005**	**0.0000**	**3.5146**

3.3 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	0.1912	1.6566	1.0839	1.5300e-003		0.1118	0.1118		0.1036	0.1036	0.0000	138.1336	138.1336	0.0411	0.0000	138.9955
Total	**0.1912**	**1.6566**	**1.0839**	**1.5300e-003**		**0.1118**	**0.1118**		**0.1036**	**0.1036**	**0.0000**	**138.1336**	**138.1336**	**0.0411**	**0.0000**	**138.9955**

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	0.0649	0.6571	0.8826	1.7300e-003	0.0493	0.0102	0.0595	0.0141	9.3700e-003	0.0234	0.0000	155.1796	155.1796	1.1100e-003	0.0000	155.2028
Worker	0.0736	0.1091	1.1322	2.7600e-003	0.2245	1.8400e-003	0.2263	0.0596	1.7000e-003	0.0613	0.0000	202.2337	202.2337	0.0105	0.0000	202.4532
Total	**0.1385**	**0.7661**	**2.0148**	**4.4900e-003**	**0.2737**	**0.0120**	**0.2858**	**0.0737**	**0.0111**	**0.0847**	**0.0000**	**357.4133**	**357.4133**	**0.0116**	**0.0000**	**357.6560**

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	0.1912	1.6566	1.0839	1.5300e-003		0.1118	0.1118		0.1036	0.1036	0.0000	138.1334	138.1334	0.0411	0.0000	138.9954
Total	**0.1912**	**1.6566**	**1.0839**	**1.5300e-003**		**0.1118**	**0.1118**		**0.1036**	**0.1036**	**0.0000**	**138.1334**	**138.1334**	**0.0411**	**0.0000**	**138.9954**

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	0.0649	0.6571	0.8826	1.7300e-003	0.0493	0.0102	0.0595	0.0141	9.3700e-003	0.0234	0.0000	155.1796	155.1796	1.1100e-003	0.0000	155.2028
Worker	0.0736	0.1091	1.1322	2.7600e-003	0.2245	1.8400e-003	0.2263	0.0596	1.7000e-003	0.0613	0.0000	202.2337	202.2337	0.0105	0.0000	202.4532
Total	**0.1385**	**0.7661**	**2.0148**	**4.4900e-003**	**0.2737**	**0.0120**	**0.2858**	**0.0737**	**0.0111**	**0.0847**	**0.0000**	**357.4133**	**357.4133**	**0.0116**	**0.0000**	**357.6560**

3.3 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	0.2823	2.4987	1.7990	2.6400e-003		0.1608	0.1608		0.1491	0.1491	0.0000	235.2249	235.2249	0.0703	0.0000	236.7010
Total	**0.2823**	**2.4987**	**1.7990**	**2.6400e-003**		**0.1608**	**0.1608**		**0.1491**	**0.1491**	**0.0000**	**235.2249**	**235.2249**	**0.0703**	**0.0000**	**236.7010**

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	0.1049	1.0418	1.4616	2.9900e-003	0.0851	0.0166	0.1018	0.0243	0.0153	0.0396	0.0000	263.7213	263.7213	1.9000e-003	0.0000	263.7613
Worker	0.1143	0.1710	1.7720	4.7600e-003	0.3880	3.0900e-003	0.3911	0.1031	2.8600e-003	0.1059	0.0000	336.5092	336.5092	0.0168	0.0000	336.8614
Total	**0.2192**	**1.2128**	**3.2335**	**7.7500e-003**	**0.4732**	**0.0197**	**0.4929**	**0.1274**	**0.0181**	**0.1455**	**0.0000**	**600.2306**	**600.2306**	**0.0187**	**0.0000**	**600.6226**

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	0.2823	2.4987	1.7990	2.6400e-003		0.1608	0.1608		0.1491	0.1491	0.0000	235.2246	235.2246	0.0703	0.0000	236.7007
Total	**0.2823**	**2.4987**	**1.7990**	**2.6400e-003**		**0.1608**	**0.1608**		**0.1491**	**0.1491**	**0.0000**	**235.2246**	**235.2246**	**0.0703**	**0.0000**	**236.7007**

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	0.1049	1.0418	1.4616	2.9900e-003	0.0851	0.0166	0.1018	0.0243	0.0153	0.0396	0.0000	263.7213	263.7213	1.9000e-003	0.0000	263.7613
Worker	0.1143	0.1710	1.7720	4.7600e-003	0.3880	3.0900e-003	0.3911	0.1031	2.8600e-003	0.1059	0.0000	336.5092	336.5092	0.0168	0.0000	336.8614
Total	**0.2192**	**1.2128**	**3.2335**	**7.7500e-003**	**0.4732**	**0.0197**	**0.4929**	**0.1274**	**0.0181**	**0.1455**	**0.0000**	**600.2306**	**600.2306**	**0.0187**	**0.0000**	**600.6226**

3.3 Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1049	0.9453	0.7369	1.1100e-003		0.0583	0.0583		0.0540	0.0540	0.0000	97.6811	97.6811	0.0294	0.0000	98.2977
Total	**0.1049**	**0.9453**	**0.7369**	**1.1100e-003**		**0.0583**	**0.0583**		**0.0540**	**0.0540**	**0.0000**	**97.6811**	**97.6811**	**0.0294**	**0.0000**	**98.2977**

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	0.0418	0.4047	0.5951	1.2600e-003	0.0359	6.6400e-003	0.0425	0.0102	6.1100e-003	0.0164	0.0000	108.9859	108.9859	7.9000e-004	0.0000	109.0024
Worker	0.0443	0.0661	0.6848	2.0000e-003	0.1635	1.2800e-003	0.1648	0.0434	1.1900e-003	0.0446	0.0000	136.4265	136.4265	6.6200e-003	0.0000	136.5654

Total	**0.0861**	**0.4708**	**1.2799**	**3.2600e-003**	**0.1994**	**7.9200e-003**	**0.2073**	**0.0537**	**7.3000e-003**	**0.0610**	**0.0000**	**245.4124**	**245.4124**	**7.4100e-003**	**0.0000**	**245.5678**

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	0.1049	0.9453	0.7369	1.1100e-003		0.0583	0.0583		0.0540	0.0540	0.0000	97.6810	97.6810	0.0294	0.0000	98.2976
Total	**0.1049**	**0.9453**	**0.7369**	**1.1100e-003**		**0.0583**	**0.0583**		**0.0540**	**0.0540**	**0.0000**	**97.6810**	**97.6810**	**0.0294**	**0.0000**	**98.2976**

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	0.0418	0.4047	0.5951	1.2600e-003	0.0359	6.6400e-003	0.0425	0.0102	6.1100e-003	0.0164	0.0000	108.9859	108.9859	7.9000e-004	0.0000	109.0024
Worker	0.0443	0.0661	0.6848	2.0000e-003	0.1635	1.2800e-003	0.1648	0.0434	1.1900e-003	0.0446	0.0000	136.4265	136.4265	6.6200e-003	0.0000	136.5654
Total	**0.0861**	**0.4708**	**1.2799**	**3.2600e-003**	**0.1994**	**7.9200e-003**	**0.2073**	**0.0537**	**7.3000e-003**	**0.0610**	**0.0000**	**245.4124**	**245.4124**	**7.4100e-003**	**0.0000**	**245.5678**

3.4 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0121	0.1259	0.1127	1.7000e-004		7.0700e-003	7.0700e-003		6.5000e-003	6.5000e-003	0.0000	15.3992	15.3992	4.8700e-003	0.0000	15.5015
Paving	0.0164					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0285**	**0.1259**	**0.1127**	**1.7000e-004**		**7.0700e-003**	**7.0700e-003**		**6.5000e-003**	**6.5000e-003**	**0.0000**	**15.3992**	**15.3992**	**4.8700e-003**	**0.0000**	**15.5015**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.1200e-003	0.0883	0.1298	2.7000e-004	7.8300e-003	1.4500e-003	9.2800e-003	2.2400e-003	1.3300e-003	3.5700e-003	0.0000	23.7788	23.7788	1.7000e-004	0.0000	23.7824
Worker	1.9600e-003	2.9300e-003	0.0303	9.0000e-005	7.2400e-003	6.0000e-005	7.3000e-003	1.9200e-003	5.0000e-005	1.9800e-003	0.0000	6.0410	6.0410	2.9000e-004	0.0000	6.0472
Total	**0.0111**	**0.0912**	**0.1602**	**3.6000e-004**	**0.0151**	**1.5100e-003**	**0.0166**	**4.1600e-003**	**1.3800e-003**	**5.5500e-003**	**0.0000**	**29.8198**	**29.8198**	**4.6000e-004**	**0.0000**	**29.8295**

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					

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
Off-Road	0.0121	0.1259	0.1127	1.7000e-004		7.0700e-003	7.0700e-003		6.5000e-003	6.5000e-003	0.0000	15.3992	15.3992	4.8700e-003	0.0000	15.5015
Paving	0.0164					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0285**	**0.1259**	**0.1127**	**1.7000e-004**		**7.0700e-003**	**7.0700e-003**		**6.5000e-003**	**6.5000e-003**	**0.0000**	**15.3992**	**15.3992**	**4.8700e-003**	**0.0000**	**15.5015**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.1200e-003	0.0883	0.1298	2.7000e-004	7.8300e-003	1.4500e-003	9.2800e-003	2.2400e-003	1.3300e-003	3.5700e-003	0.0000	23.7788	23.7788	1.7000e-004	0.0000	23.7824
Worker	1.9600e-003	2.9300e-003	0.0303	9.0000e-005	7.2400e-003	6.0000e-005	7.3000e-003	1.9200e-003	5.0000e-005	1.9800e-003	0.0000	6.0410	6.0410	2.9000e-004	0.0000	6.0472
Total	**0.0111**	**0.0912**	**0.1602**	**3.6000e-004**	**0.0151**	**1.5100e-003**	**0.0166**	**4.1600e-003**	**1.3800e-003**	**5.5500e-003**	**0.0000**	**29.8198**	**29.8198**	**4.6000e-004**	**0.0000**	**29.8295**

3.5 Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.3480					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5900e-003	0.0661	0.0663	1.1000e-004		4.6400e-003	4.6400e-003		4.6400e-003	4.6400e-003	0.0000	9.1917	9.1917	7.8000e-004	0.0000	9.2080
Total	**1.3576**	**0.0661**	**0.0663**	**1.1000e-004**		**4.6400e-003**	**4.6400e-003**		**4.6400e-003**	**4.6400e-003**	**0.0000**	**9.1917**	**9.1917**	**7.8000e-004**	**0.0000**	**9.2080**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9200e-003	2.8700e-003	0.0298	9.0000e-005	7.1100e-003	6.0000e-005	7.1700e-003	1.8900e-003	5.0000e-005	1.9400e-003	0.0000	5.9312	5.9312	2.9000e-004	0.0000	5.9372
Total	**1.9200e-003**	**2.8700e-003**	**0.0298**	**9.0000e-005**	**7.1100e-003**	**6.0000e-005**	**7.1700e-003**	**1.8900e-003**	**5.0000e-005**	**1.9400e-003**	**0.0000**	**5.9312**	**5.9312**	**2.9000e-004**	**0.0000**	**5.9372**

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	1.3480					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5900e-003	0.0661	0.0663	1.1000e-004		4.6400e-003	4.6400e-003		4.6400e-003	4.6400e-003	0.0000	9.1917	9.1917	7.8000e-004	0.0000	9.2080
Total	**1.3576**	**0.0661**	**0.0663**	**1.1000e-004**		**4.6400e-003**	**4.6400e-003**		**4.6400e-003**	**4.6400e-003**	**0.0000**	**9.1917**	**9.1917**	**7.8000e-004**	**0.0000**	**9.2080**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9200e-003	2.8700e-003	0.0298	9.0000e-005	7.1100e-003	6.0000e-005	7.1700e-003	1.8900e-003	5.0000e-005	1.9400e-003	0.0000	5.9312	5.9312	2.9000e-004	0.0000	5.9372
Total	**1.9200e-003**	**2.8700e-003**	**0.0298**	**9.0000e-005**	**7.1100e-003**	**6.0000e-005**	**7.1700e-003**	**1.8900e-003**	**5.0000e-005**	**1.9400e-003**	**0.0000**	**5.9312**	**5.9312**	**2.9000e-004**	**0.0000**	**5.9372**

Phase 3_Tier 3 Mitigation

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	9,000.00	Student	6.00	100,000.00	0
Parking Lot	1,350.00	Space	12.50	544,500.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 31

Climate Zone 9 **Operational Year** 2019

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project specific

Off-road Equipment -

Off-road Equipment - project specific

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition -

Grading - project

Architectural Coating -

Land Use Change -

Construction Off-road Equipment Mitigation - project specific

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	300.00	522.00
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	10.00	24.00
tblConstructionPhase	PhaseEndDate	7/5/2019	6/3/2019
tblConstructionPhase	PhaseEndDate	7/5/2019	6/3/2019
tblConstructionPhase	PhaseStartDate	6/4/2019	5/1/2019
tblConstructionPhase	PhaseStartDate	6/4/2019	5/1/2019
tblLandUse	LandUseSquareFeet	392,870.13	100,000.00
tblLandUse	LandUseSquareFeet	540,000.00	544,500.00
tblLandUse	LotAcreage	9.02	6.00
tblLandUse	LotAcreage	12.15	12.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	106.00
tblTripsAndVMT	WorkerTripNumber	10.00	55.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.3673	2.8229	3.4146	6.3500e-003	0.4203	0.1442	0.5645	0.1537	0.1334	0.2871	0.0000	525.8022	525.8022	0.0609	0.0000	527.0806
2018	0.5015	3.7116	5.0325	0.0104	0.4732	0.1805	0.6537	0.1274	0.1673	0.2946	0.0000	835.4554	835.4554	0.0890	0.0000	837.3236
2019	1.5901	1.7022	2.3857	5.1000e-003	0.2216	0.0794	0.3010	0.0597	0.0739	0.1336	0.0000	403.4354	403.4354	0.0432	0.0000	404.3418
Total	**2.4589**	**8.2366**	**10.8328**	**0.0219**	**1.1151**	**0.4042**	**1.5192**	**0.3408**	**0.3746**	**0.7154**	**0.0000**	**1,764.6930**	**1,764.6930**	**0.1930**	**0.0000**	**1,768.7460**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.2175	1.7656	3.2734	6.3500e-003	0.3322	0.0730	0.4052	0.1052	0.0720	0.1773	0.0000	525.8020	525.8020	0.0609	0.0000	527.0804
2018	0.3335	2.6694	5.0764	0.0104	0.4732	0.1114	0.5845	0.1274	0.1098	0.2372	0.0000	835.4552	835.4552	0.0890	0.0000	837.3233
2019	1.5149	1.3113	2.4394	5.1000e-003	0.2216	0.0557	0.2773	0.0597	0.0550	0.1147	0.0000	403.4352	403.4352	0.0432	0.0000	404.3416
Total	**2.0659**	**5.7463**	**10.7892**	**0.0219**	**1.0269**	**0.2401**	**1.2670**	**0.2923**	**0.2368**	**0.5291**	**0.0000**	**1,764.6924**	**1,764.6924**	**0.1930**	**0.0000**	**1,768.7454**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**15.98**	**30.23**	**0.40**	**0.00**	**7.91**	**40.59**	**16.60**	**14.22**	**36.78**	**26.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/1/2017	6/1/2017	5	24	
2	Construction	Building Construction	6/2/2017	6/3/2019	5	522	
3	Paving	Paving	5/1/2019	6/3/2019	5	24	
4	Coating	Architectural Coating	5/1/2019	6/3/2019	5	24	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 174,503; Non-Residential Outdoor: 58,168 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Construction	Cranes	1	7.00	226	0.29
Construction	Forklifts	3	8.00	89	0.20
Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Coating	Air Compressors	3	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	10.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Construction	8	271.00	106.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	55.00	106.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Coating	3	54.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Fugitive Dust					0.1445	0.0000	0.1445	0.0795	0.0000	0.0795	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0362	0.3897	0.2960	2.9000e-004		0.0202	0.0202		0.0186	0.0186	0.0000	26.7425	26.7425	8.1900e-003	0.0000	26.9146
Total	**0.0362**	**0.3897**	**0.2960**	**2.9000e-004**	**0.1445**	**0.0202**	**0.1647**	**0.0795**	**0.0186**	**0.0980**	**0.0000**	**26.7425**	**26.7425**	**8.1900e-003**	**0.0000**	**26.9146**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.7000e-004	9.8500e-003	0.0132	3.0000e-005	7.4000e-004	1.5000e-004	8.9000e-004	2.1000e-004	1.4000e-004	3.5000e-004	0.0000	2.3268	2.3268	2.0000e-005	0.0000	2.3272
Worker	4.3000e-004	6.4000e-004	6.6400e-003	2.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1861	1.1861	6.0000e-005	0.0000	1.1874
Total	**1.4000e-003**	**0.0105**	**0.0199**	**5.0000e-005**	**2.0600e-003**	**1.6000e-004**	**2.2200e-003**	**5.6000e-004**	**1.5000e-004**	**7.1000e-004**	**0.0000**	**3.5129**	**3.5129**	**8.0000e-005**	**0.0000**	**3.5146**

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					0.0564	0.0000	0.0564	0.0310	0.0000	0.0310	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.0000e-003	0.1418	0.1685	2.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	26.7425	26.7425	8.1900e-003	0.0000	26.9146
Total	**7.0000e-003**	**0.1418**	**0.1685**	**2.9000e-004**	**0.0564**	**6.7200e-003**	**0.0631**	**0.0310**	**6.7200e-003**	**0.0377**	**0.0000**	**26.7425**	**26.7425**	**8.1900e-003**	**0.0000**	**26.9146**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.7000e-004	9.8500e-003	0.0132	3.0000e-005	7.4000e-004	1.5000e-004	8.9000e-004	2.1000e-004	1.4000e-004	3.5000e-004	0.0000	2.3268	2.3268	2.0000e-005	0.0000	2.3272
Worker	4.3000e-004	6.4000e-004	6.6400e-003	2.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1861	1.1861	6.0000e-005	0.0000	1.1874
Total	**1.4000e-003**	**0.0105**	**0.0199**	**5.0000e-005**	**2.0600e-003**	**1.6000e-004**	**2.2200e-003**	**5.6000e-004**	**1.5000e-004**	**7.1000e-004**	**0.0000**	**3.5129**	**3.5129**	**8.0000e-005**	**0.0000**	**3.5146**

3.3 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	0.1912	1.6566	1.0839	1.5300e-003		0.1118	0.1118		0.1036	0.1036	0.0000	138.1336	138.1336	0.0411	0.0000	138.9955
Total	**0.1912**	**1.6566**	**1.0839**	**1.5300e-003**		**0.1118**	**0.1118**		**0.1036**	**0.1036**	**0.0000**	**138.1336**	**138.1336**	**0.0411**	**0.0000**	**138.9955**

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	0.0649	0.6571	0.8826	1.7300e-003	0.0493	0.0102	0.0595	0.0141	9.3700e-003	0.0234	0.0000	155.1796	155.1796	1.1100e-003	0.0000	155.2028
Worker	0.0736	0.1091	1.1322	2.7600e-003	0.2245	1.8400e-003	0.2263	0.0596	1.7000e-003	0.0613	0.0000	202.2337	202.2337	0.0105	0.0000	202.4532
Total	**0.1385**	**0.7661**	**2.0148**	**4.4900e-003**	**0.2737**	**0.0120**	**0.2858**	**0.0737**	**0.0111**	**0.0847**	**0.0000**	**357.4133**	**357.4133**	**0.0116**	**0.0000**	**357.6560**

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	0.0706	0.8472	1.0702	1.5300e-003		0.0541	0.0541		0.0541	0.0541	0.0000	138.1334	138.1334	0.0411	0.0000	138.9954
Total	**0.0706**	**0.8472**	**1.0702**	**1.5300e-003**		**0.0541**	**0.0541**		**0.0541**	**0.0541**	**0.0000**	**138.1334**	**138.1334**	**0.0411**	**0.0000**	**138.9954**

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	0.0649	0.6571	0.8826	1.7300e-003	0.0493	0.0102	0.0595	0.0141	9.3700e-003	0.0234	0.0000	155.1796	155.1796	1.1100e-003	0.0000	155.2028
Worker	0.0736	0.1091	1.1322	2.7600e-003	0.2245	1.8400e-003	0.2263	0.0596	1.7000e-003	0.0613	0.0000	202.2337	202.2337	0.0105	0.0000	202.4532
Total	**0.1385**	**0.7661**	**2.0148**	**4.4900e-003**	**0.2737**	**0.0120**	**0.2858**	**0.0737**	**0.0111**	**0.0847**	**0.0000**	**357.4133**	**357.4133**	**0.0116**	**0.0000**	**357.6560**

3.3 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	0.2823	2.4987	1.7990	2.6400e-003		0.1608	0.1608		0.1491	0.1491	0.0000	235.2249	235.2249	0.0703	0.0000	236.7010
Total	**0.2823**	**2.4987**	**1.7990**	**2.6400e-003**		**0.1608**	**0.1608**		**0.1491**	**0.1491**	**0.0000**	**235.2249**	**235.2249**	**0.0703**	**0.0000**	**236.7010**

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	0.1049	1.0418	1.4616	2.9900e-003	0.0851	0.0166	0.1018	0.0243	0.0153	0.0396	0.0000	263.7213	263.7213	1.9000e-003	0.0000	263.7613
Worker	0.1143	0.1710	1.7720	4.7600e-003	0.3880	3.0900e-003	0.3911	0.1031	2.8600e-003	0.1059	0.0000	336.5092	336.5092	0.0168	0.0000	336.8614
Total	**0.2192**	**1.2128**	**3.2335**	**7.7500e-003**	**0.4732**	**0.0197**	**0.4929**	**0.1274**	**0.0181**	**0.1455**	**0.0000**	**600.2306**	**600.2306**	**0.0187**	**0.0000**	**600.6226**

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	0.1143	1.4566	1.8428	2.6400e-003		0.0917	0.0917		0.0917	0.0917	0.0000	235.2246	235.2246	0.0703	0.0000	236.7007
Total	**0.1143**	**1.4566**	**1.8428**	**2.6400e-003**		**0.0917**	**0.0917**		**0.0917**	**0.0917**	**0.0000**	**235.2246**	**235.2246**	**0.0703**	**0.0000**	**236.7007**

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	0.1049	1.0418	1.4616	2.9900e-003	0.0851	0.0166	0.1018	0.0243	0.0153	0.0396	0.0000	263.7213	263.7213	1.9000e-003	0.0000	263.7613
Worker	0.1143	0.1710	1.7720	4.7600e-003	0.3880	3.0900e-003	0.3911	0.1031	2.8600e-003	0.1059	0.0000	336.5092	336.5092	0.0168	0.0000	336.8614
Total	**0.2192**	**1.2128**	**3.2335**	**7.7500e-003**	**0.4732**	**0.0197**	**0.4929**	**0.1274**	**0.0181**	**0.1455**	**0.0000**	**600.2306**	**600.2306**	**0.0187**	**0.0000**	**600.6226**

3.3 Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1049	0.9453	0.7369	1.1100e-003		0.0583	0.0583		0.0540	0.0540	0.0000	97.6811	97.6811	0.0294	0.0000	98.2977
Total	**0.1049**	**0.9453**	**0.7369**	**1.1100e-003**		**0.0583**	**0.0583**		**0.0540**	**0.0540**	**0.0000**	**97.6811**	**97.6811**	**0.0294**	**0.0000**	**98.2977**

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	0.0418	0.4047	0.5951	1.2600e-003	0.0359	6.6400e-003	0.0425	0.0102	6.1100e-003	0.0164	0.0000	108.9859	108.9859	7.9000e-004	0.0000	109.0024
Worker	0.0443	0.0661	0.6848	2.0000e-003	0.1635	1.2800e-003	0.1648	0.0434	1.1900e-003	0.0446	0.0000	136.4265	136.4265	6.6200e-003	0.0000	136.5654
Total	**0.0861**	**0.4708**	**1.2799**	**3.2600e-003**	**0.1994**	**7.9200e-003**	**0.2073**	**0.0537**	**7.3000e-003**	**0.0610**	**0.0000**	**245.4124**	**245.4124**	**7.4100e-003**	**0.0000**	**245.5678**

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	0.0450	0.6107	0.7738	1.1100e-003		0.0379	0.0379		0.0379	0.0379	0.0000	97.6810	97.6810	0.0294	0.0000	98.2976

Total	**0.0450**	**0.6107**	**0.7738**	**1.1100e-003**		**0.0379**	**0.0379**		**0.0379**	**0.0379**	**0.0000**	**97.6810**	**97.6810**	**0.0294**	**0.0000**	**98.2976**

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	0.0418	0.4047	0.5951	1.2600e-003	0.0359	6.6400e-003	0.0425	0.0102	6.1100e-003	0.0164	0.0000	108.9859	108.9859	7.9000e-004	0.0000	109.0024
Worker	0.0443	0.0661	0.6848	2.0000e-003	0.1635	1.2800e-003	0.1648	0.0434	1.1900e-003	0.0446	0.0000	136.4265	136.4265	6.6200e-003	0.0000	136.5654
Total	**0.0861**	**0.4708**	**1.2799**	**3.2600e-003**	**0.1994**	**7.9200e-003**	**0.2073**	**0.0537**	**7.3000e-003**	**0.0610**	**0.0000**	**245.4124**	**245.4124**	**7.4100e-003**	**0.0000**	**245.5678**

3.4 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0121	0.1259	0.1127	1.7000e-004		7.0700e-003	7.0700e-003		6.5000e-003	6.5000e-003	0.0000	15.3992	15.3992	4.8700e-003	0.0000	15.5015
Paving	0.0164					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0285**	**0.1259**	**0.1127**	**1.7000e-004**		**7.0700e-003**	**7.0700e-003**		**6.5000e-003**	**6.5000e-003**	**0.0000**	**15.3992**	**15.3992**	**4.8700e-003**	**0.0000**	**15.5015**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.1200e-003	0.0883	0.1298	2.7000e-004	7.8300e-003	1.4500e-003	9.2800e-003	2.2400e-003	1.3300e-003	3.5700e-003	0.0000	23.7788	23.7788	1.7000e-004	0.0000	23.7824
Worker	1.9600e-003	2.9300e-003	0.0303	9.0000e-005	7.2400e-003	6.0000e-005	7.3000e-003	1.9200e-003	5.0000e-005	1.9800e-003	0.0000	6.0410	6.0410	2.9000e-004	0.0000	6.0472
Total	**0.0111**	**0.0912**	**0.1602**	**3.6000e-004**	**0.0151**	**1.5100e-003**	**0.0166**	**4.1600e-003**	**1.3800e-003**	**5.5500e-003**	**0.0000**	**29.8198**	**29.8198**	**4.6000e-004**	**0.0000**	**29.8295**

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	4.2100e-003	0.0868	0.1298	1.7000e-004		4.9600e-003	4.9600e-003		4.9600e-003	4.9600e-003	0.0000	15.3992	15.3992	4.8700e-003	0.0000	15.5015
Paving	0.0164					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0206**	**0.0868**	**0.1298**	**1.7000e-004**		**4.9600e-003**	**4.9600e-003**		**4.9600e-003**	**4.9600e-003**	**0.0000**	**15.3992**	**15.3992**	**4.8700e-003**	**0.0000**	**15.5015**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.1200e-003	0.0883	0.1298	2.7000e-004	7.8300e-003	1.4500e-003	9.2800e-003	2.2400e-003	1.3300e-003	3.5700e-003	0.0000	23.7788	23.7788	1.7000e-004	0.0000	23.7824
Worker	1.9600e-003	2.9300e-003	0.0303	9.0000e-005	7.2400e-003	6.0000e-005	7.3000e-003	1.9200e-003	5.0000e-005	1.9800e-003	0.0000	6.0410	6.0410	2.9000e-004	0.0000	6.0472
Total	**0.0111**	**0.0912**	**0.1602**	**3.6000e-004**	**0.0151**	**1.5100e-003**	**0.0166**	**4.1600e-003**	**1.3800e-003**	**5.5500e-003**	**0.0000**	**29.8198**	**29.8198**	**4.6000e-004**	**0.0000**	**29.8295**

3.5 Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.3480					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5900e-003	0.0661	0.0663	1.1000e-004		4.6400e-003	4.6400e-003		4.6400e-003	4.6400e-003	0.0000	9.1917	9.1917	7.8000e-004	0.0000	9.2080
Total	**1.3576**	**0.0661**	**0.0663**	**1.1000e-004**		**4.6400e-003**	**4.6400e-003**		**4.6400e-003**	**4.6400e-003**	**0.0000**	**9.1917**	**9.1917**	**7.8000e-004**	**0.0000**	**9.2080**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9200e-003	2.8700e-003	0.0298	9.0000e-005	7.1100e-003	6.0000e-005	7.1700e-003	1.8900e-003	5.0000e-005	1.9400e-003	0.0000	5.9312	5.9312	2.9000e-004	0.0000	5.9372
Total	**1.9200e-003**	**2.8700e-003**	**0.0298**	**9.0000e-005**	**7.1100e-003**	**6.0000e-005**	**7.1700e-003**	**1.8900e-003**	**5.0000e-005**	**1.9400e-003**	**0.0000**	**5.9312**	**5.9312**	**2.9000e-004**	**0.0000**	**5.9372**

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	1.3480					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1400e-003	0.0489	0.0660	1.1000e-004		3.4200e-003	3.4200e-003		3.4200e-003	3.4200e-003	0.0000	9.1917	9.1917	7.8000e-004	0.0000	9.2080
Total	**1.3502**	**0.0489**	**0.0660**	**1.1000e-004**		**3.4200e-003**	**3.4200e-003**		**3.4200e-003**	**3.4200e-003**	**0.0000**	**9.1917**	**9.1917**	**7.8000e-004**	**0.0000**	**9.2080**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9200e-003	2.8700e-003	0.0298	9.0000e-005	7.1100e-003	6.0000e-005	7.1700e-003	1.8900e-003	5.0000e-005	1.9400e-003	0.0000	5.9312	5.9312	2.9000e-004	0.0000	5.9372
Total	**1.9200e-003**	**2.8700e-003**	**0.0298**	**9.0000e-005**	**7.1100e-003**	**6.0000e-005**	**7.1700e-003**	**1.8900e-003**	**5.0000e-005**	**1.9400e-003**	**0.0000**	**5.9312**	**5.9312**	**2.9000e-004**	**0.0000**	**5.9372**

Phase 1

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	220.55	1000sqft	5.00	220,550.00	0
Unrefrigerated Warehouse-No Rail	455.95	1000sqft	7.20	455,949.00	0
Unrefrigerated Warehouse-No Rail	366.37	1000sqft	6.30	366,371.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Off-road Equipment - project specific

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition - project specific

Grading - project

Land Use Change -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	1564305	0
tblConstructionPhase	NumDays	20.00	131.00
tblConstructionPhase	NumDays	30.00	22.00
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	PhaseEndDate	11/1/2016	9/30/2016
tblConstructionPhase	PhaseStartDate	10/1/2016	9/1/2016
tblGrading	MaterialImported	0.00	95,000.00
tblLandUse	LandUseSquareFeet	366,370.00	366,371.00
tblLandUse	LandUseSquareFeet	455,950.00	455,949.00
tblLandUse	LotAcreage	5.06	5.00
tblLandUse	LotAcreage	8.41	6.30
tblLandUse	LotAcreage	10.47	7.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	980.30	772.98
tblTripsAndVMT	HaulingTripNumber	11,875.00	0.00
tblTripsAndVMT	HaulingTripNumber	4,745.00	12,900.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00

tblTripsAndVMT	WorkerTripNumber	10.00	18.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblWater	IndoorWaterUseRate	241,163,687.50	190,161,500.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	14.9379	172.7599	121.9436	0.1965	25.2341	7.5509	32.7850	8.7423	6.9745	15.7168	0.0000	20,029.5022	20,029.5022	3.5964	0.0000	20,105.0264
Total	**14.9379**	**172.7599**	**121.9436**	**0.1965**	**25.2341**	**7.5509**	**32.7850**	**8.7423**	**6.9745**	**15.7168**	**0.0000**	**20,029.5022**	**20,029.5022**	**3.5964**	**0.0000**	**20,105.0264**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	14.9379	172.7599	121.9436	0.1965	11.1647	7.5509	18.7156	3.7702	6.9745	10.7448	0.0000	20,029.5022	20,029.5022	3.5964	0.0000	20,105.0264
Total	**14.9379**	**172.7599**	**121.9436**	**0.1965**	**11.1647**	**7.5509**	**18.7156**	**3.7702**	**6.9745**	**10.7448**	**0.0000**	**20,029.5022**	**20,029.5022**	**3.5964**	**0.0000**	**20,105.0264**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**55.76**	**0.00**	**42.91**	**56.87**	**0.00**	**31.64**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	3/31/2016	5	65	
2	Demolition	Demolition	4/1/2016	9/30/2016	5	131	
3	Grading	Grading	9/1/2016	9/30/2016	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 66

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	2	8.00	174	0.41
Grading	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	18.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	12,900.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2095	0.0000	12.2095	6.6455	0.0000	6.6455			0.0000			0.0000
Off-Road	3.1577	34.2515	25.7951	0.0240		1.7920	1.7920		1.6487	1.6487		2,494.2187	2,494.2187	0.7523		2,510.0179
Total	**3.1577**	**34.2515**	**25.7951**	**0.0240**	**12.2095**	**1.7920**	**14.0015**	**6.6455**	**1.6487**	**8.2942**		**2,494.2187**	**2,494.2187**	**0.7523**		**2,510.0179**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0752	0.0940	1.1700	2.5500e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		214.1025	214.1025	0.0110		214.3332
Total	**0.1585**	**0.9577**	**2.1659**	**4.7200e-003**	**0.2637**	**0.0159**	**0.2796**	**0.0712**	**0.0146**	**0.0858**		**432.1314**	**432.1314**	**0.0126**		**432.3948**

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					4.7617	0.0000	4.7617	2.5917	0.0000	2.5917			0.0000			0.0000
Off-Road	3.1577	34.2515	25.7951	0.0240		1.7920	1.7920		1.6487	1.6487	0.0000	2,494.2186	2,494.2186	0.7523		2,510.0179
Total	**3.1577**	**34.2515**	**25.7951**	**0.0240**	**4.7617**	**1.7920**	**6.5537**	**2.5917**	**1.6487**	**4.2404**	**0.0000**	**2,494.2186**	**2,494.2186**	**0.7523**		**2,510.0179**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0752	0.0940	1.1700	2.5500e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		214.1025	214.1025	0.0110		214.3332
Total	**0.1585**	**0.9577**	**2.1659**	**4.7200e-003**	**0.2637**	**0.0159**	**0.2796**	**0.0712**	**0.0146**	**0.0858**		**432.1314**	**432.1314**	**0.0126**		**432.3948**

3.3 Demolition - 2016

Unmitigated Construction On-Site

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
	lb/day										lb/day					
Fugitive Dust					7.8389	0.0000	7.8389	1.1869	0.0000	1.1869			0.0000			0.0000
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365		4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**	**7.8389**	**2.2921**	**10.1310**	**1.1869**	**2.1365**	**3.3234**		**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

Unmitigated Construction Off-Site

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
	lb/day										lb/day					
Hauling	1.6843	26.9933	19.0925	0.0726	1.7158	0.4285	2.1443	0.4699	0.3942	0.8640		7,318.0591	7,318.0591	0.0520		7,319.1512
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	0.0627	0.0783	0.9750	2.1200e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		178.4188	178.4188	9.1500e-003		178.6110
Total	**1.7470**	**27.0716**	**20.0675**	**0.0747**	**1.8835**	**0.4299**	**2.3134**	**0.5143**	**0.3955**	**0.9098**		**7,496.4778**	**7,496.4778**	**0.0612**		**7,497.7622**

Mitigated Construction On-Site

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
	lb/day										lb/day					
Fugitive Dust					3.0572	0.0000	3.0572	0.4629	0.0000	0.4629			0.0000			0.0000
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365	0.0000	4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**	**3.0572**	**2.2921**	**5.3493**	**0.4629**	**2.1365**	**2.5994**	**0.0000**	**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

Mitigated Construction Off-Site

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
	lb/day										lb/day					
Hauling	1.6843	26.9933	19.0925	0.0726	1.7158	0.4285	2.1443	0.4699	0.3942	0.8640		7,318.0591	7,318.0591	0.0520		7,319.1512
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	0.0627	0.0783	0.9750	2.1200e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		178.4188	178.4188	9.1500e-003		178.6110
Total	**1.7470**	**27.0716**	**20.0675**	**0.0747**	**1.8835**	**0.4299**	**2.3134**	**0.5143**	**0.3955**	**0.9098**		**7,496.4778**	**7,496.4778**	**0.0612**		**7,497.7622**

3.4 Grading - 2016

Unmitigated Construction On-Site

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
	lb/day										lb/day					
Fugitive Dust					15.2257	0.0000	15.2257	6.9640	0.0000	6.9640			0.0000			0.0000
Off-Road	8.7364	99.0643	64.5498	0.0768		4.8128	4.8128		4.4278	4.4278		7,987.8197	7,987.8197	2.4094		8,038.4173

Total	**8.7364**	**99.0643**	**64.5498**	**0.0768**	**15.2257**	**4.8128**	**20.0384**	**6.9640**	**4.4278**	**11.3917**		**7,987.8197**	**7,987.8197**	**2.4094**		**8,038.4173**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0836	0.1045	1.3000	2.8300e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		237.8917	237.8917	0.0122		238.1480
Total	**0.1668**	**0.9681**	**2.2960**	**5.0000e-003**	**0.2861**	**0.0161**	**0.3021**	**0.0771**	**0.0148**	**0.0919**		**455.9206**	**455.9206**	**0.0138**		**456.2096**

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					5.9380	0.0000	5.9380	2.7160	0.0000	2.7160			0.0000			0.0000
Off-Road	8.7364	99.0643	64.5498	0.0768		4.8128	4.8128		4.4278	4.4278	0.0000	7,987.8197	7,987.8197	2.4094		8,038.4173
Total	**8.7364**	**99.0643**	**64.5498**	**0.0768**	**5.9380**	**4.8128**	**10.7508**	**2.7160**	**4.4278**	**7.1437**	**0.0000**	**7,987.8197**	**7,987.8197**	**2.4094**		**8,038.4173**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0836	0.1045	1.3000	2.8300e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		237.8917	237.8917	0.0122		238.1480
Total	**0.1668**	**0.9681**	**2.2960**	**5.0000e-003**	**0.2861**	**0.0161**	**0.3021**	**0.0771**	**0.0148**	**0.0919**		**455.9206**	**455.9206**	**0.0138**		**456.2096**

Phase 1_Tier 3 Mitigation

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	220.55	1000sqft	5.00	220,550.00	0
Unrefrigerated Warehouse-No Rail	455.95	1000sqft	7.20	455,949.00	0
Unrefrigerated Warehouse-No Rail	366.37	1000sqft	6.30	366,371.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Off-road Equipment - project specific

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition - project specific

Grading - project

Land Use Change -

Construction Off-road Equipment Mitigation - N

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	1564305	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	131.00
tblConstructionPhase	NumDays	30.00	22.00
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	PhaseEndDate	11/1/2016	9/30/2016
tblConstructionPhase	PhaseStartDate	10/1/2016	9/1/2016
tblGrading	MaterialImported	0.00	95,000.00
tblLandUse	LandUseSquareFeet	366,370.00	366,371.00
tblLandUse	LandUseSquareFeet	455,950.00	455,949.00
tblLandUse	LotAcreage	5.06	5.00

tblLandUse	LotAcreage	8.41	6.30
tblLandUse	LotAcreage	10.47	7.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	980.30	772.98
tblTripsAndVMT	HaulingTripNumber	11,875.00	0.00
tblTripsAndVMT	HaulingTripNumber	4,745.00	12,900.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	10.00	18.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblWater	IndoorWaterUseRate	241,163,687.50	190,161,500.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	14.9379	172.7599	121.9436	0.1965	25.2341	7.5509	32.7850	8.7423	6.9745	15.7168	0.0000	20,029.5022	20,029.5022	3.5964	0.0000	20,105.0264
Total	**14.9379**	**172.7599**	**121.9436**	**0.1965**	**25.2341**	**7.5509**	**32.7850**	**8.7423**	**6.9745**	**15.7168**	**0.0000**	**20,029.5022**	**20,029.5022**	**3.5964**	**0.0000**	**20,105.0264**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	4.7413	83.6736	94.9043	0.1965	11.1647	2.9503	14.1150	3.7702	2.9145	6.6848	0.0000	20,029.5022	20,029.5022	3.5964	0.0000	20,105.0264
Total	**4.7413**	**83.6736**	**94.9043**	**0.1965**	**11.1647**	**2.9503**	**14.1150**	**3.7702**	**2.9145**	**6.6848**	**0.0000**	**20,029.5022**	**20,029.5022**	**3.5964**	**0.0000**	**20,105.0264**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**68.26**	**51.57**	**22.17**	**0.00**	**55.76**	**60.93**	**56.95**	**56.87**	**58.21**	**57.47**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	3/31/2016	5	65	
2	Demolition	Demolition	4/1/2016	9/30/2016	5	131	
3	Grading	Grading	9/1/2016	9/30/2016	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 66

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	2	8.00	174	0.41
Grading	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	18.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	12,900.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2095	0.0000	12.2095	6.6455	0.0000	6.6455			0.0000			0.0000
Off-Road	3.1577	34.2515	25.7951	0.0240		1.7920	1.7920		1.6487	1.6487		2,494.2187	2,494.2187	0.7523		2,510.0179
Total	**3.1577**	**34.2515**	**25.7951**	**0.0240**	**12.2095**	**1.7920**	**14.0015**	**6.6455**	**1.6487**	**8.2942**		**2,494.2187**	**2,494.2187**	**0.7523**		**2,510.0179**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0752	0.0940	1.1700	2.5500e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		214.1025	214.1025	0.0110		214.3332
Total	**0.1585**	**0.9577**	**2.1659**	**4.7200e-003**	**0.2637**	**0.0159**	**0.2796**	**0.0712**	**0.0146**	**0.0858**		**432.1314**	**432.1314**	**0.0126**		**432.3948**

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					4.7617	0.0000	4.7617	2.5917	0.0000	2.5917			0.0000			0.0000
Off-Road	0.5837	11.8160	14.0388	0.0240		0.5597	0.5597		0.5597	0.5597	0.0000	2,494.2186	2,494.2186	0.7523		2,510.0179
Total	**0.5837**	**11.8160**	**14.0388**	**0.0240**	**4.7617**	**0.5597**	**5.3214**	**2.5917**	**0.5597**	**3.1514**	**0.0000**	**2,494.2186**	**2,494.2186**	**0.7523**		**2,510.0179**

Mitigated Construction Off-Site

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
	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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0752	0.0940	1.1700	2.5500e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		214.1025	214.1025	0.0110		214.3332
Total	**0.1585**	**0.9577**	**2.1659**	**4.7200e-003**	**0.2637**	**0.0159**	**0.2796**	**0.0712**	**0.0146**	**0.0858**		**432.1314**	**432.1314**	**0.0126**		**432.3948**

3.3 Demolition - 2016

Unmitigated Construction On-Site

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
	lb/day										lb/day					
Fugitive Dust					7.8389	0.0000	7.8389	1.1869	0.0000	1.1869			0.0000			0.0000
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365		4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**	**7.8389**	**2.2921**	**10.1310**	**1.1869**	**2.1365**	**3.3234**		**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

Unmitigated Construction Off-Site

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
	lb/day										lb/day					
Hauling	1.6843	26.9933	19.0925	0.0726	1.7158	0.4285	2.1443	0.4699	0.3942	0.8640		7,318.0591	7,318.0591	0.0520		7,319.1512
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	0.0627	0.0783	0.9750	2.1200e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		178.4188	178.4188	9.1500e-003		178.6110
Total	**1.7470**	**27.0716**	**20.0675**	**0.0747**	**1.8835**	**0.4299**	**2.3134**	**0.5143**	**0.3955**	**0.9098**		**7,496.4778**	**7,496.4778**	**0.0612**		**7,497.7622**

Mitigated Construction On-Site

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
	lb/day										lb/day					
Fugitive Dust					3.0572	0.0000	3.0572	0.4629	0.0000	0.4629			0.0000			0.0000
Off-Road	0.9478	18.7614	25.2649	0.0399		0.8817	0.8817		0.8817	0.8817	0.0000	4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**0.9478**	**18.7614**	**25.2649**	**0.0399**	**3.0572**	**0.8817**	**3.9388**	**0.4629**	**0.8817**	**1.3445**	**0.0000**	**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

Mitigated Construction Off-Site

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
	lb/day										lb/day					
Hauling	1.6843	26.9933	19.0925	0.0726	1.7158	0.4285	2.1443	0.4699	0.3942	0.8640		7,318.0591	7,318.0591	0.0520		7,319.1512
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	0.0627	0.0783	0.9750	2.1200e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		178.4188	178.4188	9.1500e-003		178.6110

Total	1.7470	27.0716	20.0675	0.0747	1.8835	0.4299	2.3134	0.5143	0.3955	0.9098		7,496.4778	7,496.4778	0.0612		7,497.7622

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					15.2257	0.0000	15.2257	6.9640	0.0000	6.9640			0.0000			0.0000
Off-Road	8.7364	99.0643	64.5498	0.0768		4.8128	4.8128		4.4278	4.4278		7,987.8197	7,987.8197	2.4094		8,038.4173
Total	**8.7364**	**99.0643**	**64.5498**	**0.0768**	**15.2257**	**4.8128**	**20.0384**	**6.9640**	**4.4278**	**11.3917**		**7,987.8197**	**7,987.8197**	**2.4094**		**8,038.4173**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0836	0.1045	1.3000	2.8300e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		237.8917	237.8917	0.0122		238.1480
Total	**0.1668**	**0.9681**	**2.2960**	**5.0000e-003**	**0.2861**	**0.0161**	**0.3021**	**0.0771**	**0.0148**	**0.0919**		**455.9206**	**455.9206**	**0.0138**		**456.2096**

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					5.9380	0.0000	5.9380	2.7160	0.0000	2.7160			0.0000			0.0000
Off-Road	1.8797	36.8724	47.2760	0.0768		1.6226	1.6226		1.6226	1.6226	0.0000	7,987.8197	7,987.8197	2.4094		8,038.4173
Total	**1.8797**	**36.8724**	**47.2760**	**0.0768**	**5.9380**	**1.6226**	**7.5606**	**2.7160**	**1.6226**	**4.3386**	**0.0000**	**7,987.8197**	**7,987.8197**	**2.4094**		**8,038.4173**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0836	0.1045	1.3000	2.8300e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		237.8917	237.8917	0.0122		238.1480
Total	**0.1668**	**0.9681**	**2.2960**	**5.0000e-003**	**0.2861**	**0.0161**	**0.3021**	**0.0771**	**0.0148**	**0.0919**		**455.9206**	**455.9206**	**0.0138**		**456.2096**

Phase 1_Concrete Crushing

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	220.55	1000sqft	5.00	220,550.00	0
Unrefrigerated Warehouse-No Rail	455.95	1000sqft	7.20	455,949.00	0
Unrefrigerated Warehouse-No Rail	366.37	1000sqft	6.30	366,371.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 31

Climate Zone 9 **Operational Year** 2019

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Off-road Equipment - project specific

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition - project specific

Grading - project

Land Use Change -

Construction Off-road Equipment Mitigation - mitigation

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	1564305	0
tblConstructionPhase	NumDays	20.00	131.00
tblConstructionPhase	NumDays	30.00	22.00
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	PhaseEndDate	11/1/2016	9/30/2016
tblConstructionPhase	PhaseStartDate	10/1/2016	9/1/2016
tblGrading	MaterialImported	0.00	95,000.00
tblLandUse	LandUseSquareFeet	366,370.00	366,371.00
tblLandUse	LandUseSquareFeet	455,950.00	455,949.00
tblLandUse	LotAcreage	5.06	5.00
tblLandUse	LotAcreage	8.41	6.30
tblLandUse	LotAcreage	10.47	7.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	980.30	772.98
tblTripsAndVMT	HaulingTripNumber	11,875.00	0.00
tblTripsAndVMT	HaulingTripNumber	4,745.00	9,500.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00

tblTripsAndVMT	WorkerTripNumber	10.00	18.00
tblTripsAndVMT	WorkerTripNumber	18.00	15.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblWater	IndoorWaterUseRate	241,163,687.50	190,161,500.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	15.3359	171.0606	121.3818	0.1843	24.7819	7.8811	32.6630	8.6184	7.3138	15.9323	0.0000	18,765.2415	18,765.2415	3.6587	0.0000	18,842.0740
Total	**15.3359**	**171.0606**	**121.3818**	**0.1843**	**24.7819**	**7.8811**	**32.6630**	**8.6184**	**7.3138**	**15.9323**	**0.0000**	**18,765.2415**	**18,765.2415**	**3.6587**	**0.0000**	**18,842.0740**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	15.3359	171.0606	121.3818	0.1843	10.7125	7.8811	18.5936	3.6464	7.3138	10.9602	0.0000	18,765.2415	18,765.2415	3.6587	0.0000	18,842.0740
Total	**15.3359**	**171.0606**	**121.3818**	**0.1843**	**10.7125**	**7.8811**	**18.5936**	**3.6464**	**7.3138**	**10.9602**	**0.0000**	**18,765.2415**	**18,765.2415**	**3.6587**	**0.0000**	**18,842.0740**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**56.77**	**0.00**	**43.07**	**57.69**	**0.00**	**31.21**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	3/31/2016	5	65	
2	Demolition	Demolition	4/1/2016	9/30/2016	5	131	
3	Grading	Grading	9/1/2016	9/30/2016	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 66

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crushing/Proc. Equipment	1	8.00	85	0.78
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	2	8.00	174	0.41
Grading	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	18.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	7	15.00	0.00	9,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2095	0.0000	12.2095	6.6455	0.0000	6.6455			0.0000			0.0000
Off-Road	3.1577	34.2515	25.7951	0.0240		1.7920	1.7920		1.6487	1.6487		2,494.2187	2,494.2187	0.7523		2,510.0179
Total	**3.1577**	**34.2515**	**25.7951**	**0.0240**	**12.2095**	**1.7920**	**14.0015**	**6.6455**	**1.6487**	**8.2942**		**2,494.2187**	**2,494.2187**	**0.7523**		**2,510.0179**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0752	0.0940	1.1700	2.5500e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		214.1025	214.1025	0.0110		214.3332
Total	**0.1585**	**0.9577**	**2.1659**	**4.7200e-003**	**0.2637**	**0.0159**	**0.2796**	**0.0712**	**0.0146**	**0.0858**		**432.1314**	**432.1314**	**0.0126**		**432.3948**

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					4.7617	0.0000	4.7617	2.5917	0.0000	2.5917			0.0000			0.0000
Off-Road	3.1577	34.2515	25.7951	0.0240		1.7920	1.7920		1.6487	1.6487	0.0000	2,494.2186	2,494.2186	0.7523		2,510.0179
Total	**3.1577**	**34.2515**	**25.7951**	**0.0240**	**4.7617**	**1.7920**	**6.5537**	**2.5917**	**1.6487**	**4.2404**	**0.0000**	**2,494.2186**	**2,494.2186**	**0.7523**		**2,510.0179**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0752	0.0940	1.1700	2.5500e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		214.1025	214.1025	0.0110		214.3332

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**0.1585**	**0.9577**	**2.1659**	**4.7200e-003**	**0.2637**	**0.0159**	**0.2796**	**0.0712**	**0.0146**	**0.0858**		**432.1314**	**432.1314**	**0.0126**		**432.3948**

3.3 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.8389	0.0000	7.8389	1.1869	0.0000	1.1869			0.0000			0.0000
Off-Road	5.1296	51.0711	39.5007	0.0469		2.7353	2.7353		2.5797	2.5797		4,753.8142	4,753.8142	1.1881		4,778.7636
Total	**5.1296**	**51.0711**	**39.5007**	**0.0469**	**7.8389**	**2.7353**	**10.5742**	**1.1869**	**2.5797**	**3.7666**		**4,753.8142**	**4,753.8142**	**1.1881**		**4,778.7636**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2404	19.8788	14.0603	0.0535	1.2636	0.3156	1.5791	0.3460	0.2903	0.6363		5,389.2683	5,389.2683	0.0383		5,390.0726
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	0.0627	0.0783	0.9750	2.1200e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		178.4188	178.4188	9.1500e-003		178.6110
Total	**1.3031**	**19.9571**	**15.0354**	**0.0556**	**1.4312**	**0.3170**	**1.7482**	**0.3905**	**0.2916**	**0.6820**		**5,567.6871**	**5,567.6871**	**0.0475**		**5,568.6836**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0572	0.0000	3.0572	0.4629	0.0000	0.4629			0.0000			0.0000
Off-Road	5.1296	51.0711	39.5007	0.0469		2.7353	2.7353		2.5797	2.5797	0.0000	4,753.8142	4,753.8142	1.1881		4,778.7636
Total	**5.1296**	**51.0711**	**39.5007**	**0.0469**	**3.0572**	**2.7353**	**5.7925**	**0.4629**	**2.5797**	**3.0426**	**0.0000**	**4,753.8142**	**4,753.8142**	**1.1881**		**4,778.7636**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2404	19.8788	14.0603	0.0535	1.2636	0.3156	1.5791	0.3460	0.2903	0.6363		5,389.2683	5,389.2683	0.0383		5,390.0726
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	0.0627	0.0783	0.9750	2.1200e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		178.4188	178.4188	9.1500e-003		178.6110
Total	**1.3031**	**19.9571**	**15.0354**	**0.0556**	**1.4312**	**0.3170**	**1.7482**	**0.3905**	**0.2916**	**0.6820**		**5,567.6871**	**5,567.6871**	**0.0475**		**5,568.6836**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					15.2257	0.0000	15.2257	6.9640	0.0000	6.9640			0.0000			0.0000
Off-Road	8.7364	99.0643	64.5498	0.0768		4.8128	4.8128		4.4278	4.4278		7,987.8197	7,987.8197	2.4094		8,038.4173
Total	**8.7364**	**99.0643**	**64.5498**	**0.0768**	**15.2257**	**4.8128**	**20.0384**	**6.9640**	**4.4278**	**11.3917**		**7,987.8197**	**7,987.8197**	**2.4094**		**8,038.4173**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0836	0.1045	1.3000	2.8300e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		237.8917	237.8917	0.0122		238.1480
Total	**0.1668**	**0.9681**	**2.2960**	**5.0000e-003**	**0.2861**	**0.0161**	**0.3021**	**0.0771**	**0.0148**	**0.0919**		**455.9206**	**455.9206**	**0.0138**		**456.2096**

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					5.9380	0.0000	5.9380	2.7160	0.0000	2.7160			0.0000			0.0000
Off-Road	8.7364	99.0643	64.5498	0.0768		4.8128	4.8128		4.4278	4.4278	0.0000	7,987.8197	7,987.8197	2.4094		8,038.4173
Total	**8.7364**	**99.0643**	**64.5498**	**0.0768**	**5.9380**	**4.8128**	**10.7508**	**2.7160**	**4.4278**	**7.1437**	**0.0000**	**7,987.8197**	**7,987.8197**	**2.4094**		**8,038.4173**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0836	0.1045	1.3000	2.8300e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		237.8917	237.8917	0.0122		238.1480
Total	**0.1668**	**0.9681**	**2.2960**	**5.0000e-003**	**0.2861**	**0.0161**	**0.3021**	**0.0771**	**0.0148**	**0.0919**		**455.9206**	**455.9206**	**0.0138**		**456.2096**

Phase 1_Concrete Crushing_Tier 3 Mitigation

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	220.55	1000sqft	5.00	220,550.00	0
Unrefrigerated Warehouse-No Rail	455.95	1000sqft	7.20	455,949.00	0
Unrefrigerated Warehouse-No Rail	366.37	1000sqft	6.30	366,371.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Off-road Equipment - project specific

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition - project specific

Grading - project

Land Use Change -

Construction Off-road Equipment Mitigation - mitigation

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	1564305	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	131.00
tblConstructionPhase	NumDays	30.00	22.00
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	PhaseEndDate	11/1/2016	9/30/2016
tblConstructionPhase	PhaseStartDate	10/1/2016	9/1/2016
tblGrading	MaterialImported	0.00	95,000.00
tblLandUse	LandUseSquareFeet	366,370.00	366,371.00

tblLandUse	LandUseSquareFeet	455,950.00	455,949.00
tblLandUse	LotAcreage	5.06	5.00
tblLandUse	LotAcreage	8.41	6.30
tblLandUse	LotAcreage	10.47	7.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	980.30	772.98
tblTripsAndVMT	HaulingTripNumber	11,875.00	0.00
tblTripsAndVMT	HaulingTripNumber	4,745.00	9,500.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	10.00	18.00
tblTripsAndVMT	WorkerTripNumber	18.00	15.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblWater	IndoorWaterUseRate	241,163,687.50	190,161,500.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	15.3359	171.0606	121.3818	0.1843	24.7819	7.8811	32.6630	8.6184	7.3138	15.9323	0.0000	18,765.2415	18,765.2415	3.6587	0.0000	18,842.0740
Total	**15.3359**	**171.0606**	**121.3818**	**0.1843**	**24.7819**	**7.8811**	**32.6630**	**8.6184**	**7.3138**	**15.9323**	**0.0000**	**18,765.2415**	**18,765.2415**	**3.6587**	**0.0000**	**18,842.0740**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	4.4377	79.7631	94.1987	0.1843	10.7125	3.0618	13.7743	3.6464	3.0351	6.6815	0.0000	18,765.2415	18,765.2415	3.6587	0.0000	18,842.0740
Total	**4.4377**	**79.7631**	**94.1987**	**0.1843**	**10.7125**	**3.0618**	**13.7743**	**3.6464**	**3.0351**	**6.6815**	**0.0000**	**18,765.2415**	**18,765.2415**	**3.6587**	**0.0000**	**18,842.0740**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**71.06**	**53.37**	**22.39**	**0.00**	**56.77**	**61.15**	**57.83**	**57.69**	**58.50**	**58.06**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	3/31/2016	5	65	
2	Demolition	Demolition	4/1/2016	9/30/2016	5	131	
3	Grading	Grading	9/1/2016	9/30/2016	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 66

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crushing/Proc. Equipment	1	8.00	85	0.78
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	2	8.00	174	0.41
Grading	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	18.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	7	15.00	0.00	9,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2095	0.0000	12.2095	6.6455	0.0000	6.6455			0.0000			0.0000
Off-Road	3.1577	34.2515	25.7951	0.0240		1.7920	1.7920		1.6487	1.6487		2,494.2187	2,494.2187	0.7523		2,510.0179
Total	**3.1577**	**34.2515**	**25.7951**	**0.0240**	**12.2095**	**1.7920**	**14.0015**	**6.6455**	**1.6487**	**8.2942**		**2,494.2187**	**2,494.2187**	**0.7523**		**2,510.0179**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0752	0.0940	1.1700	2.5500e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		214.1025	214.1025	0.0110		214.3332
Total	**0.1585**	**0.9577**	**2.1659**	**4.7200e-003**	**0.2637**	**0.0159**	**0.2796**	**0.0712**	**0.0146**	**0.0858**		**432.1314**	**432.1314**	**0.0126**		**432.3948**

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					4.7617	0.0000	4.7617	2.5917	0.0000	2.5917			0.0000			0.0000

Off-Road	0.5837	11.8160	14.0388	0.0240		0.5597	0.5597		0.5597	0.5597	0.0000	2,494.2186	2,494.2186	0.7523		2,510.0179
Total	**0.5837**	**11.8160**	**14.0388**	**0.0240**	**4.7617**	**0.5597**	**5.3214**	**2.5917**	**0.5597**	**3.1514**	**0.0000**	**2,494.2186**	**2,494.2186**	**0.7523**		**2,510.0179**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0752	0.0940	1.1700	2.5500e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		214.1025	214.1025	0.0110		214.3332
Total	**0.1585**	**0.9577**	**2.1659**	**4.7200e-003**	**0.2637**	**0.0159**	**0.2796**	**0.0712**	**0.0146**	**0.0858**		**432.1314**	**432.1314**	**0.0126**		**432.3948**

3.3 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.8389	0.0000	7.8389	1.1869	0.0000	1.1869			0.0000			0.0000
Off-Road	5.1296	51.0711	39.5007	0.0469		2.7353	2.7353		2.5797	2.5797		4,753.8142	4,753.8142	1.1881		4,778.7636
Total	**5.1296**	**51.0711**	**39.5007**	**0.0469**	**7.8389**	**2.7353**	**10.5742**	**1.1869**	**2.5797**	**3.7666**		**4,753.8142**	**4,753.8142**	**1.1881**		**4,778.7636**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2404	19.8788	14.0603	0.0535	1.2636	0.3156	1.5791	0.3460	0.2903	0.6363		5,389.2683	5,389.2683	0.0383		5,390.0726
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	0.0627	0.0783	0.9750	2.1200e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		178.4188	178.4188	9.1500e-003		178.6110
Total	**1.3031**	**19.9571**	**15.0354**	**0.0556**	**1.4312**	**0.3170**	**1.7482**	**0.3905**	**0.2916**	**0.6820**		**5,567.6871**	**5,567.6871**	**0.0475**		**5,568.6836**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0572	0.0000	3.0572	0.4629	0.0000	0.4629			0.0000			0.0000
Off-Road	1.0881	21.9654	29.5915	0.0469		1.1062	1.1062		1.1062	1.1062	0.0000	4,753.8142	4,753.8142	1.1881		4,778.7636
Total	**1.0881**	**21.9654**	**29.5915**	**0.0469**	**3.0572**	**1.1062**	**4.1633**	**0.4629**	**1.1062**	**1.5691**	**0.0000**	**4,753.8142**	**4,753.8142**	**1.1881**		**4,778.7636**

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					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.2404	19.8788	14.0603	0.0535	1.2636	0.3156	1.5791	0.3460	0.2903	0.6363		5,389.2683	5,389.2683	0.0383		5,390.0726
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	0.0627	0.0783	0.9750	2.1200e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		178.4188	178.4188	9.1500e-003		178.6110
Total	**1.3031**	**19.9571**	**15.0354**	**0.0556**	**1.4312**	**0.3170**	**1.7482**	**0.3905**	**0.2916**	**0.6820**		**5,567.6871**	**5,567.6871**	**0.0475**		**5,568.6836**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					15.2257	0.0000	15.2257	6.9640	0.0000	6.9640			0.0000			0.0000
Off-Road	8.7364	99.0643	64.5498	0.0768		4.8128	4.8128		4.4278	4.4278		7,987.8197	7,987.8197	2.4094		8,038.4173
Total	**8.7364**	**99.0643**	**64.5498**	**0.0768**	**15.2257**	**4.8128**	**20.0384**	**6.9640**	**4.4278**	**11.3917**		**7,987.8197**	**7,987.8197**	**2.4094**		**8,038.4173**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0836	0.1045	1.3000	2.8300e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		237.8917	237.8917	0.0122		238.1480
Total	**0.1668**	**0.9681**	**2.2960**	**5.0000e-003**	**0.2861**	**0.0161**	**0.3021**	**0.0771**	**0.0148**	**0.0919**		**455.9206**	**455.9206**	**0.0138**		**456.2096**

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					5.9380	0.0000	5.9380	2.7160	0.0000	2.7160			0.0000			0.0000
Off-Road	1.8797	36.8724	47.2760	0.0768		1.6226	1.6226		1.6226	1.6226	0.0000	7,987.8197	7,987.8197	2.4094		8,038.4173
Total	**1.8797**	**36.8724**	**47.2760**	**0.0768**	**5.9380**	**1.6226**	**7.5606**	**2.7160**	**1.6226**	**4.3386**	**0.0000**	**7,987.8197**	**7,987.8197**	**2.4094**		**8,038.4173**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0836	0.1045	1.3000	2.8300e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		237.8917	237.8917	0.0122		238.1480
Total	**0.1668**	**0.9681**	**2.2960**	**5.0000e-003**	**0.2861**	**0.0161**	**0.3021**	**0.0771**	**0.0148**	**0.0919**		**455.9206**	**455.9206**	**0.0138**		**456.2096**

Phase 2

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	18.50	Acre	18.50	805,860.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Needed to add landuse even though most work is being done offsite during this phase.

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition -

Grading - project

Land Use Change -

Construction Off-road Equipment Mitigation - project specific

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	36264	0
tblConstructionPhase	NumDays	300.00	262.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblTripsAndVMT	VendorTripNumber	132.00	10.00
tblTripsAndVMT	WorkerTripNumber	338.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	3.2409	35.1152	26.7910	0.0262	0.0625	1.8063	1.8688	0.0178	1.6618	1.6796	0.0000	2,712.2476	2,712.2476	0.7539	0.0000	2,728.0795
2017	3.0906	33.2589	25.6054	0.0262	0.0625	1.6962	1.7587	0.0178	1.5605	1.5783	0.0000	2,671.0448	2,671.0448	0.7542	0.0000	2,686.8827
Total	**6.3315**	**68.3741**	**52.3964**	**0.0523**	**0.1250**	**3.5025**	**3.6275**	**0.0356**	**3.2223**	**3.2579**	**0.0000**	**5,383.2923**	**5,383.2923**	**1.5081**	**0.0000**	**5,414.9621**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	3.2409	35.1152	26.7910	0.0262	0.0625	1.8063	1.8688	0.0178	1.6618	1.6796	0.0000	2,712.2476	2,712.2476	0.7539	0.0000	2,728.0795
2017	3.0906	33.2589	25.6054	0.0262	0.0625	1.6962	1.7587	0.0178	1.5605	1.5783	0.0000	2,671.0448	2,671.0448	0.7542	0.0000	2,686.8827
Total	**6.3315**	**68.3741**	**52.3964**	**0.0523**	**0.1250**	**3.5025**	**3.6275**	**0.0356**	**3.2223**	**3.2579**	**0.0000**	**5,383.2923**	**5,383.2923**	**1.5081**	**0.0000**	**5,414.9621**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Construction	Building Construction	9/1/2016	9/1/2017	5	262	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Construction	Rubber Tired Dozers	2	8.00	255	0.40
Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Construction	4	0.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1577	34.2515	25.7951	0.0240		1.7920	1.7920		1.6487	1.6487		2,494.2187	2,494.2187	0.7523		2,510.0179
Total	**3.1577**	**34.2515**	**25.7951**	**0.0240**		**1.7920**	**1.7920**		**1.6487**	**1.6487**		**2,494.2187**	**2,494.2187**	**0.7523**		**2,510.0179**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**0.0833**	**0.8637**	**0.9959**	**2.1700e-003**	**0.0625**	**0.0142**	**0.0767**	**0.0178**	**0.0131**	**0.0309**		**218.0289**	**218.0289**	**1.5600e-003**		**218.0616**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1577	34.2515	25.7951	0.0240		1.7920	1.7920		1.6487	1.6487	0.0000	2,494.2186	2,494.2186	0.7523		2,510.0179
Total	**3.1577**	**34.2515**	**25.7951**	**0.0240**		**1.7920**	**1.7920**		**1.6487**	**1.6487**	**0.0000**	**2,494.2186**	**2,494.2186**	**0.7523**		**2,510.0179**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0833**	**0.8637**	**0.9959**	**2.1700e-003**	**0.0625**	**0.0142**	**0.0767**	**0.0178**	**0.0131**	**0.0309**		**218.0289**	**218.0289**	**1.5600e-003**		**218.0616**

3.2 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	3.0143	32.4731	24.6688	0.0240		1.6835	1.6835		1.5489	1.5489		2,456.5473	2,456.5473	0.7527		2,472.3536
Total	**3.0143**	**32.4731**	**24.6688**	**0.0240**		**1.6835**	**1.6835**		**1.5489**	**1.5489**		**2,456.5473**	**2,456.5473**	**0.7527**		**2,472.3536**

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	0.0763	0.7859	0.9366	2.1700e-003	0.0625	0.0127	0.0752	0.0178	0.0117	0.0295		214.4975	214.4975	1.5000e-003		214.5290
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0763**	**0.7859**	**0.9366**	**2.1700e-003**	**0.0625**	**0.0127**	**0.0752**	**0.0178**	**0.0117**	**0.0295**		**214.4975**	**214.4975**	**1.5000e-003**		**214.5290**

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					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	3.0143	32.4731	24.6688	0.0240		1.6835	1.6835		1.5489	1.5489	0.0000	2,456.5473	2,456.5473	0.7527		2,472.3536
Total	**3.0143**	**32.4731**	**24.6688**	**0.0240**		**1.6835**	**1.6835**		**1.5489**	**1.5489**	**0.0000**	**2,456.5473**	**2,456.5473**	**0.7527**		**2,472.3536**

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	0.0763	0.7859	0.9366	2.1700e-003	0.0625	0.0127	0.0752	0.0178	0.0117	0.0295		214.4975	214.4975	1.5000e-003		214.5290
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0763**	**0.7859**	**0.9366**	**2.1700e-003**	**0.0625**	**0.0127**	**0.0752**	**0.0178**	**0.0117**	**0.0295**		**214.4975**	**214.4975**	**1.5000e-003**		**214.5290**

Phase 2_Tier 3 Mitigation

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	18.50	Acre	18.50	805,860.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Needed to add landuse even though most work is being done offsite during this phase.

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition -

Grading - project

Land Use Change -

Construction Off-road Equipment Mitigation - project specific

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	36264	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	300.00	262.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblTripsAndVMT	VendorTripNumber	132.00	10.00
tblTripsAndVMT	WorkerTripNumber	338.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	3.2409	35.1152	26.7910	0.0262	0.0625	1.8063	1.8688	0.0178	1.6618	1.6796	0.0000	2,712.2476	2,712.2476	0.7539	0.0000	2,728.0795
2017	3.0906	33.2589	25.6054	0.0262	0.0625	1.6962	1.7587	0.0178	1.5605	1.5783	0.0000	2,671.0448	2,671.0448	0.7542	0.0000	2,686.8827
Total	**6.3315**	**68.3741**	**52.3964**	**0.0523**	**0.1250**	**3.5025**	**3.6275**	**0.0356**	**3.2223**	**3.2579**	**0.0000**	**5,383.2923**	**5,383.2923**	**1.5081**	**0.0000**	**5,414.9621**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	0.6669	12.6797	15.0347	0.0262	0.0625	0.5739	0.6364	0.0178	0.5728	0.5906	0.0000	2,712.2476	2,712.2476	0.7539	0.0000	2,728.0795
2017	0.6600	12.6019	14.9754	0.0262	0.0625	0.5724	0.6349	0.0178	0.5714	0.5892	0.0000	2,671.0448	2,671.0448	0.7542	0.0000	2,686.8827
Total	**1.3269**	**25.2816**	**30.0101**	**0.0523**	**0.1250**	**1.1463**	**1.2713**	**0.0356**	**1.1441**	**1.1797**	**0.0000**	**5,383.2923**	**5,383.2923**	**1.5081**	**0.0000**	**5,414.9621**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**79.04**	**63.02**	**42.72**	**0.00**	**0.00**	**67.27**	**64.95**	**0.00**	**64.49**	**63.79**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Construction	Building Construction	9/1/2016	9/1/2017	5	262	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Construction	Rubber Tired Dozers	2	8.00	255	0.40

Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Construction	4	0.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day									lb/day		
Off-Road	3.1577	34.2515	25.7951	0.0240		1.7920	1.7920		1.6487	1.6487		2,494.2187	2,494.2187	0.7523		2,510.0179
Total	**3.1577**	**34.2515**	**25.7951**	**0.0240**		**1.7920**	**1.7920**		**1.6487**	**1.6487**		**2,494.2187**	**2,494.2187**	**0.7523**		**2,510.0179**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0833**	**0.8637**	**0.9959**	**2.1700e-003**	**0.0625**	**0.0142**	**0.0767**	**0.0178**	**0.0131**	**0.0309**		**218.0289**	**218.0289**	**1.5600e-003**		**218.0616**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day									lb/day		
Off-Road	0.5837	11.8160	14.0388	0.0240		0.5597	0.5597		0.5597	0.5597	0.0000	2,494.2186	2,494.2186	0.7523		2,510.0179
Total	**0.5837**	**11.8160**	**14.0388**	**0.0240**		**0.5597**	**0.5597**		**0.5597**	**0.5597**	**0.0000**	**2,494.2186**	**2,494.2186**	**0.7523**		**2,510.0179**

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	0.0833	0.8637	0.9959	2.1700e-003	0.0625	0.0142	0.0767	0.0178	0.0131	0.0309		218.0289	218.0289	1.5600e-003		218.0616
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0833**	**0.8637**	**0.9959**	**2.1700e-003**	**0.0625**	**0.0142**	**0.0767**	**0.0178**	**0.0131**	**0.0309**		**218.0289**	**218.0289**	**1.5600e-003**		**218.0616**

3.2 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	3.0143	32.4731	24.6688	0.0240		1.6835	1.6835		1.5489	1.5489		2,456.5473	2,456.5473	0.7527		2,472.3536
Total	**3.0143**	**32.4731**	**24.6688**	**0.0240**		**1.6835**	**1.6835**		**1.5489**	**1.5489**		**2,456.5473**	**2,456.5473**	**0.7527**		**2,472.3536**

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	0.0763	0.7859	0.9366	2.1700e-003	0.0625	0.0127	0.0752	0.0178	0.0117	0.0295		214.4975	214.4975	1.5000e-003		214.5290
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0763**	**0.7859**	**0.9366**	**2.1700e-003**	**0.0625**	**0.0127**	**0.0752**	**0.0178**	**0.0117**	**0.0295**		**214.4975**	**214.4975**	**1.5000e-003**		**214.5290**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5837	11.8160	14.0388	0.0240		0.5597	0.5597		0.5597	0.5597	0.0000	2,456.5473	2,456.5473	0.7527		2,472.3536
Total	**0.5837**	**11.8160**	**14.0388**	**0.0240**		**0.5597**	**0.5597**		**0.5597**	**0.5597**	**0.0000**	**2,456.5473**	**2,456.5473**	**0.7527**		**2,472.3536**

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	0.0763	0.7859	0.9366	2.1700e-003	0.0625	0.0127	0.0752	0.0178	0.0117	0.0295		214.4975	214.4975	1.5000e-003		214.5290
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0763**	**0.7859**	**0.9366**	**2.1700e-003**	**0.0625**	**0.0127**	**0.0752**	**0.0178**	**0.0117**	**0.0295**		**214.4975**	**214.4975**	**1.5000e-003**		**214.5290**

Phase 3

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	9,000.00	Student	6.00	100,000.00	0
Parking Lot	1,350.00	Space	12.50	544,500.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 31

Climate Zone 9 **Operational Year** 2019

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project specific

Off-road Equipment -

Off-road Equipment - project specific

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition -

Grading - project

Architectural Coating -

Land Use Change -

Construction Off-road Equipment Mitigation - project specific

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	300.00	522.00
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	10.00	24.00
tblConstructionPhase	PhaseEndDate	7/5/2019	6/3/2019
tblConstructionPhase	PhaseEndDate	7/5/2019	6/3/2019
tblConstructionPhase	PhaseStartDate	6/4/2019	5/1/2019
tblConstructionPhase	PhaseStartDate	6/4/2019	5/1/2019
tblLandUse	LandUseSquareFeet	392,870.13	100,000.00
tblLandUse	LandUseSquareFeet	540,000.00	544,500.00
tblLandUse	LotAcreage	9.02	6.00
tblLandUse	LotAcreage	12.15	12.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	106.00
tblTripsAndVMT	WorkerTripNumber	10.00	55.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	4.3583	33.3061	40.2169	0.0816	12.2185	1.6971	13.9156	6.6679	1.5614	8.2293	0.0000	7,390.5035	7,390.5035	0.7678	0.0000	7,406.6277
2018	3.8387	27.9519	37.7170	0.0816	3.6919	1.3827	5.0745	0.9921	1.2813	2.2734	0.0000	7,207.1345	7,207.1345	0.7512	0.0000	7,222.9102
2019	120.0344	48.7762	65.1737	0.1429	5.5730	2.3076	7.8806	1.5040	2.1620	3.6660	0.0000	12,627.3480	12,627.3480	1.3243	0.0000	12,655.1578
Total	**128.2314**	**110.0342**	**143.1077**	**0.3061**	**21.4834**	**5.3874**	**26.8707**	**9.1640**	**5.0046**	**14.1686**	**0.0000**	**27,224.9860**	**27,224.9860**	**2.8433**	**0.0000**	**27,284.6957**

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	4.3583	33.3061	40.2169	0.0816	4.8715	1.6971	6.5686	2.6294	1.5614	4.1908	0.0000	7,390.5035	7,390.5035	0.7678	0.0000	7,406.6277
2018	3.8387	27.9519	37.7170	0.0816	3.6919	1.3827	5.0745	0.9921	1.2813	2.2734	0.0000	7,207.1345	7,207.1345	0.7512	0.0000	7,222.9102
2019	120.0344	48.7762	65.1737	0.1429	5.5730	2.3076	7.8806	1.5040	2.1620	3.6660	0.0000	12,627.3480	12,627.3480	1.3243	0.0000	12,655.1577
Total	**128.2314**	**110.0342**	**143.1077**	**0.3061**	**14.1364**	**5.3874**	**19.5238**	**5.1255**	**5.0046**	**10.1302**	**0.0000**	**27,224.9860**	**27,224.9860**	**2.8433**	**0.0000**	**27,284.6957**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**34.20**	**0.00**	**27.34**	**44.07**	**0.00**	**28.50**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/1/2017	6/1/2017	5	24	
2	Construction	Building Construction	6/2/2017	6/3/2019	5	522	
3	Paving	Paving	5/1/2019	6/3/2019	5	24	
4	Coating	Architectural Coating	5/1/2019	6/3/2019	5	24	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 174,503; Non-Residential Outdoor: 58,168 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Construction	Cranes	1	7.00	226	0.29
Construction	Forklifts	3	8.00	89	0.20
Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Coating	Air Compressors	3	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class

Site Preparation	4	10.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Construction	8	271.00	106.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	55.00	106.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Coating	3	54.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.0442	0.0000	12.0442	6.6205	0.0000	6.6205			0.0000			0.0000
Off-Road	3.0143	32.4731	24.6688	0.0240		1.6835	1.6835		1.5489	1.5489		2,456.5473	2,456.5473	0.7527		2,472.3536
Total	**3.0143**	**32.4731**	**24.6688**	**0.0240**	**12.0442**	**1.6835**	**13.7277**	**6.6205**	**1.5489**	**8.1693**		**2,456.5473**	**2,456.5473**	**0.7527**		**2,472.3536**

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	0.0763	0.7859	0.9366	2.1700e-003	0.0625	0.0127	0.0752	0.0178	0.0117	0.0295		214.4975	214.4975	1.5000e-003		214.5290
Worker	0.0375	0.0472	0.5880	1.4200e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		114.3934	114.3934	5.6300e-003		114.5116
Total	**0.1138**	**0.8330**	**1.5245**	**3.5900e-003**	**0.1743**	**0.0136**	**0.1879**	**0.0475**	**0.0125**	**0.0599**		**328.8908**	**328.8908**	**7.1300e-003**		**329.0407**

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					4.6972	0.0000	4.6972	2.5820	0.0000	2.5820			0.0000			0.0000
Off-Road	3.0143	32.4731	24.6688	0.0240		1.6835	1.6835		1.5489	1.5489	0.0000	2,456.5473	2,456.5473	0.7527		2,472.3536
Total	**3.0143**	**32.4731**	**24.6688**	**0.0240**	**4.6972**	**1.6835**	**6.3808**	**2.5820**	**1.5489**	**4.1308**	**0.0000**	**2,456.5473**	**2,456.5473**	**0.7527**		**2,472.3536**

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	0.0763	0.7859	0.9366	2.1700e-003	0.0625	0.0127	0.0752	0.0178	0.0117	0.0295		214.4975	214.4975	1.5000e-003		214.5290
Worker	0.0375	0.0472	0.5880	1.4200e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		114.3934	114.3934	5.6300e-003		114.5116
Total	**0.1138**	**0.8330**	**1.5245**	**3.5900e-003**	**0.1743**	**0.0136**	**0.1879**	**0.0475**	**0.0125**	**0.0599**		**328.8908**	**328.8908**	**7.1300e-003**		**329.0407**

3.3 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	2.5323	21.9415	14.3556	0.0202		1.4808	1.4808		1.3726	1.3726		2,016.7708	2,016.7708	0.5993		2,029.3554
Total	**2.5323**	**21.9415**	**14.3556**	**0.0202**		**1.4808**	**1.4808**		**1.3726**	**1.3726**		**2,016.7708**	**2,016.7708**	**0.5993**		**2,029.3554**

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	0.8087	8.3301	9.9276	0.0230	0.6627	0.1344	0.7971	0.1888	0.1237	0.3124		2,273.6730	2,273.6730	0.0159		2,274.0078
Worker	1.0173	1.2779	15.9337	0.0384	3.0291	0.0244	3.0535	0.8033	0.0225	0.8258		3,100.0598	3,100.0598	0.1526		3,103.2645
Total	**1.8260**	**9.6080**	**25.8613**	**0.0614**	**3.6918**	**0.1588**	**3.8506**	**0.9921**	**0.1461**	**1.1382**		**5,373.7328**	**5,373.7328**	**0.1686**		**5,377.2723**

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	2.5323	21.9415	14.3556	0.0202		1.4808	1.4808		1.3726	1.3726	0.0000	2,016.7708	2,016.7708	0.5993		2,029.3554
Total	**2.5323**	**21.9415**	**14.3556**	**0.0202**		**1.4808**	**1.4808**		**1.3726**	**1.3726**	**0.0000**	**2,016.7708**	**2,016.7708**	**0.5993**		**2,029.3554**

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	0.8087	8.3301	9.9276	0.0230	0.6627	0.1344	0.7971	0.1888	0.1237	0.3124		2,273.6730	2,273.6730	0.0159		2,274.0078
Worker	1.0173	1.2779	15.9337	0.0384	3.0291	0.0244	3.0535	0.8033	0.0225	0.8258		3,100.0598	3,100.0598	0.1526		3,103.2645
Total	**1.8260**	**9.6080**	**25.8613**	**0.0614**	**3.6918**	**0.1588**	**3.8506**	**0.9921**	**0.1461**	**1.1382**		**5,373.7328**	**5,373.7328**	**0.1686**		**5,377.2723**

3.3 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	2.1633	19.1475	13.7855	0.0202		1.2323	1.2323		1.1428	1.1428		1,986.9044	1,986.9044	0.5938		1,999.3732
Total	**2.1633**	**19.1475**	**13.7855**	**0.0202**		**1.2323**	**1.2323**		**1.1428**	**1.1428**		**1,986.9044**	**1,986.9044**	**0.5938**		**1,999.3732**

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	0.7584	7.6453	9.4579	0.0230	0.6627	0.1267	0.7894	0.1888	0.1166	0.3053		2,235.5197	2,235.5197	0.0158		2,235.8523
Worker	0.9170	1.1591	14.4737	0.0384	3.0291	0.0237	3.0529	0.8033	0.0219	0.8253		2,984.7105	2,984.7105	0.1416		2,987.6847
Total	**1.6754**	**8.8044**	**23.9316**	**0.0613**	**3.6918**	**0.1504**	**3.8423**	**0.9921**	**0.1385**	**1.1306**		**5,220.2301**	**5,220.2301**	**0.1575**		**5,223.5370**

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	2.1633	19.1475	13.7855	0.0202		1.2323	1.2323		1.1428	1.1428	0.0000	1,986.9044	1,986.9044	0.5938		1,999.3732
Total	**2.1633**	**19.1475**	**13.7855**	**0.0202**		**1.2323**	**1.2323**		**1.1428**	**1.1428**	**0.0000**	**1,986.9044**	**1,986.9044**	**0.5938**		**1,999.3732**

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	0.7584	7.6453	9.4579	0.0230	0.6627	0.1267	0.7894	0.1888	0.1166	0.3053		2,235.5197	2,235.5197	0.0158		2,235.8523
Worker	0.9170	1.1591	14.4737	0.0384	3.0291	0.0237	3.0529	0.8033	0.0219	0.8253		2,984.7105	2,984.7105	0.1416		2,987.6847
Total	**1.6754**	**8.8044**	**23.9316**	**0.0613**	**3.6918**	**0.1504**	**3.8423**	**0.9921**	**0.1385**	**1.1306**		**5,220.2301**	**5,220.2301**	**0.1575**		**5,223.5370**

3.3 Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9076	17.1871	13.3973	0.0202		1.0592	1.0592		0.9824	0.9824		1,957.7272	1,957.7272	0.5884		1,970.0845
Total	**1.9076**	**17.1871**	**13.3973**	**0.0202**		**1.0592**	**1.0592**		**0.9824**	**0.9824**		**1,957.7272**	**1,957.7272**	**0.5884**		**1,970.0845**

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	0.7182	7.0507	9.1025	0.0229	0.6628	0.1203	0.7830	0.1888	0.1106	0.2994		2,192.0907	2,192.0907	0.0155		2,192.4168
Worker	0.8441	1.0632	13.3024	0.0383	3.0291	0.0233	3.0524	0.8033	0.0216	0.8249		2,871.5580	2,871.5580	0.1326		2,874.3422

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**1.5623**	**8.1139**	**22.4049**	**0.0612**	**3.6919**	**0.1435**	**3.8354**	**0.9921**	**0.1322**	**1.1243**		**5,063.6487**	**5,063.6487**	**0.1481**		**5,066.7590**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9076	17.1871	13.3973	0.0202		1.0592	1.0592		0.9824	0.9824	0.0000	1,957.7272	1,957.7272	0.5884		1,970.0845
Total	**1.9076**	**17.1871**	**13.3973**	**0.0202**		**1.0592**	**1.0592**		**0.9824**	**0.9824**	**0.0000**	**1,957.7272**	**1,957.7272**	**0.5884**		**1,970.0845**

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	0.7182	7.0507	9.1025	0.0229	0.6628	0.1203	0.7830	0.1888	0.1106	0.2994		2,192.0907	2,192.0907	0.0155		2,192.4168
Worker	0.8441	1.0632	13.3024	0.0383	3.0291	0.0233	3.0524	0.8033	0.0216	0.8249		2,871.5580	2,871.5580	0.1326		2,874.3422
Total	**1.5623**	**8.1139**	**22.4049**	**0.0612**	**3.6919**	**0.1435**	**3.8354**	**0.9921**	**0.1322**	**1.1243**		**5,063.6487**	**5,063.6487**	**0.1481**		**5,066.7590**

3.4 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0064	10.4906	9.3947	0.0143		0.5889	0.5889		0.5418	0.5418		1,414.5564	1,414.5564	0.4476		1,423.9549
Paving	1.3646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.3710**	**10.4906**	**9.3947**	**0.0143**		**0.5889**	**0.5889**		**0.5418**	**0.5418**		**1,414.5564**	**1,414.5564**	**0.4476**		**1,423.9549**

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	0.7182	7.0507	9.1025	0.0229	0.6628	0.1203	0.7830	0.1888	0.1106	0.2994		2,192.0907	2,192.0907	0.0155		2,192.4168
Worker	0.1713	0.2158	2.6998	7.7700e-003	0.6148	4.7300e-003	0.6195	0.1630	4.3800e-003	0.1674		582.7885	582.7885	0.0269		583.3536
Total	**0.8895**	**7.2665**	**11.8022**	**0.0307**	**1.2775**	**0.1250**	**1.4025**	**0.3518**	**0.1150**	**0.4668**		**2,774.8792**	**2,774.8792**	**0.0424**		**2,775.7704**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	1.0064	10.4906	9.3947	0.0143		0.5889	0.5889		0.5418	0.5418	0.0000	1,414.5564	1,414.5564	0.4476		1,423.9549
Paving	1.3646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.3710**	**10.4906**	**9.3947**	**0.0143**		**0.5889**	**0.5889**		**0.5418**	**0.5418**	**0.0000**	**1,414.5564**	**1,414.5564**	**0.4476**		**1,423.9549**

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	0.7182	7.0507	9.1025	0.0229	0.6628	0.1203	0.7830	0.1888	0.1106	0.2994		2,192.0907	2,192.0907	0.0155		2,192.4168
Worker	0.1713	0.2158	2.6998	7.7700e-003	0.6148	4.7300e-003	0.6195	0.1630	4.3800e-003	0.1674		582.7885	582.7885	0.0269		583.3536
Total	**0.8895**	**7.2665**	**11.8022**	**0.0307**	**1.2775**	**0.1250**	**1.4025**	**0.3518**	**0.1150**	**0.4668**		**2,774.8792**	**2,774.8792**	**0.0424**		**2,775.7704**

3.5 Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	112.3365					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7993	5.5062	5.5240	8.9100e-003		0.3863	0.3863		0.3863	0.3863		844.3442	844.3442	0.0713		845.8418
Total	**113.1358**	**5.5062**	**5.5240**	**8.9100e-003**		**0.3863**	**0.3863**		**0.3863**	**0.3863**		**844.3442**	**844.3442**	**0.0713**		**845.8418**

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	0.1682	0.2119	2.6507	7.6300e-003	0.6036	4.6400e-003	0.6082	0.1601	4.3000e-003	0.1644		572.1924	572.1924	0.0264		572.7472
Total	**0.1682**	**0.2119**	**2.6507**	**7.6300e-003**	**0.6036**	**4.6400e-003**	**0.6082**	**0.1601**	**4.3000e-003**	**0.1644**		**572.1924**	**572.1924**	**0.0264**		**572.7472**

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	112.3365					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7993	5.5062	5.5240	8.9100e-003		0.3863	0.3863		0.3863	0.3863	0.0000	844.3441	844.3441	0.0713		845.8418
Total	**113.1358**	**5.5062**	**5.5240**	**8.9100e-003**		**0.3863**	**0.3863**		**0.3863**	**0.3863**	**0.0000**	**844.3441**	**844.3441**	**0.0713**		**845.8418**

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	0.1682	0.2119	2.6507	7.6300e-003	0.6036	4.6400e-003	0.6082	0.1601	4.3000e-003	0.1644		572.1924	572.1924	0.0264		572.7472
Total	**0.1682**	**0.2119**	**2.6507**	**7.6300e-003**	**0.6036**	**4.6400e-003**	**0.6082**	**0.1601**	**4.3000e-003**	**0.1644**		**572.1924**	**572.1924**	**0.0264**		**572.7472**

Phase 3_Tier 3 Mitigation

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	9,000.00	Student	6.00	100,000.00	0
Parking Lot	1,350.00	Space	12.50	544,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project specific

Off-road Equipment -

Off-road Equipment - project specific

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition -

Grading - project

Architectural Coating -

Land Use Change -

Construction Off-road Equipment Mitigation - project specific

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	300.00	522.00
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	10.00	24.00
tblConstructionPhase	PhaseEndDate	7/5/2019	6/3/2019
tblConstructionPhase	PhaseEndDate	7/5/2019	6/3/2019
tblConstructionPhase	PhaseStartDate	6/4/2019	5/1/2019
tblConstructionPhase	PhaseStartDate	6/4/2019	5/1/2019
tblLandUse	LandUseSquareFeet	392,870.13	100,000.00
tblLandUse	LandUseSquareFeet	540,000.00	544,500.00
tblLandUse	LotAcreage	9.02	6.00
tblLandUse	LotAcreage	12.15	12.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	106.00
tblTripsAndVMT	WorkerTripNumber	10.00	55.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	4.3583	33.3061	40.2169	0.0816	12.2185	1.6971	13.9156	6.6679	1.5614	8.2293	0.0000	7,390.5035	7,390.5035	0.7678	0.0000	7,406.6277
2018	3.8387	27.9519	37.7170	0.0816	3.6919	1.3827	5.0745	0.9921	1.2813	2.2734	0.0000	7,207.1345	7,207.1345	0.7512	0.0000	7,222.9102
2019	120.0344	48.7762	65.1737	0.1429	5.5730	2.3076	7.8806	1.5040	2.1620	3.6660	0.0000	12,627.3480	12,627.3480	1.3243	0.0000	12,655.1578
Total	**128.2314**	**110.0342**	**143.1077**	**0.3061**	**21.4834**	**5.3874**	**26.8707**	**9.1640**	**5.0046**	**14.1686**	**0.0000**	**27,224.9860**	**27,224.9860**	**2.8433**	**0.0000**	**27,284.6957**

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	2.7607	20.8286	40.0364	0.0816	4.8715	0.8754	5.4448	2.6294	0.8628	3.2016	0.0000	7,390.5035	7,390.5035	0.7678	0.0000	7,406.6277
2018	2.5509	19.9663	38.0530	0.0816	3.6919	0.8528	4.5447	0.9921	0.8409	1.8330	0.0000	7,207.1345	7,207.1345	0.7512	0.0000	7,222.9102
2019	117.6692	38.0019	67.2441	0.1429	5.5730	1.6602	7.2333	1.5040	1.6386	3.1426	0.0000	12,627.3480	12,627.3480	1.3243	0.0000	12,655.1577
Total	**122.9808**	**78.7968**	**145.3335**	**0.3061**	**14.1364**	**3.3885**	**17.2227**	**5.1255**	**3.3423**	**8.1772**	**0.0000**	**27,224.9860**	**27,224.9860**	**2.8433**	**0.0000**	**27,284.6957**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**4.09**	**28.39**	**-1.56**	**0.00**	**34.20**	**37.10**	**35.91**	**44.07**	**33.22**	**42.29**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/1/2017	6/1/2017	5	24	
2	Construction	Building Construction	6/2/2017	6/3/2019	5	522	
3	Paving	Paving	5/1/2019	6/3/2019	5	24	
4	Coating	Architectural Coating	5/1/2019	6/3/2019	5	24	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 174,503; Non-Residential Outdoor: 58,168 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Construction	Cranes	1	7.00	226	0.29
Construction	Forklifts	3	8.00	89	0.20
Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Coating	Air Compressors	3	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	10.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Construction	8	271.00	106.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	55.00	106.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Coating	3	54.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.0442	0.0000	12.0442	6.6205	0.0000	6.6205			0.0000			0.0000
Off-Road	3.0143	32.4731	24.6688	0.0240		1.6835	1.6835		1.5489	1.5489		2,456.5473	2,456.5473	0.7527		2,472.3536
Total	**3.0143**	**32.4731**	**24.6688**	**0.0240**	**12.0442**	**1.6835**	**13.7277**	**6.6205**	**1.5489**	**8.1693**		**2,456.5473**	**2,456.5473**	**0.7527**		**2,472.3536**

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	0.0763	0.7859	0.9366	2.1700e-003	0.0625	0.0127	0.0752	0.0178	0.0117	0.0295		214.4975	214.4975	1.5000e-003		214.5290
Worker	0.0375	0.0472	0.5880	1.4200e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		114.3934	114.3934	5.6300e-003		114.5116
Total	**0.1138**	**0.8330**	**1.5245**	**3.5900e-003**	**0.1743**	**0.0136**	**0.1879**	**0.0475**	**0.0125**	**0.0599**		**328.8908**	**328.8908**	**7.1300e-003**		**329.0407**

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					4.6972	0.0000	4.6972	2.5820	0.0000	2.5820			0.0000			0.0000
Off-Road	0.5837	11.8160	14.0388	0.0240		0.5597	0.5597		0.5597	0.5597	0.0000	2,456.5473	2,456.5473	0.7527		2,472.3536
Total	**0.5837**	**11.8160**	**14.0388**	**0.0240**	**4.6972**	**0.5597**	**5.2569**	**2.5820**	**0.5597**	**3.1417**	**0.0000**	**2,456.5473**	**2,456.5473**	**0.7527**		**2,472.3536**

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	0.0763	0.7859	0.9366	2.1700e-003	0.0625	0.0127	0.0752	0.0178	0.0117	0.0295		214.4975	214.4975	1.5000e-003		214.5290
Worker	0.0375	0.0472	0.5880	1.4200e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		114.3934	114.3934	5.6300e-003		114.5116
Total	**0.1138**	**0.8330**	**1.5245**	**3.5900e-003**	**0.1743**	**0.0136**	**0.1879**	**0.0475**	**0.0125**	**0.0599**		**328.8908**	**328.8908**	**7.1300e-003**		**329.0407**

3.3 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	2.5323	21.9415	14.3556	0.0202		1.4808	1.4808		1.3726	1.3726		2,016.7708	2,016.7708	0.5993		2,029.3554
Total	**2.5323**	**21.9415**	**14.3556**	**0.0202**		**1.4808**	**1.4808**		**1.3726**	**1.3726**		**2,016.7708**	**2,016.7708**	**0.5993**		**2,029.3554**

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	0.8087	8.3301	9.9276	0.0230	0.6627	0.1344	0.7971	0.1888	0.1237	0.3124		2,273.6730	2,273.6730	0.0159		2,274.0078
Worker	1.0173	1.2779	15.9337	0.0384	3.0291	0.0244	3.0535	0.8033	0.0225	0.8258		3,100.0598	3,100.0598	0.1526		3,103.2645
Total	**1.8260**	**9.6080**	**25.8613**	**0.0614**	**3.6918**	**0.1588**	**3.8506**	**0.9921**	**0.1461**	**1.1382**		**5,373.7328**	**5,373.7328**	**0.1686**		**5,377.2723**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9347	11.2206	14.1751	0.0202		0.7166	0.7166		0.7166	0.7166	0.0000	2,016.7708	2,016.7708	0.5993		2,029.3554
Total	**0.9347**	**11.2206**	**14.1751**	**0.0202**		**0.7166**	**0.7166**		**0.7166**	**0.7166**	**0.0000**	**2,016.7708**	**2,016.7708**	**0.5993**		**2,029.3554**

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	0.8087	8.3301	9.9276	0.0230	0.6627	0.1344	0.7971	0.1888	0.1237	0.3124		2,273.6730	2,273.6730	0.0159		2,274.0078
Worker	1.0173	1.2779	15.9337	0.0384	3.0291	0.0244	3.0535	0.8033	0.0225	0.8258		3,100.0598	3,100.0598	0.1526		3,103.2645
Total	**1.8260**	**9.6080**	**25.8613**	**0.0614**	**3.6918**	**0.1588**	**3.8506**	**0.9921**	**0.1461**	**1.1382**		**5,373.7328**	**5,373.7328**	**0.1686**		**5,377.2723**

3.3 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	2.1633	19.1475	13.7855	0.0202		1.2323	1.2323		1.1428	1.1428		1,986.9044	1,986.9044	0.5938		1,999.3732
Total	**2.1633**	**19.1475**	**13.7855**	**0.0202**		**1.2323**	**1.2323**		**1.1428**	**1.1428**		**1,986.9044**	**1,986.9044**	**0.5938**		**1,999.3732**

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	0.7584	7.6453	9.4579	0.0230	0.6627	0.1267	0.7894	0.1888	0.1166	0.3053		2,235.5197	2,235.5197	0.0158		2,235.8523
Worker	0.9170	1.1591	14.4737	0.0384	3.0291	0.0237	3.0529	0.8033	0.0219	0.8253		2,984.7105	2,984.7105	0.1416		2,987.6847
Total	**1.6754**	**8.8044**	**23.9316**	**0.0613**	**3.6918**	**0.1504**	**3.8423**	**0.9921**	**0.1385**	**1.1306**		**5,220.2301**	**5,220.2301**	**0.1575**		**5,223.5370**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8755	11.1618	14.1214	0.0202		0.7024	0.7024		0.7024	0.7024	0.0000	1,986.9044	1,986.9044	0.5938		1,999.3732
Total	**0.8755**	**11.1618**	**14.1214**	**0.0202**		**0.7024**	**0.7024**		**0.7024**	**0.7024**	**0.0000**	**1,986.9044**	**1,986.9044**	**0.5938**		**1,999.3732**

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	0.7584	7.6453	9.4579	0.0230	0.6627	0.1267	0.7894	0.1888	0.1166	0.3053		2,235.5197	2,235.5197	0.0158		2,235.8523
Worker	0.9170	1.1591	14.4737	0.0384	3.0291	0.0237	3.0529	0.8033	0.0219	0.8253		2,984.7105	2,984.7105	0.1416		2,987.6847
Total	**1.6754**	**8.8044**	**23.9316**	**0.0613**	**3.6918**	**0.1504**	**3.8423**	**0.9921**	**0.1385**	**1.1306**		**5,220.2301**	**5,220.2301**	**0.1575**		**5,223.5370**

3.3 Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9076	17.1871	13.3973	0.0202		1.0592	1.0592		0.9824	0.9824		1,957.7272	1,957.7272	0.5884		1,970.0845
Total	**1.9076**	**17.1871**	**13.3973**	**0.0202**		**1.0592**	**1.0592**		**0.9824**	**0.9824**		**1,957.7272**	**1,957.7272**	**0.5884**		**1,970.0845**

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	0.7182	7.0507	9.1025	0.0229	0.6628	0.1203	0.7830	0.1888	0.1106	0.2994		2,192.0907	2,192.0907	0.0155		2,192.4168
Worker	0.8441	1.0632	13.3024	0.0383	3.0291	0.0233	3.0524	0.8033	0.0216	0.8249		2,871.5580	2,871.5580	0.1326		2,874.3422
Total	**1.5623**	**8.1139**	**22.4049**	**0.0612**	**3.6919**	**0.1435**	**3.8354**	**0.9921**	**0.1322**	**1.1243**		**5,063.6487**	**5,063.6487**	**0.1481**		**5,066.7590**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8190	11.1042	14.0696	0.0202		0.6885	0.6885		0.6885	0.6885	0.0000	1,957.7272	1,957.7272	0.5884		1,970.0845

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**0.8190**	**11.1042**	**14.0696**	**0.0202**		**0.6885**	**0.6885**		**0.6885**	**0.6885**	**0.0000**	**1,957.7272**	**1,957.7272**	**0.5884**		**1,970.0845**

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	0.7182	7.0507	9.1025	0.0229	0.6628	0.1203	0.7830	0.1888	0.1106	0.2994		2,192.0907	2,192.0907	0.0155		2,192.4168
Worker	0.8441	1.0632	13.3024	0.0383	3.0291	0.0233	3.0524	0.8033	0.0216	0.8249		2,871.5580	2,871.5580	0.1326		2,874.3422
Total	**1.5623**	**8.1139**	**22.4049**	**0.0612**	**3.6919**	**0.1435**	**3.8354**	**0.9921**	**0.1322**	**1.1243**		**5,063.6487**	**5,063.6487**	**0.1481**		**5,066.7590**

3.4 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0064	10.4906	9.3947	0.0143		0.5889	0.5889		0.5418	0.5418		1,414.5564	1,414.5564	0.4476		1,423.9549
Paving	1.3646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.3710**	**10.4906**	**9.3947**	**0.0143**		**0.5889**	**0.5889**		**0.5418**	**0.5418**		**1,414.5564**	**1,414.5564**	**0.4476**		**1,423.9549**

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	0.7182	7.0507	9.1025	0.0229	0.6628	0.1203	0.7830	0.1888	0.1106	0.2994		2,192.0907	2,192.0907	0.0155		2,192.4168
Worker	0.1713	0.2158	2.6998	7.7700e-003	0.6148	4.7300e-003	0.6195	0.1630	4.3800e-003	0.1674		582.7885	582.7885	0.0269		583.3536
Total	**0.8895**	**7.2665**	**11.8022**	**0.0307**	**1.2775**	**0.1250**	**1.4025**	**0.3518**	**0.1150**	**0.4668**		**2,774.8792**	**2,774.8792**	**0.0424**		**2,775.7704**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3509	7.2346	10.8196	0.0143		0.4133	0.4133		0.4133	0.4133	0.0000	1,414.5564	1,414.5564	0.4476		1,423.9549
Paving	1.3646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7155**	**7.2346**	**10.8196**	**0.0143**		**0.4133**	**0.4133**		**0.4133**	**0.4133**	**0.0000**	**1,414.5564**	**1,414.5564**	**0.4476**		**1,423.9549**

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	0.7182	7.0507	9.1025	0.0229	0.6628	0.1203	0.7830	0.1888	0.1106	0.2994		2,192.0907	2,192.0907	0.0155		2,192.4168
Worker	0.1713	0.2158	2.6998	7.7700e-003	0.6148	4.7300e-003	0.6195	0.1630	4.3800e-003	0.1674		582.7885	582.7885	0.0269		583.3536
Total	**0.8895**	**7.2665**	**11.8022**	**0.0307**	**1.2775**	**0.1250**	**1.4025**	**0.3518**	**0.1150**	**0.4668**		**2,774.8792**	**2,774.8792**	**0.0424**		**2,775.7704**

3.5 Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	112.3365					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7993	5.5062	5.5240	8.9100e-003		0.3863	0.3863		0.3863	0.3863		844.3442	844.3442	0.0713		845.8418
Total	**113.1358**	**5.5062**	**5.5240**	**8.9100e-003**		**0.3863**	**0.3863**		**0.3863**	**0.3863**		**844.3442**	**844.3442**	**0.0713**		**845.8418**

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	0.1682	0.2119	2.6507	7.6300e-003	0.6036	4.6400e-003	0.6082	0.1601	4.3000e-003	0.1644		572.1924	572.1924	0.0264		572.7472
Total	**0.1682**	**0.2119**	**2.6507**	**7.6300e-003**	**0.6036**	**4.6400e-003**	**0.6082**	**0.1601**	**4.3000e-003**	**0.1644**		**572.1924**	**572.1924**	**0.0264**		**572.7472**

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	112.3365					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1783	4.0709	5.4972	8.9100e-003		0.2853	0.2853		0.2853	0.2853	0.0000	844.3441	844.3441	0.0713		845.8418
Total	**112.5148**	**4.0709**	**5.4972**	**8.9100e-003**		**0.2853**	**0.2853**		**0.2853**	**0.2853**	**0.0000**	**844.3441**	**844.3441**	**0.0713**		**845.8418**

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	0.1682	0.2119	2.6507	7.6300e-003	0.6036	4.6400e-003	0.6082	0.1601	4.3000e-003	0.1644		572.1924	572.1924	0.0264		572.7472
Total	**0.1682**	**0.2119**	**2.6507**	**7.6300e-003**	**0.6036**	**4.6400e-003**	**0.6082**	**0.1601**	**4.3000e-003**	**0.1644**		**572.1924**	**572.1924**	**0.0264**		**572.7472**

Phase 1

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	220.55	1000sqft	5.00	220,550.00	0
Unrefrigerated Warehouse-No Rail	455.95	1000sqft	7.20	455,949.00	0
Unrefrigerated Warehouse-No Rail	366.37	1000sqft	6.30	366,371.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 31

Climate Zone 9 **Operational Year** 2019

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Off-road Equipment - project specific

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition - project specific

Grading - project

Land Use Change -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	1564305	0
tblConstructionPhase	NumDays	20.00	131.00
tblConstructionPhase	NumDays	30.00	22.00
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	PhaseEndDate	11/1/2016	9/30/2016
tblConstructionPhase	PhaseStartDate	10/1/2016	9/1/2016
tblGrading	MaterialImported	0.00	95,000.00
tblLandUse	LandUseSquareFeet	366,370.00	366,371.00
tblLandUse	LandUseSquareFeet	455,950.00	455,949.00
tblLandUse	LotAcreage	5.06	5.00
tblLandUse	LotAcreage	8.41	6.30
tblLandUse	LotAcreage	10.47	7.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	980.30	772.98
tblTripsAndVMT	HaulingTripNumber	11,875.00	0.00
tblTripsAndVMT	HaulingTripNumber	4,745.00	12,900.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00

tblTripsAndVMT	WorkerTripNumber	10.00	18.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblWater	IndoorWaterUseRate	241,163,687.50	190,161,500.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	15.0442	173.7794	124.7589	0.1960	25.2341	7.5520	32.7861	8.7423	6.9756	15.7179	0.0000	19,984.4632	19,984.4632	3.5971	0.0000	20,060.0030
Total	**15.0442**	**173.7794**	**124.7589**	**0.1960**	**25.2341**	**7.5520**	**32.7861**	**8.7423**	**6.9756**	**15.7179**	**0.0000**	**19,984.4632**	**19,984.4632**	**3.5971**	**0.0000**	**20,060.0030**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	15.0442	173.7794	124.7589	0.1960	11.1647	7.5520	18.7167	3.7702	6.9756	10.7458	0.0000	19,984.4632	19,984.4632	3.5971	0.0000	20,060.0030
Total	**15.0442**	**173.7794**	**124.7589**	**0.1960**	**11.1647**	**7.5520**	**18.7167**	**3.7702**	**6.9756**	**10.7458**	**0.0000**	**19,984.4632**	**19,984.4632**	**3.5971**	**0.0000**	**20,060.0030**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**55.76**	**0.00**	**42.91**	**56.87**	**0.00**	**31.63**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	3/31/2016	5	65	
2	Demolition	Demolition	4/1/2016	9/30/2016	5	131	
3	Grading	Grading	9/1/2016	9/30/2016	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 66

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	2	8.00	174	0.41
Grading	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	18.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	12,900.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2016

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					4.7617	0.0000	4.7617	2.5917	0.0000	2.5917			0.0000			0.0000
Off-Road	3.1577	34.2515	25.7951	0.0240		1.7920	1.7920		1.6487	1.6487	0.0000	2,494.2186	2,494.2186	0.7523		2,510.0179
Total	**3.1577**	**34.2515**	**25.7951**	**0.0240**	**4.7617**	**1.7920**	**6.5537**	**2.5917**	**1.6487**	**4.2404**	**0.0000**	**2,494.2186**	**2,494.2186**	**0.7523**		**2,510.0179**

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	0.0913	0.8855	1.1956	2.1600e-003	0.0625	0.0144	0.0769	0.0178	0.0132	0.0310		216.2004	216.2004	1.6000e-003		216.2341
Worker	0.0768	0.1032	1.0780	2.3900e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		200.8288	200.8288	0.0110		201.0594
Total	**0.1681**	**0.9887**	**2.2737**	**4.5500e-003**	**0.2637**	**0.0161**	**0.2797**	**0.0712**	**0.0148**	**0.0859**		**417.0292**	**417.0292**	**0.0126**		**417.2935**

3.3 Demolition - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0572	0.0000	3.0572	0.4629	0.0000	0.4629			0.0000			0.0000
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365	0.0000	4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**	**3.0572**	**2.2921**	**5.3493**	**0.4629**	**2.1365**	**2.5994**	**0.0000**	**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7796	27.9731	21.8869	0.0725	1.7158	0.4295	2.1453	0.4699	0.3951	0.8649		7,300.6587	7,300.6587	0.0527		7,301.7654
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	0.0640	0.0860	0.8984	1.9900e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		167.3573	167.3573	9.1500e-003		167.5495
Total	**1.8436**	**28.0591**	**22.7853**	**0.0745**	**1.8835**	**0.4309**	**2.3144**	**0.5143**	**0.3964**	**0.9107**		**7,468.0160**	**7,468.0160**	**0.0619**		**7,469.3149**

3.4 Grading - 2016

Mitigated Construction On-Site

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
	lb/day										lb/day					
Fugitive Dust					5.9380	0.0000	5.9380	2.7160	0.0000	2.7160			0.0000			0.0000
Off-Road	8.7364	99.0643	64.5498	0.0768		4.8128	4.8128		4.4278	4.4278	0.0000	7,987.8197	7,987.8197	2.4094		8,038.4173
Total	**8.7364**	**99.0643**	**64.5498**	**0.0768**	**5.9380**	**4.8128**	**10.7508**	**2.7160**	**4.4278**	**7.1437**	**0.0000**	**7,987.8197**	**7,987.8197**	**2.4094**		**8,038.4173**

Mitigated Construction Off-Site

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
	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	0.0913	0.8855	1.1956	2.1600e-003	0.0625	0.0144	0.0769	0.0178	0.0132	0.0310		216.2004	216.2004	1.6000e-003		216.2341
Worker	0.0853	0.1147	1.1978	2.6500e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		223.1431	223.1431	0.0122		223.3994
Total	**0.1766**	**1.0001**	**2.3934**	**4.8100e-003**	**0.2861**	**0.0162**	**0.3023**	**0.0771**	**0.0149**	**0.0920**		**439.3435**	**439.3435**	**0.0138**		**439.6334**

Phase 1_Tier 3 Mitigation

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	220.55	1000sqft	5.00	220,550.00	0
Unrefrigerated Warehouse-No Rail	455.95	1000sqft	7.20	455,949.00	0
Unrefrigerated Warehouse-No Rail	366.37	1000sqft	6.30	366,371.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Off-road Equipment - project specific

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition - project specific

Grading - project

Land Use Change -

Construction Off-road Equipment Mitigation - N

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	1564305	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	131.00
tblConstructionPhase	NumDays	30.00	22.00
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	PhaseEndDate	11/1/2016	9/30/2016
tblConstructionPhase	PhaseStartDate	10/1/2016	9/1/2016
tblGrading	MaterialImported	0.00	95,000.00
tblLandUse	LandUseSquareFeet	366,370.00	366,371.00
tblLandUse	LandUseSquareFeet	455,950.00	455,949.00
tblLandUse	LotAcreage	5.06	5.00
tblLandUse	LotAcreage	8.41	6.30
tblLandUse	LotAcreage	10.47	7.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	980.30	772.98
tblTripsAndVMT	HaulingTripNumber	11,875.00	0.00
tblTripsAndVMT	HaulingTripNumber	4,745.00	12,900.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	10.00	18.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblWater	IndoorWaterUseRate	241,163,687.50	190,161,500.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	15.0442	173.7794	124.7589	0.1960	25.2341	7.5520	32.7861	8.7423	6.9756	15.7179	0.0000	19,984.4632	19,984.4632	3.5971	0.0000	20,060.0030
Total	**15.0442**	**173.7794**	**124.7589**	**0.1960**	**25.2341**	**7.5520**	**32.7861**	**8.7423**	**6.9756**	**15.7179**	**0.0000**	**19,984.4632**	**19,984.4632**	**3.5971**	**0.0000**	**20,060.0030**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	4.8476	84.6931	97.7196	0.1960	11.1647	2.9514	14.1161	3.7702	2.9156	6.6858	0.0000	19,984.4632	19,984.4632	3.5971	0.0000	20,060.0030
Total	**4.8476**	**84.6931**	**97.7196**	**0.1960**	**11.1647**	**2.9514**	**14.1161**	**3.7702**	**2.9156**	**6.6858**	**0.0000**	**19,984.4632**	**19,984.4632**	**3.5971**	**0.0000**	**20,060.0030**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**67.78**	**51.26**	**21.67**	**0.00**	**55.76**	**60.92**	**56.94**	**56.87**	**58.20**	**57.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	3/31/2016	5	65	
2	Demolition	Demolition	4/1/2016	9/30/2016	5	131	
3	Grading	Grading	9/1/2016	9/30/2016	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 66

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	2	8.00	174	0.41
Grading	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	18.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	12,900.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	20.00	10.00	0.00	14.70	6.90	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 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					12.2095	0.0000	12.2095	6.6455	0.0000	6.6455			0.0000			0.0000
Off-Road	3.1577	34.2515	25.7951	0.0240		1.7920	1.7920		1.6487	1.6487		2,494.2187	2,494.2187	0.7523		2,510.0179
Total	**3.1577**	**34.2515**	**25.7951**	**0.0240**	**12.2095**	**1.7920**	**14.0015**	**6.6455**	**1.6487**	**8.2942**		**2,494.2187**	**2,494.2187**	**0.7523**		**2,510.0179**

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	0.0913	0.8855	1.1956	2.1600e-003	0.0625	0.0144	0.0769	0.0178	0.0132	0.0310		216.2004	216.2004	1.6000e-003		216.2341
Worker	0.0768	0.1032	1.0780	2.3900e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		200.8288	200.8288	0.0110		201.0594
Total	**0.1681**	**0.9887**	**2.2737**	**4.5500e-003**	**0.2637**	**0.0161**	**0.2797**	**0.0712**	**0.0148**	**0.0859**		**417.0292**	**417.0292**	**0.0126**		**417.2935**

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					4.7617	0.0000	4.7617	2.5917	0.0000	2.5917			0.0000			0.0000
Off-Road	0.5837	11.8160	14.0388	0.0240		0.5597	0.5597		0.5597	0.5597	0.0000	2,494.2186	2,494.2186	0.7523		2,510.0179
Total	**0.5837**	**11.8160**	**14.0388**	**0.0240**	**4.7617**	**0.5597**	**5.3214**	**2.5917**	**0.5597**	**3.1514**	**0.0000**	**2,494.2186**	**2,494.2186**	**0.7523**		**2,510.0179**

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	0.0913	0.8855	1.1956	2.1600e-003	0.0625	0.0144	0.0769	0.0178	0.0132	0.0310		216.2004	216.2004	1.6000e-003		216.2341
Worker	0.0768	0.1032	1.0780	2.3900e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		200.8288	200.8288	0.0110		201.0594
Total	**0.1681**	**0.9887**	**2.2737**	**4.5500e-003**	**0.2637**	**0.0161**	**0.2797**	**0.0712**	**0.0148**	**0.0859**		**417.0292**	**417.0292**	**0.0126**		**417.2935**

3.3 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.8389	0.0000	7.8389	1.1869	0.0000	1.1869			0.0000			0.0000
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365		4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**	**7.8389**	**2.2921**	**10.1310**	**1.1869**	**2.1365**	**3.3234**		**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	1.7796	27.9731	21.8869	0.0725	1.7158	0.4295	2.1453	0.4699	0.3951	0.8649		7,300.6587	7,300.6587	0.0527		7,301.7654
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	0.0640	0.0860	0.8984	1.9900e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		167.3573	167.3573	9.1500e-003		167.5495
Total	**1.8436**	**28.0591**	**22.7853**	**0.0745**	**1.8835**	**0.4309**	**2.3144**	**0.5143**	**0.3964**	**0.9107**		**7,468.0160**	**7,468.0160**	**0.0619**		**7,469.3149**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0572	0.0000	3.0572	0.4629	0.0000	0.4629			0.0000			0.0000
Off-Road	0.9478	18.7614	25.2649	0.0399		0.8817	0.8817		0.8817	0.8817	0.0000	4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**0.9478**	**18.7614**	**25.2649**	**0.0399**	**3.0572**	**0.8817**	**3.9388**	**0.4629**	**0.8817**	**1.3445**	**0.0000**	**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7796	27.9731	21.8869	0.0725	1.7158	0.4295	2.1453	0.4699	0.3951	0.8649		7,300.6587	7,300.6587	0.0527		7,301.7654
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	0.0640	0.0860	0.8984	1.9900e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		167.3573	167.3573	9.1500e-003		167.5495
Total	**1.8436**	**28.0591**	**22.7853**	**0.0745**	**1.8835**	**0.4309**	**2.3144**	**0.5143**	**0.3964**	**0.9107**		**7,468.0160**	**7,468.0160**	**0.0619**		**7,469.3149**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					15.2257	0.0000	15.2257	6.9640	0.0000	6.9640			0.0000			0.0000
Off-Road	8.7364	99.0643	64.5498	0.0768		4.8128	4.8128		4.4278	4.4278		7,987.8197	7,987.8197	2.4094		8,038.4173
Total	**8.7364**	**99.0643**	**64.5498**	**0.0768**	**15.2257**	**4.8128**	**20.0384**	**6.9640**	**4.4278**	**11.3917**		**7,987.8197**	**7,987.8197**	**2.4094**		**8,038.4173**

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	0.0913	0.8855	1.1956	2.1600e-003	0.0625	0.0144	0.0769	0.0178	0.0132	0.0310		216.2004	216.2004	1.6000e-003		216.2341
Worker	0.0853	0.1147	1.1978	2.6500e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		223.1431	223.1431	0.0122		223.3994
Total	**0.1766**	**1.0001**	**2.3934**	**4.8100e-003**	**0.2861**	**0.0162**	**0.3023**	**0.0771**	**0.0149**	**0.0920**		**439.3435**	**439.3435**	**0.0138**		**439.6334**

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					5.9380	0.0000	5.9380	2.7160	0.0000	2.7160			0.0000			0.0000
Off-Road	1.8797	36.8724	47.2760	0.0768		1.6226	1.6226		1.6226	1.6226	0.0000	7,987.8197	7,987.8197	2.4094		8,038.4173
Total	**1.8797**	**36.8724**	**47.2760**	**0.0768**	**5.9380**	**1.6226**	**7.5606**	**2.7160**	**1.6226**	**4.3386**	**0.0000**	**7,987.8197**	**7,987.8197**	**2.4094**		**8,038.4173**

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	0.0913	0.8855	1.1956	2.1600e-003	0.0625	0.0144	0.0769	0.0178	0.0132	0.0310		216.2004	216.2004	1.6000e-003		216.2341
Worker	0.0853	0.1147	1.1978	2.6500e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		223.1431	223.1431	0.0122		223.3994
Total	**0.1766**	**1.0001**	**2.3934**	**4.8100e-003**	**0.2861**	**0.0162**	**0.3023**	**0.0771**	**0.0149**	**0.0920**		**439.3435**	**439.3435**	**0.0138**		**439.6334**

Phase 1_Concrete Crushing

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	220.55	1000sqft	5.00	220,550.00	0
Unrefrigerated Warehouse-No Rail	455.95	1000sqft	7.20	455,949.00	0
Unrefrigerated Warehouse-No Rail	366.37	1000sqft	6.30	366,371.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Off-road Equipment - project specific

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition - project specific

Grading - project

Land Use Change -

Construction Off-road Equipment Mitigation - mitigation

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	1564305	0
tblConstructionPhase	NumDays	20.00	131.00
tblConstructionPhase	NumDays	30.00	22.00
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	PhaseEndDate	11/1/2016	9/30/2016
tblConstructionPhase	PhaseStartDate	10/1/2016	9/1/2016
tblGrading	MaterialImported	0.00	95,000.00
tblLandUse	LandUseSquareFeet	366,370.00	366,371.00
tblLandUse	LandUseSquareFeet	455,950.00	455,949.00
tblLandUse	LotAcreage	5.06	5.00
tblLandUse	LotAcreage	8.41	6.30
tblLandUse	LotAcreage	10.47	7.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	980.30	772.98
tblTripsAndVMT	HaulingTripNumber	11,875.00	0.00
tblTripsAndVMT	HaulingTripNumber	4,745.00	9,500.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	10.00	18.00
tblTripsAndVMT	WorkerTripNumber	18.00	15.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblWater	IndoorWaterUseRate	241,163,687.50	190,161,500.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	15.4171	171.8218	123.4606	0.1839	24.7819	7.8820	32.6639	8.6184	7.3146	15.9331	0.0000	18,724.7887	18,724.7887	3.6593	0.0000	18,801.6329
Total	**15.4171**	**171.8218**	**123.4606**	**0.1839**	**24.7819**	**7.8820**	**32.6639**	**8.6184**	**7.3146**	**15.9331**	**0.0000**	**18,724.7887**	**18,724.7887**	**3.6593**	**0.0000**	**18,801.6329**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	15.4171	171.8218	123.4606	0.1839	10.7125	7.8820	18.5945	3.6464	7.3146	10.9610	0.0000	18,724.7887	18,724.7887	3.6593	0.0000	18,801.6329
Total	**15.4171**	**171.8218**	**123.4606**	**0.1839**	**10.7125**	**7.8820**	**18.5945**	**3.6464**	**7.3146**	**10.9610**	**0.0000**	**18,724.7887**	**18,724.7887**	**3.6593**	**0.0000**	**18,801.6329**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**56.77**	**0.00**	**43.07**	**57.69**	**0.00**	**31.21**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	3/31/2016	5	65	
2	Demolition	Demolition	4/1/2016	9/30/2016	5	131	
3	Grading	Grading	9/1/2016	9/30/2016	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 66

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crushing/Proc. Equipment	1	8.00	85	0.78
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	2	8.00	174	0.41
Grading	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	18.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	7	15.00	0.00	9,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2095	0.0000	12.2095	6.6455	0.0000	6.6455			0.0000			0.0000
Off-Road	3.1577	34.2515	25.7951	0.0240		1.7920	1.7920		1.6487	1.6487		2,494.2187	2,494.2187	0.7523		2,510.0179
Total	**3.1577**	**34.2515**	**25.7951**	**0.0240**	**12.2095**	**1.7920**	**14.0015**	**6.6455**	**1.6487**	**8.2942**		**2,494.2187**	**2,494.2187**	**0.7523**		**2,510.0179**

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	0.0913	0.8855	1.1956	2.1600e-003	0.0625	0.0144	0.0769	0.0178	0.0132	0.0310		216.2004	216.2004	1.6000e-003		216.2341
Worker	0.0768	0.1032	1.0780	2.3900e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		200.8288	200.8288	0.0110		201.0594
Total	**0.1681**	**0.9887**	**2.2737**	**4.5500e-003**	**0.2637**	**0.0161**	**0.2797**	**0.0712**	**0.0148**	**0.0859**		**417.0292**	**417.0292**	**0.0126**		**417.2935**

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					4.7617	0.0000	4.7617	2.5917	0.0000	2.5917			0.0000			0.0000
Off-Road	3.1577	34.2515	25.7951	0.0240		1.7920	1.7920		1.6487	1.6487	0.0000	2,494.2186	2,494.2186	0.7523		2,510.0179
Total	**3.1577**	**34.2515**	**25.7951**	**0.0240**	**4.7617**	**1.7920**	**6.5537**	**2.5917**	**1.6487**	**4.2404**	**0.0000**	**2,494.2186**	**2,494.2186**	**0.7523**		**2,510.0179**

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	0.0913	0.8855	1.1956	2.1600e-003	0.0625	0.0144	0.0769	0.0178	0.0132	0.0310		216.2004	216.2004	1.6000e-003		216.2341
Worker	0.0768	0.1032	1.0780	2.3900e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		200.8288	200.8288	0.0110		201.0594
Total	**0.1681**	**0.9887**	**2.2737**	**4.5500e-003**	**0.2637**	**0.0161**	**0.2797**	**0.0712**	**0.0148**	**0.0859**		**417.0292**	**417.0292**	**0.0126**		**417.2935**

3.3 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.8389	0.0000	7.8389	1.1869	0.0000	1.1869			0.0000			0.0000
Off-Road	5.1296	51.0711	39.5007	0.0469		2.7353	2.7353		2.5797	2.5797		4,753.8142	4,753.8142	1.1881		4,778.7636
Total	**5.1296**	**51.0711**	**39.5007**	**0.0469**	**7.8389**	**2.7353**	**10.5742**	**1.1869**	**2.5797**	**3.7666**		**4,753.8142**	**4,753.8142**	**1.1881**		**4,778.7636**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.3105	20.6003	16.1183	0.0534	1.2636	0.3163	1.5799	0.3460	0.2910	0.6370		5,376.4541	5,376.4541	0.0388		5,377.2691
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	0.0640	0.0860	0.8984	1.9900e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		167.3573	167.3573	9.1500e-003		167.5495
Total	**1.3745**	**20.6863**	**17.0166**	**0.0554**	**1.4312**	**0.3177**	**1.7489**	**0.3905**	**0.2922**	**0.6827**		**5,543.8114**	**5,543.8114**	**0.0480**		**5,544.8186**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Fugitive Dust					3.0572	0.0000	3.0572	0.4629	0.0000	0.4629			0.0000			0.0000
Off-Road	5.1296	51.0711	39.5007	0.0469		2.7353	2.7353		2.5797	2.5797	0.0000	4,753.8142	4,753.8142	1.1881		4,778.7636
Total	**5.1296**	**51.0711**	**39.5007**	**0.0469**	**3.0572**	**2.7353**	**5.7925**	**0.4629**	**2.5797**	**3.0426**	**0.0000**	**4,753.8142**	**4,753.8142**	**1.1881**		**4,778.7636**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Hauling	1.3105	20.6003	16.1183	0.0534	1.2636	0.3163	1.5799	0.3460	0.2910	0.6370		5,376.4541	5,376.4541	0.0388		5,377.2691
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	0.0640	0.0860	0.8984	1.9900e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		167.3573	167.3573	9.1500e-003		167.5495
Total	**1.3745**	**20.6863**	**17.0166**	**0.0554**	**1.4312**	**0.3177**	**1.7489**	**0.3905**	**0.2922**	**0.6827**		**5,543.8114**	**5,543.8114**	**0.0480**		**5,544.8186**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Fugitive Dust					15.2257	0.0000	15.2257	6.9640	0.0000	6.9640			0.0000			0.0000
Off-Road	8.7364	99.0643	64.5498	0.0768		4.8128	4.8128		4.4278	4.4278		7,987.8197	7,987.8197	2.4094		8,038.4173
Total	**8.7364**	**99.0643**	**64.5498**	**0.0768**	**15.2257**	**4.8128**	**20.0384**	**6.9640**	**4.4278**	**11.3917**		**7,987.8197**	**7,987.8197**	**2.4094**		**8,038.4173**

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	0.0913	0.8855	1.1956	2.1600e-003	0.0625	0.0144	0.0769	0.0178	0.0132	0.0310		216.2004	216.2004	1.6000e-003		216.2341
Worker	0.0853	0.1147	1.1978	2.6500e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		223.1431	223.1431	0.0122		223.3994
Total	**0.1766**	**1.0001**	**2.3934**	**4.8100e-003**	**0.2861**	**0.0162**	**0.3023**	**0.0771**	**0.0149**	**0.0920**		**439.3435**	**439.3435**	**0.0138**		**439.6334**

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					5.9380	0.0000	5.9380	2.7160	0.0000	2.7160			0.0000			0.0000
Off-Road	8.7364	99.0643	64.5498	0.0768		4.8128	4.8128		4.4278	4.4278	0.0000	7,987.8197	7,987.8197	2.4094		8,038.4173
Total	**8.7364**	**99.0643**	**64.5498**	**0.0768**	**5.9380**	**4.8128**	**10.7508**	**2.7160**	**4.4278**	**7.1437**	**0.0000**	**7,987.8197**	**7,987.8197**	**2.4094**		**8,038.4173**

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	0.0913	0.8855	1.1956	2.1600e-003	0.0625	0.0144	0.0769	0.0178	0.0132	0.0310		216.2004	216.2004	1.6000e-003		216.2341
Worker	0.0853	0.1147	1.1978	2.6500e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		223.1431	223.1431	0.0122		223.3994
Total	**0.1766**	**1.0001**	**2.3934**	**4.8100e-003**	**0.2861**	**0.0162**	**0.3023**	**0.0771**	**0.0149**	**0.0920**		**439.3435**	**439.3435**	**0.0138**		**439.6334**

Phase 1_Concrete Crushing_Tier 3 Mitigation

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	220.55	1000sqft	5.00	220,550.00	0
Unrefrigerated Warehouse-No Rail	455.95	1000sqft	7.20	455,949.00	0
Unrefrigerated Warehouse-No Rail	366.37	1000sqft	6.30	366,371.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Off-road Equipment - project specific

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition - project specific

Grading - project

Land Use Change -

Construction Off-road Equipment Mitigation - mitigation

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	1564305	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	131.00
tblConstructionPhase	NumDays	30.00	22.00
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	PhaseEndDate	11/1/2016	9/30/2016
tblConstructionPhase	PhaseStartDate	10/1/2016	9/1/2016
tblGrading	MaterialImported	0.00	95,000.00
tblLandUse	LandUseSquareFeet	366,370.00	366,371.00
tblLandUse	LandUseSquareFeet	455,950.00	455,949.00
tblLandUse	LotAcreage	5.06	5.00
tblLandUse	LotAcreage	8.41	6.30
tblLandUse	LotAcreage	10.47	7.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Demolition
tblProjectCharacteristics	OperationalYear	2014	2019
tblSolidWaste	SolidWasteGenerationRate	980.30	772.98
tblTripsAndVMT	HaulingTripNumber	11,875.00	0.00
tblTripsAndVMT	HaulingTripNumber	4,745.00	9,500.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	10.00	18.00
tblTripsAndVMT	WorkerTripNumber	18.00	15.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblWater	IndoorWaterUseRate	241,163,687.50	190,161,500.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					

2016	15.4171	171.8218	123.4606	0.1839	24.7819	7.8820	32.6639	8.6184	7.3146	15.9331	0.0000	18,724.7887	18,724.7887	3.6593	0.0000	18,801.6329
Total	**15.4171**	**171.8218**	**123.4606**	**0.1839**	**24.7819**	**7.8820**	**32.6639**	**8.6184**	**7.3146**	**15.9331**	**0.0000**	**18,724.7887**	**18,724.7887**	**3.6593**	**0.0000**	**18,801.6329**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	4.5189	80.5243	96.2775	0.1839	10.7125	3.0627	13.7752	3.6464	3.0360	6.6824	0.0000	18,724.7887	18,724.7887	3.6593	0.0000	18,801.6329
Total	**4.5189**	**80.5243**	**96.2775**	**0.1839**	**10.7125**	**3.0627**	**13.7752**	**3.6464**	**3.0360**	**6.6824**	**0.0000**	**18,724.7887**	**18,724.7887**	**3.6593**	**0.0000**	**18,801.6329**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**70.69**	**53.14**	**22.02**	**0.00**	**56.77**	**61.14**	**57.83**	**57.69**	**58.49**	**58.06**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	3/31/2016	5	65	
2	Demolition	Demolition	4/1/2016	9/30/2016	5	131	
3	Grading	Grading	9/1/2016	9/30/2016	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 66

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crushing/Proc. Equipment	1	8.00	85	0.78
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	2	8.00	174	0.41
Grading	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	18.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	7	15.00	0.00	9,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	20.00	10.00	0.00	14.70	6.90	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 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2095	0.0000	12.2095	6.6455	0.0000	6.6455			0.0000			0.0000
Off-Road	3.1577	34.2515	25.7951	0.0240		1.7920	1.7920		1.6487	1.6487		2,494.2187	2,494.2187	0.7523		2,510.0179
Total	**3.1577**	**34.2515**	**25.7951**	**0.0240**	**12.2095**	**1.7920**	**14.0015**	**6.6455**	**1.6487**	**8.2942**		**2,494.2187**	**2,494.2187**	**0.7523**		**2,510.0179**

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	0.0913	0.8855	1.1956	2.1600e-003	0.0625	0.0144	0.0769	0.0178	0.0132	0.0310		216.2004	216.2004	1.6000e-003		216.2341
Worker	0.0768	0.1032	1.0780	2.3900e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		200.8288	200.8288	0.0110		201.0594
Total	**0.1681**	**0.9887**	**2.2737**	**4.5500e-003**	**0.2637**	**0.0161**	**0.2797**	**0.0712**	**0.0148**	**0.0859**		**417.0292**	**417.0292**	**0.0126**		**417.2935**

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					4.7617	0.0000	4.7617	2.5917	0.0000	2.5917			0.0000			0.0000
Off-Road	0.5837	11.8160	14.0388	0.0240		0.5597	0.5597		0.5597	0.5597	0.0000	2,494.2186	2,494.2186	0.7523		2,510.0179
Total	**0.5837**	**11.8160**	**14.0388**	**0.0240**	**4.7617**	**0.5597**	**5.3214**	**2.5917**	**0.5597**	**3.1514**	**0.0000**	**2,494.2186**	**2,494.2186**	**0.7523**		**2,510.0179**

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	0.0913	0.8855	1.1956	2.1600e-003	0.0625	0.0144	0.0769	0.0178	0.0132	0.0310		216.2004	216.2004	1.6000e-003		216.2341
Worker	0.0768	0.1032	1.0780	2.3900e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		200.8288	200.8288	0.0110		201.0594
Total	**0.1681**	**0.9887**	**2.2737**	**4.5500e-003**	**0.2637**	**0.0161**	**0.2797**	**0.0712**	**0.0148**	**0.0859**		**417.0292**	**417.0292**	**0.0126**		**417.2935**

3.3 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.8389	0.0000	7.8389	1.1869	0.0000	1.1869			0.0000			0.0000
Off-Road	5.1296	51.0711	39.5007	0.0469		2.7353	2.7353		2.5797	2.5797		4,753.8142	4,753.8142	1.1881		4,778.7636

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**5.1296**	**51.0711**	**39.5007**	**0.0469**	**7.8389**	**2.7353**	**10.5742**	**1.1869**	**2.5797**	**3.7666**		**4,753.8142**	**4,753.8142**	**1.1881**		**4,778.7636**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.3105	20.6003	16.1183	0.0534	1.2636	0.3163	1.5799	0.3460	0.2910	0.6370		5,376.4541	5,376.4541	0.0388		5,377.2691
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	0.0640	0.0860	0.8984	1.9900e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		167.3573	167.3573	9.1500e-003		167.5495
Total	**1.3745**	**20.6863**	**17.0166**	**0.0554**	**1.4312**	**0.3177**	**1.7489**	**0.3905**	**0.2922**	**0.6827**		**5,543.8114**	**5,543.8114**	**0.0480**		**5,544.8186**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0572	0.0000	3.0572	0.4629	0.0000	0.4629			0.0000			0.0000
Off-Road	1.0881	21.9654	29.5915	0.0469		1.1062	1.1062		1.1062	1.1062	0.0000	4,753.8142	4,753.8142	1.1881		4,778.7636
Total	**1.0881**	**21.9654**	**29.5915**	**0.0469**	**3.0572**	**1.1062**	**4.1633**	**0.4629**	**1.1062**	**1.5691**	**0.0000**	**4,753.8142**	**4,753.8142**	**1.1881**		**4,778.7636**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.3105	20.6003	16.1183	0.0534	1.2636	0.3163	1.5799	0.3460	0.2910	0.6370		5,376.4541	5,376.4541	0.0388		5,377.2691
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	0.0640	0.0860	0.8984	1.9900e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		167.3573	167.3573	9.1500e-003		167.5495
Total	**1.3745**	**20.6863**	**17.0166**	**0.0554**	**1.4312**	**0.3177**	**1.7489**	**0.3905**	**0.2922**	**0.6827**		**5,543.8114**	**5,543.8114**	**0.0480**		**5,544.8186**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					15.2257	0.0000	15.2257	6.9640	0.0000	6.9640			0.0000			0.0000
Off-Road	8.7364	99.0643	64.5498	0.0768		4.8128	4.8128		4.4278	4.4278		7,987.8197	7,987.8197	2.4094		8,038.4173
Total	**8.7364**	**99.0643**	**64.5498**	**0.0768**	**15.2257**	**4.8128**	**20.0384**	**6.9640**	**4.4278**	**11.3917**		**7,987.8197**	**7,987.8197**	**2.4094**		**8,038.4173**

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					

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
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	0.0913	0.8855	1.1956	2.1600e-003	0.0625	0.0144	0.0769	0.0178	0.0132	0.0310		216.2004	216.2004	1.6000e-003		216.2341
Worker	0.0853	0.1147	1.1978	2.6500e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		223.1431	223.1431	0.0122		223.3994
Total	**0.1766**	**1.0001**	**2.3934**	**4.8100e-003**	**0.2861**	**0.0162**	**0.3023**	**0.0771**	**0.0149**	**0.0920**		**439.3435**	**439.3435**	**0.0138**		**439.6334**

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					5.9380	0.0000	5.9380	2.7160	0.0000	2.7160			0.0000			0.0000
Off-Road	1.8797	36.8724	47.2760	0.0768		1.6226	1.6226		1.6226	1.6226	0.0000	7,987.8197	7,987.8197	2.4094		8,038.4173
Total	**1.8797**	**36.8724**	**47.2760**	**0.0768**	**5.9380**	**1.6226**	**7.5606**	**2.7160**	**1.6226**	**4.3386**	**0.0000**	**7,987.8197**	**7,987.8197**	**2.4094**		**8,038.4173**

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	0.0913	0.8855	1.1956	2.1600e-003	0.0625	0.0144	0.0769	0.0178	0.0132	0.0310		216.2004	216.2004	1.6000e-003		216.2341
Worker	0.0853	0.1147	1.1978	2.6500e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		223.1431	223.1431	0.0122		223.3994
Total	**0.1766**	**1.0001**	**2.3934**	**4.8100e-003**	**0.2861**	**0.0162**	**0.3023**	**0.0771**	**0.0149**	**0.0920**		**439.3435**	**439.3435**	**0.0138**		**439.6334**

Phase 2

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	18.50	Acre	18.50	805,860.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Needed to add landuse even though most work is being done offsite during this phase.

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition -

Grading - project

Land Use Change -

Construction Off-road Equipment Mitigation - project specific

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	36264	0
tblConstructionPhase	NumDays	300.00	262.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblTripsAndVMT	VendorTripNumber	132.00	10.00
tblTripsAndVMT	WorkerTripNumber	338.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	3.2489	35.1370	26.9907	0.0261	0.0625	1.8064	1.8689	0.0178	1.6619	1.6797	0.0000	2,710.4191	2,710.4191	0.7540	0.0000	2,726.2520
2017	3.0976	33.2783	25.8038	0.0262	0.0625	1.6963	1.7589	0.0178	1.5606	1.5784	0.0000	2,669.2415	2,669.2415	0.7542	0.0000	2,685.0804
Total	**6.3466**	**68.4153**	**52.7945**	**0.0523**	**0.1250**	**3.5027**	**3.6278**	**0.0356**	**3.2225**	**3.2581**	**0.0000**	**5,379.6605**	**5,379.6605**	**1.5082**	**0.0000**	**5,411.3323**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	3.2489	35.1370	26.9907	0.0261	0.0625	1.8064	1.8689	0.0178	1.6619	1.6797	0.0000	2,710.4191	2,710.4191	0.7540	0.0000	2,726.2520
2017	3.0976	33.2783	25.8038	0.0262	0.0625	1.6963	1.7589	0.0178	1.5606	1.5784	0.0000	2,669.2415	2,669.2415	0.7542	0.0000	2,685.0804
Total	**6.3466**	**68.4153**	**52.7945**	**0.0523**	**0.1250**	**3.5027**	**3.6278**	**0.0356**	**3.2225**	**3.2581**	**0.0000**	**5,379.6605**	**5,379.6605**	**1.5082**	**0.0000**	**5,411.3323**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Construction	Building Construction	9/1/2016	9/1/2017	5	262	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Construction	Rubber Tired Dozers	2	8.00	255	0.40
Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class

Construction	4	0.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Construction - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1577	34.2515	25.7951	0.0240		1.7920	1.7920		1.6487	1.6487	0.0000	2,494.2186	2,494.2186	0.7523		2,510.0179
Total	**3.1577**	**34.2515**	**25.7951**	**0.0240**		**1.7920**	**1.7920**		**1.6487**	**1.6487**	**0.0000**	**2,494.2186**	**2,494.2186**	**0.7523**		**2,510.0179**

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	0.0913	0.8855	1.1956	2.1600e-003	0.0625	0.0144	0.0769	0.0178	0.0132	0.0310		216.2004	216.2004	1.6000e-003		216.2341
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0913**	**0.8855**	**1.1956**	**2.1600e-003**	**0.0625**	**0.0144**	**0.0769**	**0.0178**	**0.0132**	**0.0310**		**216.2004**	**216.2004**	**1.6000e-003**		**216.2341**

3.2 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	3.0143	32.4731	24.6688	0.0240		1.6835	1.6835		1.5489	1.5489		2,456.5473	2,456.5473	0.7527		2,472.3536
Total	**3.0143**	**32.4731**	**24.6688**	**0.0240**		**1.6835**	**1.6835**		**1.5489**	**1.5489**		**2,456.5473**	**2,456.5473**	**0.7527**		**2,472.3536**

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	0.0834	0.8052	1.1350	2.1600e-003	0.0625	0.0128	0.0753	0.0178	0.0118	0.0296		212.6942	212.6942	1.5500e-003		212.7267
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0834**	**0.8052**	**1.1350**	**2.1600e-003**	**0.0625**	**0.0128**	**0.0753**	**0.0178**	**0.0118**	**0.0296**		**212.6942**	**212.6942**	**1.5500e-003**		**212.7267**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.0143	32.4731	24.6688	0.0240		1.6835	1.6835		1.5489	1.5489	0.0000	2,456.5473	2,456.5473	0.7527		2,472.3536
Total	**3.0143**	**32.4731**	**24.6688**	**0.0240**		**1.6835**	**1.6835**		**1.5489**	**1.5489**	**0.0000**	**2,456.5473**	**2,456.5473**	**0.7527**		**2,472.3536**

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	0.0834	0.8052	1.1350	2.1600e-003	0.0625	0.0128	0.0753	0.0178	0.0118	0.0296		212.6942	212.6942	1.5500e-003		212.7267
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0834**	**0.8052**	**1.1350**	**2.1600e-003**	**0.0625**	**0.0128**	**0.0753**	**0.0178**	**0.0118**	**0.0296**		**212.6942**	**212.6942**	**1.5500e-003**		**212.7267**

Phase 2_Tier 3 Mitigation

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	18.50	Acre	18.50	805,860.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Needed to add landuse even though most work is being done offsite during this phase.

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition -

Grading - project

Land Use Change -

Construction Off-road Equipment Mitigation - project specific

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	36264	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	300.00	262.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblTripsAndVMT	VendorTripNumber	132.00	10.00
tblTripsAndVMT	WorkerTripNumber	338.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	3.2489	35.1370	26.9907	0.0261	0.0625	1.8064	1.8689	0.0178	1.6619	1.6797	0.0000	2,710.4191	2,710.4191	0.7540	0.0000	2,726.2520
2017	3.0976	33.2783	25.8038	0.0262	0.0625	1.6963	1.7589	0.0178	1.5606	1.5784	0.0000	2,669.2415	2,669.2415	0.7542	0.0000	2,685.0804
Total	**6.3466**	**68.4153**	**52.7945**	**0.0523**	**0.1250**	**3.5027**	**3.6278**	**0.0356**	**3.2225**	**3.2581**	**0.0000**	**5,379.6605**	**5,379.6605**	**1.5082**	**0.0000**	**5,411.3323**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	0.6750	12.7015	15.2344	0.0261	0.0625	0.5741	0.6366	0.0178	0.5729	0.5907	0.0000	2,710.4191	2,710.4191	0.7540	0.0000	2,726.2520
2017	0.6670	12.6213	15.1738	0.0262	0.0625	0.5725	0.6350	0.0178	0.5715	0.5893	0.0000	2,669.2415	2,669.2415	0.7542	0.0000	2,685.0804
Total	**1.3420**	**25.3228**	**30.4082**	**0.0523**	**0.1250**	**1.1465**	**1.2716**	**0.0356**	**1.1444**	**1.1800**	**0.0000**	**5,379.6605**	**5,379.6605**	**1.5082**	**0.0000**	**5,411.3323**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**78.86**	**62.99**	**42.40**	**0.00**	**0.00**	**67.27**	**64.95**	**0.00**	**64.49**	**63.78**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Construction	Building Construction	9/1/2016	9/1/2017	5	262	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Construction	Rubber Tired Dozers	2	8.00	255	0.40

Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Construction	4	0.00	10.00	0.00	14.70	6.90	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 Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1577	34.2515	25.7951	0.0240		1.7920	1.7920		1.6487	1.6487		2,494.2187	2,494.2187	0.7523		2,510.0179
Total	**3.1577**	**34.2515**	**25.7951**	**0.0240**		**1.7920**	**1.7920**		**1.6487**	**1.6487**		**2,494.2187**	**2,494.2187**	**0.7523**		**2,510.0179**

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	0.0913	0.8855	1.1956	2.1600e-003	0.0625	0.0144	0.0769	0.0178	0.0132	0.0310		216.2004	216.2004	1.6000e-003		216.2341
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0913**	**0.8855**	**1.1956**	**2.1600e-003**	**0.0625**	**0.0144**	**0.0769**	**0.0178**	**0.0132**	**0.0310**		**216.2004**	**216.2004**	**1.6000e-003**		**216.2341**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5837	11.8160	14.0388	0.0240		0.5597	0.5597		0.5597	0.5597	0.0000	2,494.2186	2,494.2186	0.7523		2,510.0179
Total	**0.5837**	**11.8160**	**14.0388**	**0.0240**		**0.5597**	**0.5597**		**0.5597**	**0.5597**	**0.0000**	**2,494.2186**	**2,494.2186**	**0.7523**		**2,510.0179**

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	0.0913	0.8855	1.1956	2.1600e-003	0.0625	0.0144	0.0769	0.0178	0.0132	0.0310		216.2004	216.2004	1.6000e-003		216.2341
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**0.0913**	**0.8855**	**1.1956**	**2.1600e-003**	**0.0625**	**0.0144**	**0.0769**	**0.0178**	**0.0132**	**0.0310**		**216.2004**	**216.2004**	**1.6000e-003**		**216.2341**

3.2 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	3.0143	32.4731	24.6688	0.0240		1.6835	1.6835		1.5489	1.5489		2,456.5473	2,456.5473	0.7527		2,472.3536
Total	**3.0143**	**32.4731**	**24.6688**	**0.0240**		**1.6835**	**1.6835**		**1.5489**	**1.5489**		**2,456.5473**	**2,456.5473**	**0.7527**		**2,472.3536**

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	0.0834	0.8052	1.1350	2.1600e-003	0.0625	0.0128	0.0753	0.0178	0.0118	0.0296		212.6942	212.6942	1.5500e-003		212.7267
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0834**	**0.8052**	**1.1350**	**2.1600e-003**	**0.0625**	**0.0128**	**0.0753**	**0.0178**	**0.0118**	**0.0296**		**212.6942**	**212.6942**	**1.5500e-003**		**212.7267**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5837	11.8160	14.0388	0.0240		0.5597	0.5597		0.5597	0.5597	0.0000	2,456.5473	2,456.5473	0.7527		2,472.3536
Total	**0.5837**	**11.8160**	**14.0388**	**0.0240**		**0.5597**	**0.5597**		**0.5597**	**0.5597**	**0.0000**	**2,456.5473**	**2,456.5473**	**0.7527**		**2,472.3536**

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	0.0834	0.8052	1.1350	2.1600e-003	0.0625	0.0128	0.0753	0.0178	0.0118	0.0296		212.6942	212.6942	1.5500e-003		212.7267
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0834**	**0.8052**	**1.1350**	**2.1600e-003**	**0.0625**	**0.0128**	**0.0753**	**0.0178**	**0.0118**	**0.0296**		**212.6942**	**212.6942**	**1.5500e-003**		**212.7267**

Phase 3

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	9,000.00	Student	6.00	100,000.00	0
Parking Lot	1,350.00	Space	12.50	544,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project specific

Off-road Equipment -

Off-road Equipment - project specific

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition -

Grading - project

Architectural Coating -

Land Use Change -

Construction Off-road Equipment Mitigation - project specific

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	300.00	522.00
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	10.00	24.00
tblConstructionPhase	PhaseEndDate	7/5/2019	6/3/2019
tblConstructionPhase	PhaseEndDate	7/5/2019	6/3/2019
tblConstructionPhase	PhaseStartDate	6/4/2019	5/1/2019
tblConstructionPhase	PhaseStartDate	6/4/2019	5/1/2019
tblLandUse	LandUseSquareFeet	392,870.13	100,000.00
tblLandUse	LandUseSquareFeet	540,000.00	544,500.00
tblLandUse	LotAcreage	9.02	6.00
tblLandUse	LotAcreage	12.15	12.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	106.00
tblTripsAndVMT	WorkerTripNumber	10.00	55.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	4.4522	33.3300	41.0150	0.0790	12.2185	1.6972	13.9157	6.6679	1.5615	8.2294	0.0000	7,178.7818	7,178.7818	0.7683	0.0000	7,194.9164
2018	3.9210	28.2487	38.5663	0.0790	3.6919	1.3839	5.0757	0.9921	1.2824	2.2745	0.0000	7,002.4791	7,002.4791	0.7517	0.0000	7,018.2656
2019	120.1770	49.2520	67.6571	0.1392	5.5730	2.3097	7.8828	1.5040	2.1640	3.6680	0.0000	12,338.9443	12,338.9443	1.3253	0.0000	12,366.7760
Total	**128.5502**	**110.8307**	**147.2384**	**0.2972**	**21.4834**	**5.3909**	**26.8742**	**9.1640**	**5.0079**	**14.1718**	**0.0000**	**26,520.2052**	**26,520.2052**	**2.8454**	**0.0000**	**26,579.9581**

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	4.4522	33.3300	41.0150	0.0790	4.8715	1.6972	6.5688	2.6294	1.5615	4.1909	0.0000	7,178.7818	7,178.7818	0.7683	0.0000	7,194.9164
2018	3.9210	28.2487	38.5663	0.0790	3.6919	1.3839	5.0757	0.9921	1.2824	2.2745	0.0000	7,002.4791	7,002.4791	0.7517	0.0000	7,018.2656
2019	120.1770	49.2520	67.6571	0.1392	5.5730	2.3097	7.8828	1.5040	2.1640	3.6680	0.0000	12,338.9443	12,338.9443	1.3253	0.0000	12,366.7760
Total	**128.5502**	**110.8307**	**147.2384**	**0.2972**	**14.1364**	**5.3909**	**19.5272**	**5.1255**	**5.0079**	**10.1334**	**0.0000**	**26,520.2052**	**26,520.2052**	**2.8454**	**0.0000**	**26,579.9581**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**34.20**	**0.00**	**27.34**	**44.07**	**0.00**	**28.50**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/1/2017	6/1/2017	5	24	
2	Construction	Building Construction	6/2/2017	6/3/2019	5	522	
3	Paving	Paving	5/1/2019	6/3/2019	5	24	
4	Coating	Architectural Coating	5/1/2019	6/3/2019	5	24	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 174,503; Non-Residential Outdoor: 58,168 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Construction	Cranes	1	7.00	226	0.29
Construction	Forklifts	3	8.00	89	0.20
Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Coating	Air Compressors	3	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class

Site Preparation	4	10.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Construction	8	271.00	106.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	55.00	106.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Coating	3	54.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 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					4.6972	0.0000	4.6972	2.5820	0.0000	2.5820			0.0000			0.0000
Off-Road	3.0143	32.4731	24.6688	0.0240		1.6835	1.6835		1.5489	1.5489	0.0000	2,456.5473	2,456.5473	0.7527		2,472.3536
Total	**3.0143**	**32.4731**	**24.6688**	**0.0240**	**4.6972**	**1.6835**	**6.3808**	**2.5820**	**1.5489**	**4.1308**	**0.0000**	**2,456.5473**	**2,456.5473**	**0.7527**		**2,472.3536**

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	0.0834	0.8052	1.1350	2.1600e-003	0.0625	0.0128	0.0753	0.0178	0.0118	0.0296		212.6942	212.6942	1.5500e-003		212.7267
Worker	0.0382	0.0518	0.5398	1.3300e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		107.2861	107.2861	5.6300e-003		107.4043
Total	**0.1216**	**0.8570**	**1.6748**	**3.4900e-003**	**0.1743**	**0.0137**	**0.1880**	**0.0475**	**0.0126**	**0.0601**		**319.9802**	**319.9802**	**7.1800e-003**		**320.1311**

3.3 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	2.5323	21.9415	14.3556	0.0202		1.4808	1.4808		1.3726	1.3726	0.0000	2,016.7708	2,016.7708	0.5993		2,029.3554
Total	**2.5323**	**21.9415**	**14.3556**	**0.0202**		**1.4808**	**1.4808**		**1.3726**	**1.3726**	**0.0000**	**2,016.7708**	**2,016.7708**	**0.5993**		**2,029.3554**

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	0.8835	8.5354	12.0308	0.0229	0.6627	0.1358	0.7985	0.1888	0.1249	0.3136		2,254.5581	2,254.5581	0.0164		2,254.9034
Worker	1.0364	1.4023	14.6286	0.0360	3.0291	0.0244	3.0535	0.8033	0.0225	0.8258		2,907.4529	2,907.4529	0.1526		2,910.6576
Total	**1.9199**	**9.9377**	**26.6594**	**0.0588**	**3.6918**	**0.1601**	**3.8520**	**0.9921**	**0.1473**	**1.1394**		**5,162.0110**	**5,162.0110**	**0.1691**		**5,165.5610**

3.3 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	2.1633	19.1475	13.7855	0.0202		1.2323	1.2323		1.1428	1.1428		1,986.9044	1,986.9044	0.5938		1,999.3732
Total	**2.1633**	**19.1475**	**13.7855**	**0.0202**		**1.2323**	**1.2323**		**1.1428**	**1.1428**		**1,986.9044**	**1,986.9044**	**0.5938**		**1,999.3732**

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	0.8257	7.8295	11.5443	0.0228	0.6627	0.1279	0.7906	0.1888	0.1177	0.3064		2,216.6855	2,216.6855	0.0164		2,217.0289
Worker	0.9320	1.2717	13.2366	0.0359	3.0291	0.0237	3.0529	0.8033	0.0219	0.8253		2,798.8892	2,798.8892	0.1416		2,801.8635
Total	**1.7577**	**9.1012**	**24.7809**	**0.0588**	**3.6918**	**0.1516**	**3.8435**	**0.9921**	**0.1396**	**1.1317**		**5,015.5748**	**5,015.5748**	**0.1580**		**5,018.8924**

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	2.1633	19.1475	13.7855	0.0202		1.2323	1.2323		1.1428	1.1428	0.0000	1,986.9044	1,986.9044	0.5938		1,999.3732
Total	**2.1633**	**19.1475**	**13.7855**	**0.0202**		**1.2323**	**1.2323**		**1.1428**	**1.1428**	**0.0000**	**1,986.9044**	**1,986.9044**	**0.5938**		**1,999.3732**

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	0.8257	7.8295	11.5443	0.0228	0.6627	0.1279	0.7906	0.1888	0.1177	0.3064		2,216.6855	2,216.6855	0.0164		2,217.0289
Worker	0.9320	1.2717	13.2366	0.0359	3.0291	0.0237	3.0529	0.8033	0.0219	0.8253		2,798.8892	2,798.8892	0.1416		2,801.8635
Total	**1.7577**	**9.1012**	**24.7809**	**0.0588**	**3.6918**	**0.1516**	**3.8435**	**0.9921**	**0.1396**	**1.1317**		**5,015.5748**	**5,015.5748**	**0.1580**		**5,018.8924**

3.3 Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9076	17.1871	13.3973	0.0202		1.0592	1.0592		0.9824	0.9824		1,957.7272	1,957.7272	0.5884		1,970.0845
Total	**1.9076**	**17.1871**	**13.3973**	**0.0202**		**1.0592**	**1.0592**		**0.9824**	**0.9824**		**1,957.7272**	**1,957.7272**	**0.5884**		**1,970.0845**

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	0.7804	7.2165	11.1650	0.0227	0.6628	0.1213	0.7841	0.1888	0.1116	0.3004		2,173.5384	2,173.5384	0.0161		2,173.8755
Worker	0.8570	1.1661	12.1316	0.0359	3.0291	0.0233	3.0524	0.8033	0.0216	0.8249		2,692.3421	2,692.3421	0.1326		2,695.1263
Total	**1.6375**	**8.3826**	**23.2966**	**0.0586**	**3.6919**	**0.1446**	**3.8365**	**0.9921**	**0.1332**	**1.1253**		**4,865.8805**	**4,865.8805**	**0.1486**		**4,869.0018**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9076	17.1871	13.3973	0.0202		1.0592	1.0592		0.9824	0.9824	0.0000	1,957.7272	1,957.7272	0.5884		1,970.0845
Total	**1.9076**	**17.1871**	**13.3973**	**0.0202**		**1.0592**	**1.0592**		**0.9824**	**0.9824**	**0.0000**	**1,957.7272**	**1,957.7272**	**0.5884**		**1,970.0845**

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	0.7804	7.2165	11.1650	0.0227	0.6628	0.1213	0.7841	0.1888	0.1116	0.3004		2,173.5384	2,173.5384	0.0161		2,173.8755
Worker	0.8570	1.1661	12.1316	0.0359	3.0291	0.0233	3.0524	0.8033	0.0216	0.8249		2,692.3421	2,692.3421	0.1326		2,695.1263
Total	**1.6375**	**8.3826**	**23.2966**	**0.0586**	**3.6919**	**0.1446**	**3.8365**	**0.9921**	**0.1332**	**1.1253**		**4,865.8805**	**4,865.8805**	**0.1486**		**4,869.0018**

3.4 Paving - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0064	10.4906	9.3947	0.0143		0.5889	0.5889		0.5418	0.5418	0.0000	1,414.5564	1,414.5564	0.4476		1,423.9549
Paving	1.3646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.3710**	**10.4906**	**9.3947**	**0.0143**		**0.5889**	**0.5889**		**0.5418**	**0.5418**	**0.0000**	**1,414.5564**	**1,414.5564**	**0.4476**		**1,423.9549**

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					

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
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	0.7804	7.2165	11.1650	0.0227	0.6628	0.1213	0.7841	0.1888	0.1116	0.3004		2,173.5384	2,173.5384	0.0161		2,173.8755
Worker	0.1739	0.2367	2.4621	7.2800e-003	0.6148	4.7300e-003	0.6195	0.1630	4.3800e-003	0.1674		546.4163	546.4163	0.0269		546.9814
Total	**0.9544**	**7.4532**	**13.6271**	**0.0300**	**1.2775**	**0.1261**	**1.4036**	**0.3518**	**0.1160**	**0.4678**		**2,719.9547**	**2,719.9547**	**0.0430**		**2,720.8568**

3.5 Coating - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	112.3365					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7993	5.5062	5.5240	8.9100e-003		0.3863	0.3863		0.3863	0.3863	0.0000	844.3441	844.3441	0.0713		845.8418
Total	**113.1358**	**5.5062**	**5.5240**	**8.9100e-003**		**0.3863**	**0.3863**		**0.3863**	**0.3863**	**0.0000**	**844.3441**	**844.3441**	**0.0713**		**845.8418**

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	0.1708	0.2324	2.4174	7.1400e-003	0.6036	4.6400e-003	0.6082	0.1601	4.3000e-003	0.1644		536.4815	536.4815	0.0264		537.0362
Total	**0.1708**	**0.2324**	**2.4174**	**7.1400e-003**	**0.6036**	**4.6400e-003**	**0.6082**	**0.1601**	**4.3000e-003**	**0.1644**		**536.4815**	**536.4815**	**0.0264**		**537.0362**

Phase 3_Tier 3 Mitigation

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	9,000.00	Student	6.00	100,000.00	0
Parking Lot	1,350.00	Space	12.50	544,500.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 31

Climate Zone 9 **Operational Year** 2019

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project specific

Off-road Equipment -

Off-road Equipment - project specific

Off-road Equipment - project specific

Trips and VMT - project specific

Demolition -

Grading - project

Architectural Coating -

Land Use Change -

Construction Off-road Equipment Mitigation - project specific

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	300.00	522.00
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	10.00	24.00
tblConstructionPhase	PhaseEndDate	7/5/2019	6/3/2019

tblConstructionPhase	PhaseEndDate	7/5/2019	6/3/2019
tblConstructionPhase	PhaseStartDate	6/4/2019	5/1/2019
tblConstructionPhase	PhaseStartDate	6/4/2019	5/1/2019
tblLandUse	LandUseSquareFeet	392,870.13	100,000.00
tblLandUse	LandUseSquareFeet	540,000.00	544,500.00
tblLandUse	LotAcreage	9.02	6.00
tblLandUse	LotAcreage	12.15	12.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	106.00
tblTripsAndVMT	WorkerTripNumber	10.00	55.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	4.4522	33.3300	41.0150	0.0790	12.2185	1.6972	13.9157	6.6679	1.5615	8.2294	0.0000	7,178.7818	7,178.7818	0.7683	0.0000	7,194.9164
2018	3.9210	28.2487	38.5663	0.0790	3.6919	1.3839	5.0757	0.9921	1.2824	2.2745	0.0000	7,002.4791	7,002.4791	0.7517	0.0000	7,018.2656
2019	120.1770	49.2520	67.6571	0.1392	5.5730	2.3097	7.8828	1.5040	2.1640	3.6680	0.0000	12,338.9443	12,338.9443	1.3253	0.0000	12,366.7760
Total	**128.5502**	**110.8307**	**147.2384**	**0.2972**	**21.4834**	**5.3909**	**26.8742**	**9.1640**	**5.0079**	**14.1718**	**0.0000**	**26,520.2052**	**26,520.2052**	**2.8454**	**0.0000**	**26,579.9581**

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	2.4596	21.1079	40.4186	0.0790	4.8715	0.8512	5.4449	2.6294	0.8384	3.2017	0.0000	7,178.7818	7,178.7818	0.7683	0.0000	7,194.9164
2018	2.2974	20.2714	38.5401	0.0790	3.6919	0.8427	4.5346	0.9921	0.8307	1.8228	0.0000	7,002.4791	7,002.4791	0.7517	0.0000	7,018.2656
2019	117.5325	38.5438	69.4172	0.1392	5.5730	1.6650	7.2380	1.5040	1.6432	3.1472	0.0000	12,338.9443	12,338.9443	1.3253	0.0000	12,366.7760
Total	**122.2895**	**79.9232**	**148.3759**	**0.2972**	**14.1364**	**3.3589**	**17.2175**	**5.1255**	**3.3122**	**8.1716**	**0.0000**	**26,520.2052**	**26,520.2052**	**2.8454**	**0.0000**	**26,579.9581**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**4.87**	**27.89**	**-0.77**	**0.00**	**34.20**	**37.69**	**35.93**	**44.07**	**33.86**	**42.34**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/1/2017	6/1/2017	5	24	
2	Construction	Building Construction	6/2/2017	6/3/2019	5	522	
3	Paving	Paving	5/1/2019	6/3/2019	5	24	
4	Coating	Architectural Coating	5/1/2019	6/3/2019	5	24	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 174,503; Non-Residential Outdoor: 58,168 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Construction	Cranes	1	7.00	226	0.29
Construction	Forklifts	3	8.00	89	0.20
Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Coating	Air Compressors	3	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	10.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Construction	8	271.00	106.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	55.00	106.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Coating	3	54.00	0.00	0.00	14.70	6.90	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 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.0442	0.0000	12.0442	6.6205	0.0000	6.6205			0.0000			0.0000
Off-Road	3.0143	32.4731	24.6688	0.0240		1.6835	1.6835		1.5489	1.5489		2,456.5473	2,456.5473	0.7527		2,472.3536
Total	**3.0143**	**32.4731**	**24.6688**	**0.0240**	**12.0442**	**1.6835**	**13.7277**	**6.6205**	**1.5489**	**8.1693**		**2,456.5473**	**2,456.5473**	**0.7527**		**2,472.3536**

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	0.0834	0.8052	1.1350	2.1600e-003	0.0625	0.0128	0.0753	0.0178	0.0118	0.0296		212.6942	212.6942	1.5500e-003		212.7267
Worker	0.0382	0.0518	0.5398	1.3300e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		107.2861	107.2861	5.6300e-003		107.4043
Total	**0.1216**	**0.8570**	**1.6748**	**3.4900e-003**	**0.1743**	**0.0137**	**0.1880**	**0.0475**	**0.0126**	**0.0601**		**319.9802**	**319.9802**	**7.1800e-003**		**320.1311**

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					4.6972	0.0000	4.6972	2.5820	0.0000	2.5820			0.0000			0.0000

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
Off-Road	0.5837	11.8160	14.0388	0.0240		0.5597	0.5597		0.5597	0.5597	0.0000	2,456.5473	2,456.5473	0.7527		2,472.3536
Total	**0.5837**	**11.8160**	**14.0388**	**0.0240**	**4.6972**	**0.5597**	**5.2569**	**2.5820**	**0.5597**	**3.1417**	**0.0000**	**2,456.5473**	**2,456.5473**	**0.7527**		**2,472.3536**

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	0.0834	0.8052	1.1350	2.1600e-003	0.0625	0.0128	0.0753	0.0178	0.0118	0.0296		212.6942	212.6942	1.5500e-003		212.7267
Worker	0.0382	0.0518	0.5398	1.3300e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		107.2861	107.2861	5.6300e-003		107.4043
Total	**0.1216**	**0.8570**	**1.6748**	**3.4900e-003**	**0.1743**	**0.0137**	**0.1880**	**0.0475**	**0.0126**	**0.0601**		**319.9802**	**319.9802**	**7.1800e-003**		**320.1311**

3.3 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	2.5323	21.9415	14.3556	0.0202		1.4808	1.4808		1.3726	1.3726		2,016.7708	2,016.7708	0.5993		2,029.3554
Total	**2.5323**	**21.9415**	**14.3556**	**0.0202**		**1.4808**	**1.4808**		**1.3726**	**1.3726**		**2,016.7708**	**2,016.7708**	**0.5993**		**2,029.3554**

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	0.8835	8.5354	12.0308	0.0229	0.6627	0.1358	0.7985	0.1888	0.1249	0.3136		2,254.5581	2,254.5581	0.0164		2,254.9034
Worker	1.0364	1.4023	14.6286	0.0360	3.0291	0.0244	3.0535	0.8033	0.0225	0.8258		2,907.4529	2,907.4529	0.1526		2,910.6576
Total	**1.9199**	**9.9377**	**26.6594**	**0.0588**	**3.6918**	**0.1601**	**3.8520**	**0.9921**	**0.1473**	**1.1394**		**5,162.0110**	**5,162.0110**	**0.1691**		**5,165.5610**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5397	11.1702	13.7592	0.0202		0.6911	0.6911		0.6911	0.6911	0.0000	2,016.7708	2,016.7708	0.5993		2,029.3554
Total	**0.5397**	**11.1702**	**13.7592**	**0.0202**		**0.6911**	**0.6911**		**0.6911**	**0.6911**	**0.0000**	**2,016.7708**	**2,016.7708**	**0.5993**		**2,029.3554**

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	0.8835	8.5354	12.0308	0.0229	0.6627	0.1358	0.7985	0.1888	0.1249	0.3136		2,254.5581	2,254.5581	0.0164		2,254.9034
Worker	1.0364	1.4023	14.6286	0.0360	3.0291	0.0244	3.0535	0.8033	0.0225	0.8258		2,907.4529	2,907.4529	0.1526		2,910.6576
Total	**1.9199**	**9.9377**	**26.6594**	**0.0588**	**3.6918**	**0.1601**	**3.8520**	**0.9921**	**0.1473**	**1.1394**		**5,162.0110**	**5,162.0110**	**0.1691**		**5,165.5610**

3.3 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	2.1633	19.1475	13.7855	0.0202		1.2323	1.2323		1.1428	1.1428		1,986.9044	1,986.9044	0.5938		1,999.3732
Total	**2.1633**	**19.1475**	**13.7855**	**0.0202**		**1.2323**	**1.2323**		**1.1428**	**1.1428**		**1,986.9044**	**1,986.9044**	**0.5938**		**1,999.3732**

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	0.8257	7.8295	11.5443	0.0228	0.6627	0.1279	0.7906	0.1888	0.1177	0.3064		2,216.6855	2,216.6855	0.0164		2,217.0289
Worker	0.9320	1.2717	13.2366	0.0359	3.0291	0.0237	3.0529	0.8033	0.0219	0.8253		2,798.8892	2,798.8892	0.1416		2,801.8635
Total	**1.7577**	**9.1012**	**24.7809**	**0.0588**	**3.6918**	**0.1516**	**3.8435**	**0.9921**	**0.1396**	**1.1317**		**5,015.5748**	**5,015.5748**	**0.1580**		**5,018.8924**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5397	11.1702	13.7592	0.0202		0.6911	0.6911		0.6911	0.6911	0.0000	1,986.9044	1,986.9044	0.5938		1,999.3732
Total	**0.5397**	**11.1702**	**13.7592**	**0.0202**		**0.6911**	**0.6911**		**0.6911**	**0.6911**	**0.0000**	**1,986.9044**	**1,986.9044**	**0.5938**		**1,999.3732**

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	0.8257	7.8295	11.5443	0.0228	0.6627	0.1279	0.7906	0.1888	0.1177	0.3064		2,216.6855	2,216.6855	0.0164		2,217.0289
Worker	0.9320	1.2717	13.2366	0.0359	3.0291	0.0237	3.0529	0.8033	0.0219	0.8253		2,798.8892	2,798.8892	0.1416		2,801.8635
Total	**1.7577**	**9.1012**	**24.7809**	**0.0588**	**3.6918**	**0.1516**	**3.8435**	**0.9921**	**0.1396**	**1.1317**		**5,015.5748**	**5,015.5748**	**0.1580**		**5,018.8924**

3.3 Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9076	17.1871	13.3973	0.0202		1.0592	1.0592		0.9824	0.9824		1,957.7272	1,957.7272	0.5884		1,970.0845
Total	**1.9076**	**17.1871**	**13.3973**	**0.0202**		**1.0592**	**1.0592**		**0.9824**	**0.9824**		**1,957.7272**	**1,957.7272**	**0.5884**		**1,970.0845**

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	0.7804	7.2165	11.1650	0.0227	0.6628	0.1213	0.7841	0.1888	0.1116	0.3004		2,173.5384	2,173.5384	0.0161		2,173.8755
Worker	0.8570	1.1661	12.1316	0.0359	3.0291	0.0233	3.0524	0.8033	0.0216	0.8249		2,692.3421	2,692.3421	0.1326		2,695.1263
Total	**1.6375**	**8.3826**	**23.2966**	**0.0586**	**3.6919**	**0.1446**	**3.8365**	**0.9921**	**0.1332**	**1.1253**		**4,865.8805**	**4,865.8805**	**0.1486**		**4,869.0018**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5397	11.1702	13.7592	0.0202		0.6911	0.6911		0.6911	0.6911	0.0000	1,957.7272	1,957.7272	0.5884		1,970.0845
Total	**0.5397**	**11.1702**	**13.7592**	**0.0202**		**0.6911**	**0.6911**		**0.6911**	**0.6911**	**0.0000**	**1,957.7272**	**1,957.7272**	**0.5884**		**1,970.0845**

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	0.7804	7.2165	11.1650	0.0227	0.6628	0.1213	0.7841	0.1888	0.1116	0.3004		2,173.5384	2,173.5384	0.0161		2,173.8755
Worker	0.8570	1.1661	12.1316	0.0359	3.0291	0.0233	3.0524	0.8033	0.0216	0.8249		2,692.3421	2,692.3421	0.1326		2,695.1263
Total	**1.6375**	**8.3826**	**23.2966**	**0.0586**	**3.6919**	**0.1446**	**3.8365**	**0.9921**	**0.1332**	**1.1253**		**4,865.8805**	**4,865.8805**	**0.1486**		**4,869.0018**

3.4 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0064	10.4906	9.3947	0.0143		0.5889	0.5889		0.5418	0.5418		1,414.5564	1,414.5564	0.4476		1,423.9549
Paving	1.3646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.3710**	**10.4906**	**9.3947**	**0.0143**		**0.5889**	**0.5889**		**0.5418**	**0.5418**		**1,414.5564**	**1,414.5564**	**0.4476**		**1,423.9549**

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	0.7804	7.2165	11.1650	0.0227	0.6628	0.1213	0.7841	0.1888	0.1116	0.3004		2,173.5384	2,173.5384	0.0161		2,173.8755
Worker	0.1739	0.2367	2.4621	7.2800e-003	0.6148	4.7300e-003	0.6195	0.1630	4.3800e-003	0.1674		546.4163	546.4163	0.0269		546.9814
Total	**0.9544**	**7.4532**	**13.6271**	**0.0300**	**1.2775**	**0.1261**	**1.4036**	**0.3518**	**0.1160**	**0.4678**		**2,719.9547**	**2,719.9547**	**0.0430**		**2,720.8568**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3509	7.2346	10.8196	0.0143		0.4133	0.4133		0.4133	0.4133	0.0000	1,414.5564	1,414.5564	0.4476		1,423.9549
Paving	1.3646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7155**	**7.2346**	**10.8196**	**0.0143**		**0.4133**	**0.4133**		**0.4133**	**0.4133**	**0.0000**	**1,414.5564**	**1,414.5564**	**0.4476**		**1,423.9549**

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	0.7804	7.2165	11.1650	0.0227	0.6628	0.1213	0.7841	0.1888	0.1116	0.3004		2,173.5384	2,173.5384	0.0161		2,173.8755
Worker	0.1739	0.2367	2.4621	7.2800e-003	0.6148	4.7300e-003	0.6195	0.1630	4.3800e-003	0.1674		546.4163	546.4163	0.0269		546.9814
Total	**0.9544**	**7.4532**	**13.6271**	**0.0300**	**1.2775**	**0.1261**	**1.4036**	**0.3518**	**0.1160**	**0.4678**		**2,719.9547**	**2,719.9547**	**0.0430**		**2,720.8568**

3.5 Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	112.3365					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7993	5.5062	5.5240	8.9100e-003		0.3863	0.3863		0.3863	0.3863		844.3442	844.3442	0.0713		845.8418
Total	**113.1358**	**5.5062**	**5.5240**	**8.9100e-003**		**0.3863**	**0.3863**		**0.3863**	**0.3863**		**844.3442**	**844.3442**	**0.0713**		**845.8418**

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	0.1708	0.2324	2.4174	7.1400e-003	0.6036	4.6400e-003	0.6082	0.1601	4.3000e-003	0.1644		536.4815	536.4815	0.0264		537.0362
Total	**0.1708**	**0.2324**	**2.4174**	**7.1400e-003**	**0.6036**	**4.6400e-003**	**0.6082**	**0.1601**	**4.3000e-003**	**0.1644**		**536.4815**	**536.4815**	**0.0264**		**537.0362**

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	112.3365					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1783	4.0709	5.4972	8.9100e-003		0.2853	0.2853		0.2853	0.2853	0.0000	844.3441	844.3441	0.0713		845.8418
Total	**112.5148**	**4.0709**	**5.4972**	**8.9100e-003**		**0.2853**	**0.2853**		**0.2853**	**0.2853**	**0.0000**	**844.3441**	**844.3441**	**0.0713**		**845.8418**

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	0.1708	0.2324	2.4174	7.1400e-003	0.6036	4.6400e-003	0.6082	0.1601	4.3000e-003	0.1644		536.4815	536.4815	0.0264		537.0362
Total	**0.1708**	**0.2324**	**2.4174**	**7.1400e-003**	**0.6036**	**4.6400e-003**	**0.6082**	**0.1601**	**4.3000e-003**	**0.1644**		**536.4815**	**536.4815**	**0.0264**		**537.0362**

Operational Emissions

Existing No Project

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	4,912.00	Student	4.20	51,000.00	0
Unrefrigerated Warehouse-No Rail	320.40	1000sqft	7.30	320,400.00	0
Unrefrigerated Warehouse-No Rail	220.55	1000sqft	5.00	220,550.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2015
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Trips and VMT -

Demolition -

Grading - project

Vehicle Trips - project specific

Energy Use - Assuming that only 25% of the warehouse is currently being used.

Water And Wastewater - Assuming that only 25% of the warehouse is currently being utilized.

Solid Waste - Assuming that only 25% of the warehouse is currently being used.

Land Use Change -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	887925	887921
tblConstructionPhase	NumDays	20.00	0.00
tblEnergyUse	LightingElect	2.23	0.56
tblEnergyUse	NT24E	1.34	0.34
tblEnergyUse	NT24NG	0.03	0.01
tblEnergyUse	T24E	0.79	0.20
tblEnergyUse	T24NG	0.88	0.22
tblLandUse	LandUseSquareFeet	214,419.79	51,000.00
tblLandUse	LotAcreage	4.92	4.20
tblLandUse	LotAcreage	5.06	5.00
tblLandUse	LotAcreage	7.36	7.30
tblProjectCharacteristics	OperationalYear	2014	2015
tblSolidWaste	SolidWasteGenerationRate	508.49	127.12
tblVehicleTrips	DV_TP	7.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	1.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	0.42	0.28

tblVehicleTrips	ST_TR	2.59	2.04
tblVehicleTrips	SU_TR	0.04	0.03
tblVehicleTrips	SU_TR	2.59	2.04
tblVehicleTrips	WD_TR	1.20	0.79
tblVehicleTrips	WD_TR	2.59	2.04
tblWater	IndoorWaterUseRate	125,094,687.50	31,273,671.88

2.0 Emissions Summary

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.8321	7.0000e-004	0.0720	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1353	0.1353	3.9000e-004	0.0000	0.1436
Energy	8.5000e-003	0.0773	0.0649	4.6000e-004		5.8700e-003	5.8700e-003		5.8700e-003	5.8700e-003	0.0000	417.2790	417.2790	0.0169	4.7100e-003	419.0948
Mobile	3.1104	10.1285	37.9846	0.0810	5.5683	0.1416	5.7098	1.4898	0.1301	1.6199	0.0000	6,642.4815	6,642.4815	0.2867	0.0000	6,648.5019
Waste						0.0000	0.0000		0.0000	0.0000	207.7734	0.0000	207.7734	12.2791	0.0000	465.6337
Water						0.0000	0.0000		0.0000	0.0000	13.2583	208.0189	221.2772	1.3713	0.0341	260.6558
Total	**5.9510**	**10.2064**	**38.1215**	**0.0815**	**5.5683**	**0.1477**	**5.7160**	**1.4898**	**0.1362**	**1.6260**	**221.0317**	**7,267.9147**	**7,488.9464**	**13.9544**	**0.0388**	**7,794.0297**

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	2.8321	7.0000e-004	0.0720	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1353	0.1353	3.9000e-004	0.0000	0.1436
Energy	8.5000e-003	0.0773	0.0649	4.6000e-004		5.8700e-003	5.8700e-003		5.8700e-003	5.8700e-003	0.0000	417.2790	417.2790	0.0169	4.7100e-003	419.0948
Mobile	3.1104	10.1285	37.9846	0.0810	5.5683	0.1416	5.7098	1.4898	0.1301	1.6199	0.0000	6,642.4815	6,642.4815	0.2867	0.0000	6,648.5019
Waste						0.0000	0.0000		0.0000	0.0000	207.7734	0.0000	207.7734	12.2791	0.0000	465.6337
Water						0.0000	0.0000		0.0000	0.0000	13.2583	208.0189	221.2772	1.3711	0.0341	260.6346
Total	**5.9510**	**10.2064**	**38.1215**	**0.0815**	**5.5683**	**0.1477**	**5.7160**	**1.4898**	**0.1362**	**1.6260**	**221.0317**	**7,267.9147**	**7,488.9464**	**13.9541**	**0.0388**	**7,794.0086**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.13**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.1104	10.1285	37.9846	0.0810	5.5683	0.1416	5.7098	1.4898	0.1301	1.6199	0.0000	6,642.4815	6,642.4815	0.2867	0.0000	6,648.5019
Unmitigated	3.1104	10.1285	37.9846	0.0810	5.5683	0.1416	5.7098	1.4898	0.1301	1.6199	0.0000	6,642.4815	6,642.4815	0.2867	0.0000	6,648.5019

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	3,880.48	1,375.36	147.36	9,629,523	9,629,523
Unrefrigerated Warehouse-No Rail	653.62	653.62	653.62	3,003,216	3,003,216
Unrefrigerated Warehouse-No Rail	449.92	449.92	449.92	2,067,289	2,067,289
Total	4,984.02	2,478.90	1,250.90	14,700,028	14,700,028

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	100	0	0
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	100	0	0
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.514499	0.060499	0.179997	0.139763	0.042095	0.006675	0.015446	0.029572	0.001914	0.002508	0.004341	0.000594	0.002098

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
NaturalGas Mitigated	8.5000e-003	0.0773	0.0649	4.6000e-004		5.8700e-003	5.8700e-003		5.8700e-003	5.8700e-003	0.0000	84.1221	84.1221	1.6100e-003	1.5400e-003	84.6341
NaturalGas Unmitigated	8.5000e-003	0.0773	0.0649	4.6000e-004		5.8700e-003	5.8700e-003		5.8700e-003	5.8700e-003	0.0000	84.1221	84.1221	1.6100e-003	1.5400e-003	84.6341
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	333.1569	333.1569	0.0153	3.1700e-003	334.4607
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	333.1569	333.1569	0.0153	3.1700e-003	334.4607

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					
Junior College (2Yr)	1.45197e+006	7.8300e-003	0.0712	0.0598	4.3000e-004		5.4100e-003	5.4100e-003		5.4100e-003	5.4100e-003	0.0000	77.4827	77.4827	1.4900e-003	1.4200e-003	77.9542
Unrefrigerated Warehouse-No Rail	50726.5	2.7000e-004	2.4900e-003	2.0900e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7070	2.7070	5.0000e-005	5.0000e-005	2.7234
Unrefrigerated Warehouse-No Rail	73692	4.0000e-004	3.6100e-003	3.0300e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	3.9325	3.9325	8.0000e-005	7.0000e-005	3.9564
Total		**8.5000e-003**	**0.0773**	**0.0649**	**4.6000e-004**		**5.8700e-003**	**5.8700e-003**		**5.8700e-003**	**5.8700e-003**	**0.0000**	**84.1221**	**84.1221**	**1.6200e-003**	**1.5400e-003**	**84.6341**

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					
Junior College (2Yr)	1.45197e+006	7.8300e-003	0.0712	0.0598	4.3000e-004		5.4100e-003	5.4100e-003		5.4100e-003	5.4100e-003	0.0000	77.4827	77.4827	1.4900e-003	1.4200e-003	77.9542

Unrefrigerated Warehouse-No Rail	50726.5	2.7000e-004	2.4900e-003	2.0900e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7070	2.7070	5.0000e-005	5.0000e-005	2.7234
Unrefrigerated Warehouse-No Rail	73692	4.0000e-004	3.6100e-003	3.0300e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	3.9325	3.9325	8.0000e-005	7.0000e-005	3.9564
Total		**8.5000e-003**	**0.0773**	**0.0649**	**4.6000e-004**		**5.8700e-003**	**5.8700e-003**		**5.8700e-003**	**5.8700e-003**	**0.0000**	**84.1221**	**84.1221**	**1.6200e-003**	**1.5400e-003**	**84.6341**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	569160	162.8748	7.4900e-003	1.5500e-003	163.5122
Unrefrigerated Warehouse-No Rail	242605	69.4255	3.1900e-003	6.6000e-004	69.6972
Unrefrigerated Warehouse-No Rail	352440	100.8567	4.6400e-003	9.6000e-004	101.2514
Total		**333.1569**	**0.0153**	**3.1700e-003**	**334.4607**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	569160	162.8748	7.4900e-003	1.5500e-003	163.5122
Unrefrigerated Warehouse-No Rail	242605	69.4255	3.1900e-003	6.6000e-004	69.6972
Unrefrigerated Warehouse-No Rail	352440	100.8567	4.6400e-003	9.6000e-004	101.2514
Total		**333.1569**	**0.0153**	**3.1700e-003**	**334.4607**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.8321	7.0000e-004	0.0720	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1353	0.1353	3.9000e-004	0.0000	0.1436
Unmitigated	2.8321	7.0000e-004	0.0720	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1353	0.1353	3.9000e-004	0.0000	0.1436

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	0.6859					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.1390					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.1200e-003	7.0000e-004	0.0720	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1353	0.1353	3.9000e-004	0.0000	0.1436
Total	**2.8321**	**7.0000e-004**	**0.0720**	**1.0000e-005**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**	**0.0000**	**0.1353**	**0.1353**	**3.9000e-004**	**0.0000**	**0.1436**

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	0.6859					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.1390					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.1200e-003	7.0000e-004	0.0720	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	0.1353	0.1353	3.9000e-004	0.0000	0.1436
Total	**2.8321**	**7.0000e-004**	**0.0720**	**1.0000e-005**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**	**0.0000**	**0.1353**	**0.1353**	**3.9000e-004**	**0.0000**	**0.1436**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	221.2772	1.3713	0.0341	260.6558
Mitigated	221.2772	1.3711	0.0341	260.6346

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	10.5171 / 16.4498	94.8242	0.3469	8.9600e-003	104.8874
Unrefrigerated Warehouse-No Rail	31.2737 / 0	126.4530	1.0244	0.0252	155.7684
Total		**221.2772**	**1.3713**	**0.0341**	**260.6558**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	10.5171 / 16.4498	94.8242	0.3468	8.9500e-003	104.8821
Unrefrigerated Warehouse-No Rail	31.2737 / 0	126.4530	1.0242	0.0251	155.7526
Total		**221.2772**	**1.3711**	**0.0341**	**260.6346**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e

Existing Plus Project

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	9,000.00	Student	6.20	100,000.00	0
Parking Lot	1,350.00	Space	12.30	540,000.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 31

Climate Zone 9 **Operational Year** 2015

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Trips and VMT -

Demolition -

Grading - project

Vehicle Trips - project specific

Energy Use -

Water And Wastewater -

Solid Waste -

Land Use Change -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblLandUse	LandUseSquareFeet	392,870.13	100,000.00
tblLandUse	LotAcreage	9.02	6.20
tblLandUse	LotAcreage	12.15	12.30
tblProjectCharacteristics	OperationalYear	2014	2015
tblVehicleTrips	DV_TP	7.00	0.00
tblVehicleTrips	PB_TP	1.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	0.42	0.28
tblVehicleTrips	SU_TR	0.04	0.03
tblVehicleTrips	WD_TR	1.20	0.79

2.0 Emissions Summary

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.4608	1.3200e-003	0.1366	1.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	0.2569	0.2569	7.4000e-004	0.0000	0.2725
Energy	0.0154	0.1396	0.1172	8.4000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	607.2755	607.2755	0.0238	7.1200e-003	609.9821
Mobile	4.0004	12.3241	46.8660	0.0975	6.6833	0.1709	6.8542	1.7881	0.1570	1.9451	0.0000	7,994.0373	7,994.0373	0.3473	0.0000	8,001.3304
Waste						0.0000	0.0000		0.0000	0.0000	333.4127	0.0000	333.4127	19.7041	0.0000	747.1993
Water						0.0000	0.0000		0.0000	0.0000	6.1135	167.6279	173.7414	0.6356	0.0164	192.1797
Total	**6.4766**	**12.4650**	**47.1198**	**0.0984**	**6.6833**	**0.1820**	**6.8653**	**1.7881**	**0.1681**	**1.9562**	**339.5261**	**8,769.1976**	**9,108.7237**	**20.7116**	**0.0235**	**9,550.9639**

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	2.4608	1.3200e-003	0.1366	1.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	0.2569	0.2569	7.4000e-004	0.0000	0.2725
Energy	0.0154	0.1396	0.1172	8.4000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	607.2755	607.2755	0.0238	7.1200e-003	609.9821
Mobile	4.0004	12.3241	46.8660	0.0975	6.6833	0.1709	6.8542	1.7881	0.1570	1.9451	0.0000	7,994.0373	7,994.0373	0.3473	0.0000	8,001.3304
Waste						0.0000	0.0000		0.0000	0.0000	333.4127	0.0000	333.4127	19.7041	0.0000	747.1993
Water						0.0000	0.0000		0.0000	0.0000	6.1135	167.6279	173.7414	0.6355	0.0164	192.1699
Total	**6.4766**	**12.4650**	**47.1198**	**0.0984**	**6.6833**	**0.1820**	**6.8653**	**1.7881**	**0.1681**	**1.9562**	**339.5261**	**8,769.1976**	**9,108.7237**	**20.7115**	**0.0235**	**9,550.9542**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.08**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.0004	12.3241	46.8660	0.0975	6.6833	0.1709	6.8542	1.7881	0.1570	1.9451	0.0000	7,994.0373	7,994.0373	0.3473	0.0000	8,001.3304
Unmitigated	4.0004	12.3241	46.8660	0.0975	6.6833	0.1709	6.8542	1.7881	0.1570	1.9451	0.0000	7,994.0373	7,994.0373	0.3473	0.0000	8,001.3304

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	7,110.00	2,520.00	270.00	17,643,669	17,643,669
Parking Lot	0.00	0.00	0.00		
Total	7,110.00	2,520.00	270.00	17,643,669	17,643,669

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.514499	0.060499	0.179997	0.139763	0.042095	0.006675	0.015446	0.029572	0.001914	0.002508	0.004341	0.000594	0.002098

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
NaturalGas Mitigated	0.0154	0.1396	0.1172	8.4000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	151.9268	151.9268	2.9100e-003	2.7900e-003	152.8514
NaturalGas Unmitigated	0.0154	0.1396	0.1172	8.4000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	151.9268	151.9268	2.9100e-003	2.7900e-003	152.8514
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	455.3488	455.3488	0.0209	4.3300e-003	457.1308
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	455.3488	455.3488	0.0209	4.3300e-003	457.1308

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					
Junior College (2Yr)	2.847e+006	0.0154	0.1396	0.1172	8.4000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	151.9268	151.9268	2.9100e-003	2.7900e-003	152.8514
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0154**	**0.1396**	**0.1172**	**8.4000e-004**		**0.0106**	**0.0106**		**0.0106**	**0.0106**	**0.0000**	**151.9268**	**151.9268**	**2.9100e-003**	**2.7900e-003**	**152.8514**

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					
Junior College (2Yr)	2.847e+006	0.0154	0.1396	0.1172	8.4000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	151.9268	151.9268	2.9100e-003	2.7900e-003	152.8514
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0154**	**0.1396**	**0.1172**	**8.4000e-004**		**0.0106**	**0.0106**		**0.0106**	**0.0106**	**0.0000**	**151.9268**	**151.9268**	**2.9100e-003**	**2.7900e-003**	**152.8514**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	1.116e+006	319.3623	0.0147	3.0400e-003	320.6121
Parking Lot	475200	135.9865	6.2500e-003	1.2900e-003	136.5187
Total		**455.3488**	**0.0209**	**4.3300e-003**	**457.1308**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	1.116e+006	319.3623	0.0147	3.0400e-003	320.6121
Parking Lot	475200	135.9865	6.2500e-003	1.2900e-003	136.5187
Total		**455.3488**	**0.0209**	**4.3300e-003**	**457.1308**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.4608	1.3200e-003	0.1366	1.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	0.2569	0.2569	7.4000e-004	0.0000	0.2725
Unmitigated	2.4608	1.3200e-003	0.1366	1.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	0.2569	0.2569	7.4000e-004	0.0000	0.2725

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	0.1347					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.3126					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0135	1.3200e-003	0.1366	1.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	0.2569	0.2569	7.4000e-004	0.0000	0.2725
Total	**2.4608**	**1.3200e-003**	**0.1366**	**1.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.9000e-004**	**4.9000e-004**	**0.0000**	**0.2569**	**0.2569**	**7.4000e-004**	**0.0000**	**0.2725**

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	0.1347					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.3126					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0135	1.3200e-003	0.1366	1.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	0.2569	0.2569	7.4000e-004	0.0000	0.2725
Total	**2.4608**	**1.3200e-003**	**0.1366**	**1.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.9000e-004**	**4.9000e-004**	**0.0000**	**0.2569**	**0.2569**	**7.4000e-004**	**0.0000**	**0.2725**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	173.7414	0.6356	0.0164	192.1797
Mitigated	173.7414	0.6355	0.0164	192.1699

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	19.2699 / 30.1401	173.7414	0.6356	0.0164	192.1797
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**173.7414**	**0.6356**	**0.0164**	**192.1797**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	19.2699 / 30.1401	173.7414	0.6355	0.0164	192.1699
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**173.7414**	**0.6355**	**0.0164**	**192.1699**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	333.4127	19.7041	0.0000	747.1993
Unmitigated	333.4127	19.7041	0.0000	747.1993

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	1642.5	333.4127	19.7041	0.0000	747.1993
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**333.4127**	**19.7041**	**0.0000**	**747.1993**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Junior College (2Yr)	1642.5	333.4127	19.7041	0.0000	747.1993
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**333.4127**	**19.7041**	**0.0000**	**747.1993**

	MT/yr			
Mitigated	207.7734	12.2791	0.0000	465.6337
Unmitigated	207.7734	12.2791	0.0000	465.6337

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	896.44	181.9692	10.7541	0.0000	407.8048
Unrefrigerated Warehouse-No Rail	127.12	25.8042	1.5250	0.0000	57.8289
Total		**207.7734**	**12.2791**	**0.0000**	**465.6337**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	896.44	181.9692	10.7541	0.0000	407.8048
Unrefrigerated Warehouse-No Rail	127.12	25.8042	1.5250	0.0000	57.8289
Total		**207.7734**	**12.2791**	**0.0000**	**465.6337**

Future No Project

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	4,912.00	Student	4.20	51,000.00	0
Unrefrigerated Warehouse-No Rail	320.40	1000sqft	7.36	320,397.00	0
Unrefrigerated Warehouse-No Rail	220.55	1000sqft	5.06	220,550.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 31

Climate Zone 9 **Operational Year** 2030

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Trips and VMT -

Demolition -

Grading - project

Vehicle Trips - project specific

Land Use Change -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Energy Use - Assuming only 25% of the warehouse is operational.

Water And Wastewater - Assuming only 25% of the warehouse is operational.

Solid Waste - Assuming only 25% of the warehouse is operational.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblEnergyUse	LightingElect	2.23	0.56
tblEnergyUse	NT24E	1.34	0.34
tblEnergyUse	NT24NG	0.03	7.5000e-003
tblEnergyUse	T24E	0.79	0.20
tblEnergyUse	T24NG	0.88	0.22
tblLandUse	LandUseSquareFeet	214,419.79	51,000.00
tblLandUse	LandUseSquareFeet	320,400.00	320,397.00
tblLandUse	LotAcreage	4.92	4.20
tblProjectCharacteristics	OperationalYear	2014	2030
tblSolidWaste	SolidWasteGenerationRate	508.49	127.12
tblVehicleTrips	DV_TP	7.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	1.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	0.42	0.28
tblVehicleTrips	ST_TR	2.59	2.04
tblVehicleTrips	SU_TR	0.04	0.03

tblVehicleTrips	SU_TR	2.59	2.04
tblVehicleTrips	WD_TR	1.20	0.79
tblVehicleTrips	WD_TR	2.59	2.04
tblWater	IndoorWaterUseRate	125,094,687.50	31,273,671.88

2.0 Emissions Summary

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.8313	6.2000e-004	0.0692	1.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	0.1353	0.1353	3.5000e-004	0.0000	0.1427
Energy	8.4900e-003	0.0772	0.0649	4.6000e-004		5.8700e-003	5.8700e-003		5.8700e-003	5.8700e-003	0.0000	415.6579	415.6579	0.0169	4.6900e-003	417.4671
Mobile	1.6161	4.3461	19.0732	0.0836	5.5794	0.1135	5.6929	1.4938	0.1047	1.5985	0.0000	5,465.0919	5,465.0919	0.1529	0.0000	5,468.3022
Waste						0.0000	0.0000		0.0000	0.0000	207.7739	0.0000	207.7739	12.2791	0.0000	465.6348
Water						0.0000	0.0000		0.0000	0.0000	13.2583	208.0189	221.2772	1.3713	0.0341	260.6558
Total	**4.4558**	**4.4239**	**19.2073**	**0.0841**	**5.5794**	**0.1196**	**5.6990**	**1.4938**	**0.1108**	**1.6046**	**221.0322**	**6,088.9040**	**6,309.9362**	**13.8205**	**0.0388**	**6,612.2025**

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	2.8313	6.2000e-004	0.0692	1.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	0.1353	0.1353	3.5000e-004	0.0000	0.1427
Energy	8.4900e-003	0.0772	0.0649	4.6000e-004		5.8700e-003	5.8700e-003		5.8700e-003	5.8700e-003	0.0000	415.6579	415.6579	0.0169	4.6900e-003	417.4671
Mobile	1.6161	4.3461	19.0732	0.0836	5.5794	0.1135	5.6929	1.4938	0.1047	1.5985	0.0000	5,465.0919	5,465.0919	0.1529	0.0000	5,468.3022
Waste						0.0000	0.0000		0.0000	0.0000	207.7739	0.0000	207.7739	12.2791	0.0000	465.6348
Water						0.0000	0.0000		0.0000	0.0000	13.2583	208.0189	221.2772	1.3711	0.0341	260.6346
Total	**4.4558**	**4.4239**	**19.2073**	**0.0841**	**5.5794**	**0.1196**	**5.6990**	**1.4938**	**0.1108**	**1.6046**	**221.0322**	**6,088.9040**	**6,309.9362**	**13.8202**	**0.0388**	**6,612.1814**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.13**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.6161	4.3461	19.0732	0.0836	5.5794	0.1135	5.6929	1.4938	0.1047	1.5985	0.0000	5,465.0919	5,465.0919	0.1529	0.0000	5,468.3022
Unmitigated	1.6161	4.3461	19.0732	0.0836	5.5794	0.1135	5.6929	1.4938	0.1047	1.5985	0.0000	5,465.0919	5,465.0919	0.1529	0.0000	5,468.3022

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	3,880.48	1,375.36	147.36	9,629,523	9,629,523
Unrefrigerated Warehouse-No Rail	653.62	653.62	653.62	3,003,216	3,003,216
Unrefrigerated Warehouse-No Rail	449.92	449.92	449.92	2,067,289	2,067,289
Total	4,984.02	2,478.90	1,250.90	14,700,028	14,700,028

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	100	0	0
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	100	0	0
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.490213	0.060887	0.184949	0.142956	0.045319	0.007258	0.016906	0.039511	0.002069	0.002542	0.004120	0.000539	0.002732

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
NaturalGas Mitigated	8.4900e-003	0.0772	0.0649	4.6000e-004		5.8700e-003	5.8700e-003		5.8700e-003	5.8700e-003	0.0000	84.0499	84.0499	1.6100e-003	1.5400e-003	84.5614
NaturalGas Unmitigated	8.4900e-003	0.0772	0.0649	4.6000e-004		5.8700e-003	5.8700e-003		5.8700e-003	5.8700e-003	0.0000	84.0499	84.0499	1.6100e-003	1.5400e-003	84.5614
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	331.6080	331.6080	0.0152	3.1500e-003	332.9057
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	331.6080	331.6080	0.0152	3.1500e-003	332.9057

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					
Junior College (2Yr)	1.45197e+006	7.8300e-003	0.0712	0.0598	4.3000e-004		5.4100e-003	5.4100e-003		5.4100e-003	5.4100e-003	0.0000	77.4827	77.4827	1.4900e-003	1.4200e-003	77.9542
Unrefrigerated Warehouse-No Rail	50175.1	2.7000e-004	2.4600e-003	2.0700e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.6775	2.6775	5.0000e-005	5.0000e-005	2.6938
Unrefrigerated Warehouse-No Rail	72890.3	3.9000e-004	3.5700e-003	3.0000e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	3.8897	3.8897	7.0000e-005	7.0000e-005	3.9134
Total		**8.4900e-003**	**0.0772**	**0.0649**	**4.6000e-004**		**5.8700e-003**	**5.8700e-003**		**5.8700e-003**	**5.8700e-003**	**0.0000**	**84.0499**	**84.0499**	**1.6100e-003**	**1.5400e-003**	**84.5614**

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					
Junior College (2Yr)	1.45197e+006	7.8300e-003	0.0712	0.0598	4.3000e-004		5.4100e-003	5.4100e-003		5.4100e-003	5.4100e-003	0.0000	77.4827	77.4827	1.4900e-003	1.4200e-003	77.9542

Unrefrigerated Warehouse-No Rail	50175.1	2.7000e-004	2.4600e-003	2.0700e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.6775	2.6775	5.0000e-005	5.0000e-005	2.6938
Unrefrigerated Warehouse-No Rail	72890.3	3.9000e-004	3.5700e-003	3.0000e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	3.8897	3.8897	7.0000e-005	7.0000e-005	3.9134
Total		**8.4900e-003**	**0.0772**	**0.0649**	**4.6000e-004**		**5.8700e-003**	**5.8700e-003**		**5.8700e-003**	**5.8700e-003**	**0.0000**	**84.0499**	**84.0499**	**1.6100e-003**	**1.5400e-003**	**84.5614**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	569160	162.8748	7.4900e-003	1.5500e-003	163.5122
Unrefrigerated Warehouse-No Rail	240399	68.7944	3.1600e-003	6.5000e-004	69.0636
Unrefrigerated Warehouse-No Rail	349233	99.9388	4.5900e-003	9.5000e-004	100.3300
Total		**331.6080**	**0.0152**	**3.1500e-003**	**332.9057**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	569160	162.8748	7.4900e-003	1.5500e-003	163.5122
Unrefrigerated Warehouse-No Rail	240399	68.7944	3.1600e-003	6.5000e-004	69.0636
Unrefrigerated Warehouse-No Rail	349233	99.9388	4.5900e-003	9.5000e-004	100.3300
Total		**331.6080**	**0.0152**	**3.1500e-003**	**332.9057**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.8313	6.2000e-004	0.0692	1.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	0.1353	0.1353	3.5000e-004	0.0000	0.1427
Unmitigated	2.8313	6.2000e-004	0.0692	1.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	0.1353	0.1353	3.5000e-004	0.0000	0.1427

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	0.6859					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.1390					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.3400e-003	6.2000e-004	0.0692	1.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	0.1353	0.1353	3.5000e-004	0.0000	0.1427
Total	**2.8313**	**6.2000e-004**	**0.0692**	**1.0000e-005**		**2.5000e-004**	**2.5000e-004**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**0.1353**	**0.1353**	**3.5000e-004**	**0.0000**	**0.1427**

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	0.6859					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.1390					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.3400e-003	6.2000e-004	0.0692	1.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	0.1353	0.1353	3.5000e-004	0.0000	0.1427
Total	**2.8313**	**6.2000e-004**	**0.0692**	**1.0000e-005**		**2.5000e-004**	**2.5000e-004**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**0.1353**	**0.1353**	**3.5000e-004**	**0.0000**	**0.1427**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	221.2772	1.3713	0.0341	260.6558
Mitigated	221.2772	1.3711	0.0341	260.6346

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	10.5171 / 16.4498	94.8242	0.3469	8.9600e-003	104.8874
Unrefrigerated Warehouse-No Rail	31.2737 / 0	126.4530	1.0244	0.0252	155.7684
Total		**221.2772**	**1.3713**	**0.0341**	**260.6558**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	10.5171 / 16.4498	94.8242	0.3468	8.9500e-003	104.8821
Unrefrigerated Warehouse-No Rail	31.2737 / 0	126.4530	1.0242	0.0251	155.7526
Total		**221.2772**	**1.3711**	**0.0341**	**260.6346**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e

Future Plus Project

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	9,000.00	Student	6.20	100,000.00	0
Parking Lot	1,350.00	Space	12.30	540,000.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 31

Climate Zone 9 **Operational Year** 2030

Utility Company Los Angeles Department of Water & Power

CO2 Intensity (lb/MWhr) 1227.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Trips and VMT -

Demolition -

Grading - project

Vehicle Trips - project specific

Land Use Change -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblLandUse	LandUseSquareFeet	392,870.13	100,000.00
tblLandUse	LotAcreage	9.02	6.20
tblLandUse	LotAcreage	12.15	12.30
tblProjectCharacteristics	OperationalYear	2014	2030
tblVehicleTrips	WD_TR	1.20	0.79

2.0 Emissions Summary

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

2.2 Overall Operational

<u>Unmitigated Operational</u>

	ROG	NOx	CO	SO2	Fugitive 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	2.4593	1.1800e-003	0.1314	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	0.2569	0.2569	6.6000e-004	0.0000	0.2708
Energy	0.0154	0.1396	0.1172	8.4000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	1,038.1640	1,038.1640	0.0238	7.1200e-003	1,040.8706
Mobile	2.1173	5.2340	23.4998	0.0979	6.5000	0.1340	6.6339	1.7402	0.1236	1.8638	0.0000	6,396.1693	6,396.1693	0.1801	0.0000	6,399.9511

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
Waste						0.0000	0.0000		0.0000	0.0000	333.4127	0.0000	333.4127	19.7041	0.0000	747.1993
Water						0.0000	0.0000		0.0000	0.0000	6.1135	326.2513	332.3647	0.6356	0.0164	350.8030
Total	**4.5920**	**5.3747**	**23.7485**	**0.0987**	**6.5000**	**0.1450**	**6.6450**	**1.7402**	**0.1347**	**1.8749**	**339.5261**	**7,760.8414**	**8,100.3675**	**20.5443**	**0.0235**	**8,539.0947**

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	2.4593	1.1800e-003	0.1314	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	0.2569	0.2569	6.6000e-004	0.0000	0.2708
Energy	0.0154	0.1396	0.1172	8.4000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	1,038.1640	1,038.1640	0.0238	7.1200e-003	1,040.8706
Mobile	2.1173	5.2340	23.4998	0.0979	6.5000	0.1340	6.6339	1.7402	0.1236	1.8638	0.0000	6,396.1693	6,396.1693	0.1801	0.0000	6,399.9511
Waste						0.0000	0.0000		0.0000	0.0000	333.4127	0.0000	333.4127	19.7041	0.0000	747.1993
Water						0.0000	0.0000		0.0000	0.0000	6.1135	326.2513	332.3647	0.6355	0.0164	350.7933
Total	**4.5920**	**5.3747**	**23.7485**	**0.0987**	**6.5000**	**0.1450**	**6.6450**	**1.7402**	**0.1347**	**1.8749**	**339.5261**	**7,760.8414**	**8,100.3675**	**20.5442**	**0.0235**	**8,539.0849**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.08**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.1173	5.2340	23.4998	0.0979	6.5000	0.1340	6.6339	1.7402	0.1236	1.8638	0.0000	6,396.1693	6,396.1693	0.1801	0.0000	6,399.9511
Unmitigated	2.1173	5.2340	23.4998	0.0979	6.5000	0.1340	6.6339	1.7402	0.1236	1.8638	0.0000	6,396.1693	6,396.1693	0.1801	0.0000	6,399.9511

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	7,110.00	3,780.00	360.00	17,125,431	17,125,431
Parking Lot	0.00	0.00	0.00		
Total	7,110.00	3,780.00	360.00	17,125,431	17,125,431

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.490213	0.060887	0.184949	0.142956	0.045319	0.007258	0.016906	0.039511	0.002069	0.002542	0.004120	0.000539	0.002732

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
NaturalGas Mitigated	0.0154	0.1396	0.1172	8.4000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	151.9268	151.9268	2.9100e-003	2.7900e-003	152.8514
NaturalGas Unmitigated	0.0154	0.1396	0.1172	8.4000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	151.9268	151.9268	2.9100e-003	2.7900e-003	152.8514
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	886.2372	886.2372	0.0209	4.3300e-003	888.0192
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	886.2372	886.2372	0.0209	4.3300e-003	888.0192

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					
Junior College (2Yr)	2.847e+006	0.0154	0.1396	0.1172	8.4000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	151.9268	151.9268	2.9100e-003	2.7900e-003	152.8514
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0154**	**0.1396**	**0.1172**	**8.4000e-004**		**0.0106**	**0.0106**		**0.0106**	**0.0106**	**0.0000**	**151.9268**	**151.9268**	**2.9100e-003**	**2.7900e-003**	**152.8514**

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					
Junior College (2Yr)	2.847e+006	0.0154	0.1396	0.1172	8.4000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	151.9268	151.9268	2.9100e-003	2.7900e-003	152.8514
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0154**	**0.1396**	**0.1172**	**8.4000e-004**		**0.0106**	**0.0106**		**0.0106**	**0.0106**	**0.0000**	**151.9268**	**151.9268**	**2.9100e-003**	**2.7900e-003**	**152.8514**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	1.116e+006	621.5691	0.0147	3.0400e-003	622.8189
Parking Lot	475200	264.6681	6.2500e-003	1.2900e-003	265.2003
Total		**886.2372**	**0.0209**	**4.3300e-003**	**888.0192**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	1.116e+006	621.5691	0.0147	3.0400e-003	622.8189
Parking Lot	475200	264.6681	6.2500e-003	1.2900e-003	265.2003
Total		**886.2372**	**0.0209**	**4.3300e-003**	**888.0192**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.4593	1.1800e-003	0.1314	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	0.2569	0.2569	6.6000e-004	0.0000	0.2708
Unmitigated	2.4593	1.1800e-003	0.1314	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	0.2569	0.2569	6.6000e-004	0.0000	0.2708

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	0.1347					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.3126					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0120	1.1800e-003	0.1314	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	0.2569	0.2569	6.6000e-004	0.0000	0.2708
Total	**2.4593**	**1.1800e-003**	**0.1314**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**0.2569**	**0.2569**	**6.6000e-004**	**0.0000**	**0.2708**

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	0.1347					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.3126					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0120	1.1800e-003	0.1314	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	0.2569	0.2569	6.6000e-004	0.0000	0.2708
Total	**2.4593**	**1.1800e-003**	**0.1314**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**0.2569**	**0.2569**	**6.6000e-004**	**0.0000**	**0.2708**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	332.3647	0.6356	0.0164	350.8030
Mitigated	332.3647	0.6355	0.0164	350.7933

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	19.2699 / 30.1401	332.3647	0.6356	0.0164	350.8030

Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**332.3647**	**0.6356**	**0.0164**	**350.8030**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	19.2699 / 30.1401	332.3647	0.6355	0.0164	350.7933
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**332.3647**	**0.6355**	**0.0164**	**350.7933**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	333.4127	19.7041	0.0000	747.1993
Unmitigated	333.4127	19.7041	0.0000	747.1993

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	1642.5	333.4127	19.7041	0.0000	747.1993
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**333.4127**	**19.7041**	**0.0000**	**747.1993**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	1642.5	333.4127	19.7041	0.0000	747.1993
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**333.4127**	**19.7041**	**0.0000**	**747.1993**

Existing No Project

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	4,912.00	Student	4.20	51,000.00	0
Unrefrigerated Warehouse-No Rail	320.40	1000sqft	7.30	320,400.00	0
Unrefrigerated Warehouse-No Rail	220.55	1000sqft	5.00	220,550.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 31

Climate Zone 9 **Operational Year** 2015

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Trips and VMT -

Demolition -

Grading - project

Vehicle Trips - project specific

Energy Use - Assuming that only 25% of the warehouse is currently being used.

Water And Wastewater - Assuming that only 25% of the warehouse is currently being utilized.

Solid Waste - Assuming that only 25% of the warehouse is currently being used.

Land Use Change -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	887925	887921
tblConstructionPhase	NumDays	20.00	0.00
tblEnergyUse	LightingElect	2.23	0.56
tblEnergyUse	NT24E	1.34	0.34
tblEnergyUse	NT24NG	0.03	0.01
tblEnergyUse	T24E	0.79	0.20
tblEnergyUse	T24NG	0.88	0.22
tblLandUse	LandUseSquareFeet	214,419.79	51,000.00
tblLandUse	LotAcreage	4.92	4.20
tblLandUse	LotAcreage	5.06	5.00
tblLandUse	LotAcreage	7.36	7.30
tblProjectCharacteristics	OperationalYear	2014	2015
tblSolidWaste	SolidWasteGenerationRate	508.49	127.12
tblVehicleTrips	DV_TP	7.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	1.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	0.42	0.28

tblVehicleTrips	ST_TR	2.59	2.04
tblVehicleTrips	SU_TR	0.04	0.03
tblVehicleTrips	SU_TR	2.59	2.04
tblVehicleTrips	WD_TR	1.20	0.79
tblVehicleTrips	WD_TR	2.59	2.04
tblWater	IndoorWaterUseRate	125,094,687.50	31,273,671.88

2.0 Emissions Summary

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	15.5360	5.5700e-003	0.5759	4.0000e-005		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		1.1934	1.1934	3.4600e-003		1.2660
Energy	0.0466	0.4234	0.3557	2.5400e-003		0.0322	0.0322		0.0322	0.0322		508.1027	508.1027	9.7400e-003	9.3200e-003	511.1949
Mobile	21.0000	62.0780	253.8874	0.5541	37.2472	0.9298	38.1771	9.9507	0.8543	10.8050		50,020.6032	50,020.6032	2.0805		50,064.2945
Total	**36.5826**	**62.5069**	**254.8190**	**0.5566**	**37.2472**	**0.9641**	**38.2113**	**9.9507**	**0.8886**	**10.8392**		**50,529.8992**	**50,529.8992**	**2.0937**	**9.3200e-003**	**50,576.7553**

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	15.5360	5.5700e-003	0.5759	4.0000e-005		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		1.1934	1.1934	3.4600e-003		1.2660
Energy	0.0466	0.4234	0.3557	2.5400e-003		0.0322	0.0322		0.0322	0.0322		508.1027	508.1027	9.7400e-003	9.3200e-003	511.1949
Mobile	21.0000	62.0780	253.8874	0.5541	37.2472	0.9298	38.1771	9.9507	0.8543	10.8050		50,020.6032	50,020.6032	2.0805		50,064.2945
Total	**36.5826**	**62.5069**	**254.8190**	**0.5566**	**37.2472**	**0.9641**	**38.2113**	**9.9507**	**0.8886**	**10.8392**		**50,529.8992**	**50,529.8992**	**2.0937**	**9.3200e-003**	**50,576.7553**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	21.0000	62.0780	253.8874	0.5541	37.2472	0.9298	38.1771	9.9507	0.8543	10.8050		50,020.6032	50,020.6032	2.0805		50,064.2945
Mitigated	21.0000	62.0780	253.8874	0.5541	37.2472	0.9298	38.1771	9.9507	0.8543	10.8050		50,020.6032	50,020.6032	2.0805		50,064.2945

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	3,880.48	1,375.36	147.36	9,629,523	9,629,523
Unrefrigerated Warehouse-No Rail	653.62	653.62	653.62	3,003,216	3,003,216
Unrefrigerated Warehouse-No Rail	449.92	449.92	449.92	2,067,289	2,067,289
Total	4,984.02	2,478.90	1,250.90	14,700,028	14,700,028

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	100	0	0
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	100	0	0
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.514499	0.060499	0.179997	0.139763	0.042095	0.006675	0.015446	0.029572	0.001914	0.002508	0.004341	0.000594	0.002098

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0466	0.4234	0.3557	2.5400e-003		0.0322	0.0322		0.0322	0.0322		508.1027	508.1027	9.7400e-003	9.3200e-003	511.1949
NaturalGas Unmitigated	0.0466	0.4234	0.3557	2.5400e-003		0.0322	0.0322		0.0322	0.0322		508.1027	508.1027	9.7400e-003	9.3200e-003	511.1949

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					
Junior College (2Yr)	3978	0.0429	0.3900	0.3276	2.3400e-003		0.0296	0.0296		0.0296	0.0296		468.0000	468.0000	8.9700e-003	8.5800e-003	470.8482
Unrefrigerated Warehouse-No Rail	138.977	1.5000e-003	0.0136	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003		16.3502	16.3502	3.1000e-004	3.0000e-004	16.4497
Unrefrigerated Warehouse-No Rail	201.896	2.1800e-003	0.0198	0.0166	1.2000e-004		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		23.7525	23.7525	4.6000e-004	4.4000e-004	23.8970
Total		**0.0466**	**0.4234**	**0.3557**	**2.5400e-003**		**0.0322**	**0.0322**		**0.0322**	**0.0322**		**508.1027**	**508.1027**	**9.7400e-003**	**9.3200e-003**	**511.1949**

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					
Junior College (2Yr)	3.978	0.0429	0.3900	0.3276	2.3400e-003		0.0296	0.0296		0.0296	0.0296		468.0000	468.0000	8.9700e-003	8.5800e-003	470.8482
Unrefrigerated Warehouse-No Rail	0.138977	1.5000e-003	0.0136	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003		16.3502	16.3502	3.1000e-004	3.0000e-004	16.4497
Unrefrigerated Warehouse-No Rail	0.201896	2.1800e-003	0.0198	0.0166	1.2000e-004		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		23.7525	23.7525	4.6000e-004	4.4000e-004	23.8970
Total		**0.0466**	**0.4234**	**0.3557**	**2.5400e-003**		**0.0322**	**0.0322**		**0.0322**	**0.0322**		**508.1027**	**508.1027**	**9.7400e-003**	**9.3200e-003**	**511.1949**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	15.5360	5.5700e-003	0.5759	4.0000e-005		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		1.1934	1.1934	3.4600e-003		1.2660
Mitigated	15.5360	5.5700e-003	0.5759	4.0000e-005		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		1.1934	1.1934	3.4600e-003		1.2660

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	3.7585					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.7206					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0569	5.5700e-003	0.5759	4.0000e-005		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		1.1934	1.1934	3.4600e-003		1.2660
Total	**15.5360**	**5.5700e-003**	**0.5759**	**4.0000e-005**		**2.0800e-003**	**2.0800e-003**		**2.0800e-003**	**2.0800e-003**		**1.1934**	**1.1934**	**3.4600e-003**		**1.2660**

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	3.7585					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.7206					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0569	5.5700e-003	0.5759	4.0000e-005		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		1.1934	1.1934	3.4600e-003		1.2660
Total	**15.5360**	**5.5700e-003**	**0.5759**	**4.0000e-005**		**2.0800e-003**	**2.0800e-003**		**2.0800e-003**	**2.0800e-003**		**1.1934**	**1.1934**	**3.4600e-003**		**1.2660**

Existing Plus Project

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	9,000.00	Student	6.20	100,000.00	0
Parking Lot	1,350.00	Space	12.30	540,000.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 31

Climate Zone 9 **Operational Year** 2015

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Trips and VMT -

Demolition -

Grading - project

Vehicle Trips - project specific

Energy Use -

Water And Wastewater -

Solid Waste -

Land Use Change -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblLandUse	LandUseSquareFeet	392,870.13	100,000.00
tblLandUse	LotAcreage	9.02	6.20
tblLandUse	LotAcreage	12.15	12.30
tblProjectCharacteristics	OperationalYear	2014	2015
tblVehicleTrips	DV_TP	7.00	0.00
tblVehicleTrips	PB_TP	1.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	0.42	0.28
tblVehicleTrips	SU_TR	0.04	0.03
tblVehicleTrips	WD_TR	1.20	0.79

2.0 Emissions Summary

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	13.5179	0.0106	1.0931	8.0000e-005		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003		2.2651	2.2651	6.5600e-003		2.4028
Energy	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
Mobile	28.9916	81.8971	337.1167	0.7239	48.5520	1.2174	49.7694	12.9707	1.1185	14.0893		65,345.4018	65,345.4018	2.7330		65,402.7940
Total	**42.5935**	**82.6724**	**338.8521**	**0.7285**	**48.5520**	**1.2795**	**49.8315**	**12.9707**	**1.1806**	**14.1513**		**66,265.3140**	**66,265.3140**	**2.7571**	**0.0168**	**66,328.4286**

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	13.5179	0.0106	1.0931	8.0000e-005		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003		2.2651	2.2651	6.5600e-003		2.4028
Energy	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
Mobile	28.9916	81.8971	337.1167	0.7239	48.5520	1.2174	49.7694	12.9707	1.1185	14.0893		65,345.4018	65,345.4018	2.7330		65,402.7940
Total	**42.5935**	**82.6724**	**338.8521**	**0.7285**	**48.5520**	**1.2795**	**49.8315**	**12.9707**	**1.1806**	**14.1513**		**66,265.3140**	**66,265.3140**	**2.7571**	**0.0168**	**66,328.4286**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	28.9916	81.8971	337.1167	0.7239	48.5520	1.2174	49.7694	12.9707	1.1185	14.0893		65,345.4018	65,345.4018	2.7330		65,402.7940
Mitigated	28.9916	81.8971	337.1167	0.7239	48.5520	1.2174	49.7694	12.9707	1.1185	14.0893		65,345.4018	65,345.4018	2.7330		65,402.7940

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	7,110.00	2,520.00	270.00	17,643,669	17,643,669
Parking Lot	0.00	0.00	0.00		
Total	7,110.00	2,520.00	270.00	17,643,669	17,643,669

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.514499	0.060499	0.179997	0.139763	0.042095	0.006675	0.015446	0.029572	0.001914	0.002508	0.004341	0.000594	0.002098

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
NaturalGas Unmitigated	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317

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					
Junior College (2Yr)	7800	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0841**	**0.7647**	**0.6424**	**4.5900e-003**		**0.0581**	**0.0581**		**0.0581**	**0.0581**		**917.6471**	**917.6471**	**0.0176**	**0.0168**	**923.2317**

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					
Junior College (2Yr)	7.8	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0841**	**0.7647**	**0.6424**	**4.5900e-003**		**0.0581**	**0.0581**		**0.0581**	**0.0581**		**917.6471**	**917.6471**	**0.0176**	**0.0168**	**923.2317**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	13.5179	0.0106	1.0931	8.0000e-005		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003		2.2651	2.2651	6.5600e-003		2.4028
Mitigated	13.5179	0.0106	1.0931	8.0000e-005		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003		2.2651	2.2651	6.5600e-003		2.4028

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	0.7378					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.6720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.1081	0.0106	1.0931	8.0000e-005		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003		2.2651	2.2651	6.5600e-003		2.4028
Total	**13.5179**	**0.0106**	**1.0931**	**8.0000e-005**		**3.9500e-003**	**3.9500e-003**		**3.9500e-003**	**3.9500e-003**		**2.2651**	**2.2651**	**6.5600e-003**		**2.4028**

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	0.7378					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.6720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.1081	0.0106	1.0931	8.0000e-005		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003		2.2651	2.2651	6.5600e-003		2.4028
Total	**13.5179**	**0.0106**	**1.0931**	**8.0000e-005**		**3.9500e-003**	**3.9500e-003**		**3.9500e-003**	**3.9500e-003**		**2.2651**	**2.2651**	**6.5600e-003**		**2.4028**

	MT/yr			
Mitigated	207.7739	12.2791	0.0000	465.6348
Unmitigated	207.7739	12.2791	0.0000	465.6348

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	896.44	181.9692	10.7541	0.0000	407.8048
Unrefrigerated Warehouse-No Rail	127.123	25.8047	1.5250	0.0000	57.8300
Total		**207.7739**	**12.2791**	**0.0000**	**465.6348**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	896.44	181.9692	10.7541	0.0000	407.8048
Unrefrigerated Warehouse-No Rail	127.123	25.8047	1.5250	0.0000	57.8300
Total		**207.7739**	**12.2791**	**0.0000**	**465.6348**

Future No Project

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	4,912.00	Student	4.20	51,000.00	0
Unrefrigerated Warehouse-No Rail	320.40	1000sqft	7.36	320,397.00	0
Unrefrigerated Warehouse-No Rail	220.55	1000sqft	5.06	220,550.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 31

Climate Zone 9 **Operational Year** 2030

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Trips and VMT -

Demolition -

Grading - project

Vehicle Trips - project specific

Energy Use - Assuming only 25% of the warehouse is operational.

Water And Wastewater -
Assuming only 25% of the warehouse is operational.

Solid Waste - Assuming only 25% of the warehouse is operational.

Land Use Change -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblEnergyUse	LightingElect	2.23	0.56
tblEnergyUse	NT24E	1.34	0.34
tblEnergyUse	NT24NG	0.03	0.01
tblEnergyUse	T24E	0.79	0.20
tblEnergyUse	T24NG	0.88	0.22
tblLandUse	LandUseSquareFeet	214,419.79	51,000.00
tblLandUse	LandUseSquareFeet	320,400.00	320,397.00
tblLandUse	LotAcreage	4.92	4.20
tblProjectCharacteristics	OperationalYear	2014	2030
tblSolidWaste	SolidWasteGenerationRate	508.49	127.12
tblVehicleTrips	DV_TP	7.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	1.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	0.42	0.28
tblVehicleTrips	ST_TR	2.59	2.04

tblVehicleTrips	SU_TR	0.04	0.03
tblVehicleTrips	SU_TR	2.59	2.04
tblVehicleTrips	WD_TR	1.20	0.79
tblVehicleTrips	WD_TR	2.59	2.04
tblWater	IndoorWaterUseRate	125,094,687.50	31,273,671.88

2.0 Emissions Summary

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	15.5297	4.9900e-003	0.5540	4.0000e-005		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003		1.1934	1.1934	3.0800e-003		1.2580
Energy	0.0466	0.4234	0.3557	2.5400e-003		0.0322	0.0322		0.0322	0.0322		508.1024	508.1024	9.7400e-003	9.3200e-003	511.1947
Mobile	11.0057	26.8002	126.3526	0.5717	37.3205	0.7462	38.0667	9.9766	0.6885	10.6652		41,056.4456	41,056.4456	1.1084		41,079.7220
Total	**26.5820**	**27.2286**	**127.2622**	**0.5743**	**37.3205**	**0.7803**	**38.1008**	**9.9766**	**0.7227**	**10.6993**		**41,565.7414**	**41,565.7414**	**1.1212**	**9.3200e-003**	**41,592.1747**

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	15.5297	4.9900e-003	0.5540	4.0000e-005		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003		1.1934	1.1934	3.0800e-003		1.2580
Energy	0.0466	0.4234	0.3557	2.5400e-003		0.0322	0.0322		0.0322	0.0322		508.1024	508.1024	9.7400e-003	9.3200e-003	511.1947
Mobile	11.0057	26.8002	126.3526	0.5717	37.3205	0.7462	38.0667	9.9766	0.6885	10.6652		41,056.4456	41,056.4456	1.1084		41,079.7220
Total	**26.5820**	**27.2286**	**127.2622**	**0.5743**	**37.3205**	**0.7803**	**38.1008**	**9.9766**	**0.7227**	**10.6993**		**41,565.7414**	**41,565.7414**	**1.1212**	**9.3200e-003**	**41,592.1747**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	11.0057	26.8002	126.3526	0.5717	37.3205	0.7462	38.0667	9.9766	0.6885	10.6652		41,056.4456	41,056.4456	1.1084		41,079.7220
Mitigated	11.0057	26.8002	126.3526	0.5717	37.3205	0.7462	38.0667	9.9766	0.6885	10.6652		41,056.4456	41,056.4456	1.1084		41,079.7220

4.2 Trip Summary Information

	Average Daily Trip Rate	Unmitigated	Mitigated

Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	3,880.48	1,375.36	147.36	9,629,523	9,629,523
Unrefrigerated Warehouse-No Rail	653.62	653.62	653.62	3,003,216	3,003,216
Unrefrigerated Warehouse-No Rail	449.92	449.92	449.92	2,067,289	2,067,289
Total	4,984.02	2,478.90	1,250.90	14,700,028	14,700,028

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	100	0	0
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	100	0	0
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.490213	0.060887	0.184949	0.142956	0.045319	0.007258	0.016906	0.039511	0.002069	0.002542	0.004120	0.000539	0.002732

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0466	0.4234	0.3557	2.5400e-003		0.0322	0.0322		0.0322	0.0322		508.1024	508.1024	9.7400e-003	9.3200e-003	511.1947
NaturalGas Unmitigated	0.0466	0.4234	0.3557	2.5400e-003		0.0322	0.0322		0.0322	0.0322		508.1024	508.1024	9.7400e-003	9.3200e-003	511.1947

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					
Junior College (2Yr)	3978	0.0429	0.3900	0.3276	2.3400e-003		0.0296	0.0296		0.0296	0.0296		468.0000	468.0000	8.9700e-003	8.5800e-003	470.8482
Unrefrigerated Warehouse-No Rail	138.977	1.5000e-003	0.0136	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003		16.3502	16.3502	3.1000e-004	3.0000e-004	16.4497
Unrefrigerated Warehouse-No Rail	201.894	2.1800e-003	0.0198	0.0166	1.2000e-004		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		23.7522	23.7522	4.6000e-004	4.4000e-004	23.8968
Total		**0.0466**	**0.4234**	**0.3557**	**2.5400e-003**		**0.0322**	**0.0322**		**0.0322**	**0.0322**		**508.1024**	**508.1024**	**9.7400e-003**	**9.3200e-003**	**511.1947**

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					
Junior College (2Yr)	3.978	0.0429	0.3900	0.3276	2.3400e-003		0.0296	0.0296		0.0296	0.0296		468.0000	468.0000	8.9700e-003	8.5800e-003	470.8482
Unrefrigerated Warehouse-No Rail	0.138977	1.5000e-003	0.0136	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003		16.3502	16.3502	3.1000e-004	3.0000e-004	16.4497
Unrefrigerated Warehouse-No Rail	0.201894	2.1800e-003	0.0198	0.0166	1.2000e-004		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		23.7522	23.7522	4.6000e-004	4.4000e-004	23.8968
Total		**0.0466**	**0.4234**	**0.3557**	**2.5400e-003**		**0.0322**	**0.0322**		**0.0322**	**0.0322**		**508.1024**	**508.1024**	**9.7400e-003**	**9.3200e-003**	**511.1947**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	15.5297	4.9900e-003	0.5540	4.0000e-005		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003		1.1934	1.1934	3.0800e-003		1.2580
Mitigated	15.5297	4.9900e-003	0.5540	4.0000e-005		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003		1.1934	1.1934	3.0800e-003		1.2580

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	3.7585					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.7206					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0507	4.9900e-003	0.5540	4.0000e-005		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003		1.1934	1.1934	3.0800e-003		1.2580
Total	**15.5297**	**4.9900e-003**	**0.5540**	**4.0000e-005**		**1.9600e-003**	**1.9600e-003**		**1.9600e-003**	**1.9600e-003**		**1.1934**	**1.1934**	**3.0800e-003**		**1.2580**

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	3.7585					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.7206					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0507	4.9900e-003	0.5540	4.0000e-005		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003		1.1934	1.1934	3.0800e-003		1.2580
Total	**15.5297**	**4.9900e-003**	**0.5540**	**4.0000e-005**		**1.9600e-003**	**1.9600e-003**		**1.9600e-003**	**1.9600e-003**		**1.1934**	**1.1934**	**3.0800e-003**		**1.2580**

Future Plus Project

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	9,000.00	Student	6.20	100,000.00	0
Parking Lot	1,350.00	Space	12.30	540,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Trips and VMT -

Demolition -

Grading - project

Vehicle Trips - project specific

Energy Use -

Water And Wastewater -

Solid Waste -

Land Use Change -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblLandUse	LandUseSquareFeet	392,870.13	100,000.00
tblLandUse	LotAcreage	9.02	6.20
tblLandUse	LotAcreage	12.15	12.30
tblProjectCharacteristics	OperationalYear	2014	2030
tblVehicleTrips	DV_TP	7.00	0.00
tblVehicleTrips	PB_TP	1.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	0.42	0.28
tblVehicleTrips	SU_TR	0.04	0.03
tblVehicleTrips	WD_TR	1.20	0.79

2.0 Emissions Summary

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	13.5060	9.4700e-003	1.0514	8.0000e-005		3.7300e-003	3.7300e-003		3.7300e-003	3.7300e-003		2.2651	2.2651	5.8400e-003		2.3878
Energy	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
Mobile	15.2451	35.5638	168.5356	0.7469	48.6475	0.9792	49.6267	13.0046	0.9035	13.9081		53,641.0016	53,641.0016	1.4529		53,671.5130
Total	**28.8352**	**36.3380**	**170.2294**	**0.7516**	**48.6475**	**1.0410**	**49.6885**	**13.0046**	**0.9654**	**13.9700**		**54,560.9138**	**54,560.9138**	**1.4764**	**0.0168**	**54,597.1325**

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	13.5060	9.4700e-003	1.0514	8.0000e-005		3.7300e-003	3.7300e-003		3.7300e-003	3.7300e-003		2.2651	2.2651	5.8400e-003		2.3878
Energy	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
Mobile	15.2451	35.5638	168.5356	0.7469	48.6475	0.9792	49.6267	13.0046	0.9035	13.9081		53,641.0016	53,641.0016	1.4529		53,671.5130
Total	**28.8352**	**36.3380**	**170.2294**	**0.7516**	**48.6475**	**1.0410**	**49.6885**	**13.0046**	**0.9654**	**13.9700**		**54,560.9138**	**54,560.9138**	**1.4764**	**0.0168**	**54,597.1325**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	15.2451	35.5638	168.5356	0.7469	48.6475	0.9792	49.6267	13.0046	0.9035	13.9081		53,641.0016	53,641.0016	1.4529		53,671.5130
Mitigated	15.2451	35.5638	168.5356	0.7469	48.6475	0.9792	49.6267	13.0046	0.9035	13.9081		53,641.0016	53,641.0016	1.4529		53,671.5130

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	7,110.00	2,520.00	270.00	17,643,669	17,643,669
Parking Lot	0.00	0.00	0.00		
Total	7,110.00	2,520.00	270.00	17,643,669	17,643,669

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.490213	0.060887	0.184949	0.142956	0.045319	0.007258	0.016906	0.039511	0.002069	0.002542	0.004120	0.000539	0.002732

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
NaturalGas Unmitigated	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317

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					
Junior College (2Yr)	7800	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0841**	**0.7647**	**0.6424**	**4.5900e-003**		**0.0581**	**0.0581**		**0.0581**	**0.0581**		**917.6471**	**917.6471**	**0.0176**	**0.0168**	**923.2317**

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					
Junior College (2Yr)	7.8	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0841**	**0.7647**	**0.6424**	**4.5900e-003**		**0.0581**	**0.0581**		**0.0581**	**0.0581**		**917.6471**	**917.6471**	**0.0176**	**0.0168**	**923.2317**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	13.5060	9.4700e-003	1.0514	8.0000e-005		3.7300e-003	3.7300e-003		3.7300e-003	3.7300e-003		2.2651	2.2651	5.8400e-003		2.3878
Mitigated	13.5060	9.4700e-003	1.0514	8.0000e-005		3.7300e-003	3.7300e-003		3.7300e-003	3.7300e-003		2.2651	2.2651	5.8400e-003		2.3878

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					

Existing No Project

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	4,912.00	Student	4.20	51,000.00	0
Unrefrigerated Warehouse-No Rail	320.40	1000sqft	7.30	320,400.00	0
Unrefrigerated Warehouse-No Rail	220.55	1000sqft	5.00	220,550.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2015
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Trips and VMT -

Demolition -

Grading - project

Vehicle Trips - project specific

Energy Use - Assuming that only 25% of the warehouse is currently being used.

Water And Wastewater - Assuming that only 25% of the warehouse is currently being utilized.

Solid Waste - Assuming that only 25% of the warehouse is currently being used.

Land Use Change -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	887925	887921
tblConstructionPhase	NumDays	20.00	0.00
tblEnergyUse	LightingElect	2.23	0.56
tblEnergyUse	NT24E	1.34	0.34
tblEnergyUse	NT24NG	0.03	0.01
tblEnergyUse	T24E	0.79	0.20
tblEnergyUse	T24NG	0.88	0.22
tblLandUse	LandUseSquareFeet	214,419.79	51,000.00
tblLandUse	LotAcreage	4.92	4.20
tblLandUse	LotAcreage	5.06	5.00
tblLandUse	LotAcreage	7.36	7.30
tblProjectCharacteristics	OperationalYear	2014	2015
tblSolidWaste	SolidWasteGenerationRate	508.49	127.12
tblVehicleTrips	DV_TP	7.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	1.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	0.42	0.28

tblVehicleTrips	ST_TR	2.59	2.04
tblVehicleTrips	SU_TR	0.04	0.03
tblVehicleTrips	SU_TR	2.59	2.04
tblVehicleTrips	WD_TR	1.20	0.79
tblVehicleTrips	WD_TR	2.59	2.04
tblWater	IndoorWaterUseRate	125,094,687.50	31,273,671.88

2.0 Emissions Summary

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	15.5360	5.5700e-003	0.5759	4.0000e-005		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		1.1934	1.1934	3.4600e-003		1.2660
Energy	0.0466	0.4234	0.3557	2.5400e-003		0.0322	0.0322		0.0322	0.0322		508.1027	508.1027	9.7400e-003	9.3200e-003	511.1949
Mobile	21.7068	65.3608	247.6755	0.5262	37.2472	0.9346	38.1818	9.9507	0.8587	10.8093		47,578.4284	47,578.4284	2.0819		47,622.1476
Total	**37.2894**	**65.7898**	**248.6070**	**0.5287**	**37.2472**	**0.9688**	**38.2161**	**9.9507**	**0.8929**	**10.8436**		**48,087.7244**	**48,087.7244**	**2.0951**	**9.3200e-003**	**48,134.6084**

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	15.5360	5.5700e-003	0.5759	4.0000e-005		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		1.1934	1.1934	3.4600e-003		1.2660
Energy	0.0466	0.4234	0.3557	2.5400e-003		0.0322	0.0322		0.0322	0.0322		508.1027	508.1027	9.7400e-003	9.3200e-003	511.1949
Mobile	21.7068	65.3608	247.6755	0.5262	37.2472	0.9346	38.1818	9.9507	0.8587	10.8093		47,578.4284	47,578.4284	2.0819		47,622.1476
Total	**37.2894**	**65.7898**	**248.6070**	**0.5287**	**37.2472**	**0.9688**	**38.2161**	**9.9507**	**0.8929**	**10.8436**		**48,087.7244**	**48,087.7244**	**2.0951**	**9.3200e-003**	**48,134.6084**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	21.7068	65.3608	247.6755	0.5262	37.2472	0.9346	38.1818	9.9507	0.8587	10.8093		47,578.4284	47,578.4284	2.0819		47,622.1476
Mitigated	21.7068	65.3608	247.6755	0.5262	37.2472	0.9346	38.1818	9.9507	0.8587	10.8093		47,578.4284	47,578.4284	2.0819		47,622.1476

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	3,880.48	1,375.36	147.36	9,629,523	9,629,523
Unrefrigerated Warehouse-No Rail	653.62	653.62	653.62	3,003,216	3,003,216
Unrefrigerated Warehouse-No Rail	449.92	449.92	449.92	2,067,289	2,067,289
Total	4,984.02	2,478.90	1,250.90	14,700,028	14,700,028

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	100	0	0
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	100	0	0
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.514499	0.060499	0.179997	0.139763	0.042095	0.006675	0.015446	0.029572	0.001914	0.002508	0.004341	0.000594	0.002098

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0466	0.4234	0.3557	2.5400e-003		0.0322	0.0322		0.0322	0.0322		508.1027	508.1027	9.7400e-003	9.3200e-003	511.1949
NaturalGas Unmitigated	0.0466	0.4234	0.3557	2.5400e-003		0.0322	0.0322		0.0322	0.0322		508.1027	508.1027	9.7400e-003	9.3200e-003	511.1949

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					
Junior College (2Yr)	3978	0.0429	0.3900	0.3276	2.3400e-003		0.0296	0.0296		0.0296	0.0296		468.0000	468.0000	8.9700e-003	8.5800e-003	470.8482
Unrefrigerated Warehouse-No Rail	138.977	1.5000e-003	0.0136	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003		16.3502	16.3502	3.1000e-004	3.0000e-004	16.4497
Unrefrigerated Warehouse-No Rail	201.896	2.1800e-003	0.0198	0.0166	1.2000e-004		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		23.7525	23.7525	4.6000e-004	4.4000e-004	23.8970
Total		**0.0466**	**0.4234**	**0.3557**	**2.5400e-003**		**0.0322**	**0.0322**		**0.0322**	**0.0322**		**508.1027**	**508.1027**	**9.7400e-003**	**9.3200e-003**	**511.1949**

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					
Junior College (2Yr)	3.978	0.0429	0.3900	0.3276	2.3400e-003		0.0296	0.0296		0.0296	0.0296		468.0000	468.0000	8.9700e-003	8.5800e-003	470.8482
Unrefrigerated Warehouse-No Rail	0.138977	1.5000e-003	0.0136	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003		16.3502	16.3502	3.1000e-004	3.0000e-004	16.4497
Unrefrigerated Warehouse-No Rail	0.201896	2.1800e-003	0.0198	0.0166	1.2000e-004		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		23.7525	23.7525	4.6000e-004	4.4000e-004	23.8970
Total		**0.0466**	**0.4234**	**0.3557**	**2.5400e-003**		**0.0322**	**0.0322**		**0.0322**	**0.0322**		**508.1027**	**508.1027**	**9.7400e-003**	**9.3200e-003**	**511.1949**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	15.5360	5.5700e-003	0.5759	4.0000e-005		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		1.1934	1.1934	3.4600e-003		1.2660
Mitigated	15.5360	5.5700e-003	0.5759	4.0000e-005		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		1.1934	1.1934	3.4600e-003		1.2660

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	3.7585					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.7206					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0569	5.5700e-003	0.5759	4.0000e-005		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		1.1934	1.1934	3.4600e-003		1.2660
Total	**15.5360**	**5.5700e-003**	**0.5759**	**4.0000e-005**		**2.0800e-003**	**2.0800e-003**		**2.0800e-003**	**2.0800e-003**		**1.1934**	**1.1934**	**3.4600e-003**		**1.2660**

__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	3.7585					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.7206					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0569	5.5700e-003	0.5759	4.0000e-005		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		1.1934	1.1934	3.4600e-003		1.2660
Total	**15.5360**	**5.5700e-003**	**0.5759**	**4.0000e-005**		**2.0800e-003**	**2.0800e-003**		**2.0800e-003**	**2.0800e-003**		**1.1934**	**1.1934**	**3.4600e-003**		**1.2660**

Existing Plus Project

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	9,000.00	Student	6.20	100,000.00	0
Parking Lot	1,350.00	Space	12.30	540,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2015
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Trips and VMT -

Demolition -

Grading - project

Vehicle Trips - project specific

Energy Use -

Water And Wastewater -

Solid Waste -

Land Use Change -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblLandUse	LandUseSquareFeet	392,870.13	100,000.00
tblLandUse	LotAcreage	9.02	6.20
tblLandUse	LotAcreage	12.15	12.30
tblProjectCharacteristics	OperationalYear	2014	2015
tblVehicleTrips	DV_TP	7.00	0.00
tblVehicleTrips	PB_TP	1.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	0.42	0.28
tblVehicleTrips	SU_TR	0.04	0.03
tblVehicleTrips	WD_TR	1.20	0.79

2.0 Emissions Summary

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	13.5179	0.0106	1.0931	8.0000e-005		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003		2.2651	2.2651	6.5600e-003		2.4028
Energy	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
Mobile	30.0263	86.1870	330.6948	0.6875	48.5520	1.2242	49.7762	12.9707	1.1248	14.0955		62,156.7067	62,156.7067	2.7349		62,214.1388
Total	**43.6283**	**86.9623**	**332.4302**	**0.6921**	**48.5520**	**1.2863**	**49.8382**	**12.9707**	**1.1868**	**14.1576**		**63,076.6189**	**63,076.6189**	**2.7590**	**0.0168**	**63,139.7733**

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	13.5179	0.0106	1.0931	8.0000e-005		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003		2.2651	2.2651	6.5600e-003		2.4028
Energy	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
Mobile	30.0263	86.1870	330.6948	0.6875	48.5520	1.2242	49.7762	12.9707	1.1248	14.0955		62,156.7067	62,156.7067	2.7349		62,214.1388
Total	**43.6283**	**86.9623**	**332.4302**	**0.6921**	**48.5520**	**1.2863**	**49.8382**	**12.9707**	**1.1868**	**14.1576**		**63,076.6189**	**63,076.6189**	**2.7590**	**0.0168**	**63,139.7733**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	30.0263	86.1870	330.6948	0.6875	48.5520	1.2242	49.7762	12.9707	1.1248	14.0955		62,156.7067	62,156.7067	2.7349		62,214.1388
Mitigated	30.0263	86.1870	330.6948	0.6875	48.5520	1.2242	49.7762	12.9707	1.1248	14.0955		62,156.7067	62,156.7067	2.7349		62,214.1388

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	7,110.00	2,520.00	270.00	17,643,669	17,643,669
Parking Lot	0.00	0.00	0.00		
Total	7,110.00	2,520.00	270.00	17,643,669	17,643,669

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.514499	0.060499	0.179997	0.139763	0.042095	0.006675	0.015446	0.029572	0.001914	0.002508	0.004341	0.000594	0.002098

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
NaturalGas Unmitigated	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317

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					
Junior College (2Yr)	7800	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0841**	**0.7647**	**0.6424**	**4.5900e-003**		**0.0581**	**0.0581**		**0.0581**	**0.0581**		**917.6471**	**917.6471**	**0.0176**	**0.0168**	**923.2317**

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					
Junior College (2Yr)	7.8	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0841**	**0.7647**	**0.6424**	**4.5900e-003**		**0.0581**	**0.0581**		**0.0581**	**0.0581**		**917.6471**	**917.6471**	**0.0176**	**0.0168**	**923.2317**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	13.5179	0.0106	1.0931	8.0000e-005		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003		2.2651	2.2651	6.5600e-003		2.4028
Mitigated	13.5179	0.0106	1.0931	8.0000e-005		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003		2.2651	2.2651	6.5600e-003		2.4028

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	0.7378					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.6720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.1081	0.0106	1.0931	8.0000e-005		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003		2.2651	2.2651	6.5600e-003		2.4028
Total	**13.5179**	**0.0106**	**1.0931**	**8.0000e-005**		**3.9500e-003**	**3.9500e-003**		**3.9500e-003**	**3.9500e-003**		**2.2651**	**2.2651**	**6.5600e-003**		**2.4028**

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	0.7378					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.6720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.1081	0.0106	1.0931	8.0000e-005		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003		2.2651	2.2651	6.5600e-003		2.4028
Total	**13.5179**	**0.0106**	**1.0931**	**8.0000e-005**		**3.9500e-003**	**3.9500e-003**		**3.9500e-003**	**3.9500e-003**		**2.2651**	**2.2651**	**6.5600e-003**		**2.4028**

Architectural Coating	0.7378					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.6720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0962	9.4700e-003	1.0514	8.0000e-005		3.7300e-003	3.7300e-003		3.7300e-003	3.7300e-003		2.2651	2.2651	5.8400e-003		2.3878
Total	**13.5060**	**9.4700e-003**	**1.0514**	**8.0000e-005**		**3.7300e-003**	**3.7300e-003**		**3.7300e-003**	**3.7300e-003**		**2.2651**	**2.2651**	**5.8400e-003**		**2.3878**

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	0.7378					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.6720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0962	9.4700e-003	1.0514	8.0000e-005		3.7300e-003	3.7300e-003		3.7300e-003	3.7300e-003		2.2651	2.2651	5.8400e-003		2.3878
Total	**13.5060**	**9.4700e-003**	**1.0514**	**8.0000e-005**		**3.7300e-003**	**3.7300e-003**		**3.7300e-003**	**3.7300e-003**		**2.2651**	**2.2651**	**5.8400e-003**		**2.3878**

Future No Project

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	4,912.00	Student	4.20	51,000.00	0
Unrefrigerated Warehouse-No Rail	320.40	1000sqft	7.36	320,397.00	0
Unrefrigerated Warehouse-No Rail	220.55	1000sqft	5.06	220,550.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Trips and VMT -

Demolition -

Grading - project

Vehicle Trips - project specific

Land Use Change -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Energy Use - Assuming only 25% of the warehouse is operational.

Water And Wastewater - Assuming only 25% of the warehouse is operational.

Solid Waste - Assuming only 25% of the warehouse is operational.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblEnergyUse	LightingElect	2.23	0.56
tblEnergyUse	NT24E	1.34	0.34
tblEnergyUse	NT24NG	0.03	7.5000e-003
tblEnergyUse	T24E	0.79	0.20
tblEnergyUse	T24NG	0.88	0.22
tblLandUse	LandUseSquareFeet	214,419.79	51,000.00
tblLandUse	LandUseSquareFeet	320,400.00	320,397.00
tblLandUse	LotAcreage	4.92	4.20
tblProjectCharacteristics	OperationalYear	2014	2030
tblSolidWaste	SolidWasteGenerationRate	508.49	127.12
tblVehicleTrips	DV_TP	7.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	1.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	0.42	0.28
tblVehicleTrips	ST_TR	2.59	2.04
tblVehicleTrips	SU_TR	0.04	0.03

tblVehicleTrips	SU_TR	2.59	2.04
tblVehicleTrips	WD_TR	1.20	0.79
tblVehicleTrips	WD_TR	2.59	2.04
tblWater	IndoorWaterUseRate	125,094,687.50	31,273,671.88

2.0 Emissions Summary

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	15.5297	4.9900e-003	0.5540	4.0000e-005		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003		1.1934	1.1934	3.0800e-003		1.2580
Energy	0.0465	0.4231	0.3554	2.5400e-003		0.0322	0.0322		0.0322	0.0322		507.6665	507.6665	9.7300e-003	9.3100e-003	510.7561
Mobile	11.2959	28.0644	124.9981	0.5432	37.3205	0.7483	38.0688	9.9766	0.6905	10.6671		39,181.5892	39,181.5892	1.1104		39,204.9074
Total	**26.8721**	**28.4925**	**125.9074**	**0.5458**	**37.3205**	**0.7824**	**38.1029**	**9.9766**	**0.7246**	**10.7012**		**39,690.4491**	**39,690.4491**	**1.1232**	**9.3100e-003**	**39,716.9215**

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	15.5297	4.9900e-003	0.5540	4.0000e-005		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003		1.1934	1.1934	3.0800e-003		1.2580
Energy	0.0465	0.4231	0.3554	2.5400e-003		0.0322	0.0322		0.0322	0.0322		507.6665	507.6665	9.7300e-003	9.3100e-003	510.7561
Mobile	11.2959	28.0644	124.9981	0.5432	37.3205	0.7483	38.0688	9.9766	0.6905	10.6671		39,181.5892	39,181.5892	1.1104		39,204.9074
Total	**26.8721**	**28.4925**	**125.9074**	**0.5458**	**37.3205**	**0.7824**	**38.1029**	**9.9766**	**0.7246**	**10.7012**		**39,690.4491**	**39,690.4491**	**1.1232**	**9.3100e-003**	**39,716.9215**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	12/31/2015	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class

Demolition				0.00	14.70	6.90				

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	11.2959	28.0644	124.9981	0.5432	37.3205	0.7483	38.0688	9.9766	0.6905	10.6671		39,181.5892	39,181.5892	1.1104		39,204.9074
Mitigated	11.2959	28.0644	124.9981	0.5432	37.3205	0.7483	38.0688	9.9766	0.6905	10.6671		39,181.5892	39,181.5892	1.1104		39,204.9074

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	3,880.48	1,375.36	147.36	9,629,523	9,629,523
Unrefrigerated Warehouse-No Rail	653.62	653.62	653.62	3,003,216	3,003,216
Unrefrigerated Warehouse-No Rail	449.92	449.92	449.92	2,067,289	2,067,289
Total	4,984.02	2,478.90	1,250.90	14,700,028	14,700,028

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	100	0	0
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	100	0	0
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.490213	0.060887	0.184949	0.142956	0.045319	0.007258	0.016906	0.039511	0.002069	0.002542	0.004120	0.000539	0.002732

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0465	0.4231	0.3554	2.5400e-003		0.0322	0.0322		0.0322	0.0322		507.6665	507.6665	9.7300e-003	9.3100e-003	510.7561
NaturalGas Unmitigated	0.0465	0.4231	0.3554	2.5400e-003		0.0322	0.0322		0.0322	0.0322		507.6665	507.6665	9.7300e-003	9.3100e-003	510.7561

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					
Junior College (2Yr)	3978	0.0429	0.3900	0.3276	2.3400e-003		0.0296	0.0296		0.0296	0.0296		468.0000	468.0000	8.9700e-003	8.5800e-003	470.8482

Unrefrigerated Warehouse-No Rail	137.466	1.4800e-003	0.0135	0.0113	8.0000e-005		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003		16.1725	16.1725	3.1000e-004	3.0000e-004	16.2709
Unrefrigerated Warehouse-No Rail	199.7	2.1500e-003	0.0196	0.0165	1.2000e-004		1.4900e-003	1.4900e-003		1.4900e-003	1.4900e-003		23.4941	23.4941	4.5000e-004	4.3000e-004	23.6370
Total		**0.0465**	**0.4231**	**0.3554**	**2.5400e-003**		**0.0322**	**0.0322**		**0.0322**	**0.0322**		**507.6665**	**507.6665**	**9.7300e-003**	**9.3100e-003**	**510.7561**

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					
Junior College (2Yr)	3.978	0.0429	0.3900	0.3276	2.3400e-003		0.0296	0.0296		0.0296	0.0296		468.0000	468.0000	8.9700e-003	8.5800e-003	470.8482
Unrefrigerated Warehouse-No Rail	0.137466	1.4800e-003	0.0135	0.0113	8.0000e-005		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003		16.1725	16.1725	3.1000e-004	3.0000e-004	16.2709
Unrefrigerated Warehouse-No Rail	0.1997	2.1500e-003	0.0196	0.0165	1.2000e-004		1.4900e-003	1.4900e-003		1.4900e-003	1.4900e-003		23.4941	23.4941	4.5000e-004	4.3000e-004	23.6370
Total		**0.0465**	**0.4231**	**0.3554**	**2.5400e-003**		**0.0322**	**0.0322**		**0.0322**	**0.0322**		**507.6665**	**507.6665**	**9.7300e-003**	**9.3100e-003**	**510.7561**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	15.5297	4.9900e-003	0.5540	4.0000e-005		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003		1.1934	1.1934	3.0800e-003		1.2580
Mitigated	15.5297	4.9900e-003	0.5540	4.0000e-005		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003		1.1934	1.1934	3.0800e-003		1.2580

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	3.7585					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.7206					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0507	4.9900e-003	0.5540	4.0000e-005		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003		1.1934	1.1934	3.0800e-003		1.2580
Total	**15.5297**	**4.9900e-003**	**0.5540**	**4.0000e-005**		**1.9600e-003**	**1.9600e-003**		**1.9600e-003**	**1.9600e-003**		**1.1934**	**1.1934**	**3.0800e-003**		**1.2580**

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	3.7585					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.7206					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0507	4.9900e-003	0.5540	4.0000e-005		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003		1.1934	1.1934	3.0800e-003		1.2580
Total	**15.5297**	**4.9900e-003**	**0.5540**	**4.0000e-005**		**1.9600e-003**	**1.9600e-003**		**1.9600e-003**	**1.9600e-003**		**1.1934**	**1.1934**	**3.0800e-003**		**1.2580**

Future Plus Project

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	9,000.00	Student	6.20	100,000.00	0
Parking Lot	1,350.00	Space	12.30	540,000.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 31

Climate Zone 9 **Operational Year** 2030

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - project specific

Construction Phase - project specifc

Off-road Equipment -

Off-road Equipment - project

Trips and VMT -

Demolition -

Grading - project

Vehicle Trips - project specific

Land Use Change -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Energy Use -

Water And Wastewater -

Solid Waste -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblLandUse	LandUseSquareFeet	392,870.13	100,000.00
tblLandUse	LotAcreage	9.02	6.20
tblLandUse	LotAcreage	12.15	12.30
tblProjectCharacteristics	OperationalYear	2014	2030
tblVehicleTrips	DV_TP	7.00	0.00
tblVehicleTrips	PB_TP	1.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	0.42	0.28
tblVehicleTrips	SU_TR	0.04	0.03
tblVehicleTrips	WD_TR	1.20	0.79

2.0 Emissions Summary

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

2.2 Overall Operational

<u>**Unmitigated Operational**</u>

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
	lb/day										lb/day					
Area	13.5060	9.4700e-003	1.0514	8.0000e-005		3.7300e-003	3.7300e-003		3.7300e-003	3.7300e-003		2.2651	2.2651	5.8400e-003		2.3878
Energy	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
Mobile	15.6727	37.2118	167.8971	0.7097	48.6475	0.9821	49.6296	13.0046	0.9063	13.9109		51,191.0067	51,191.0067	1.4558		51,221.5777
Total	**29.2628**	**37.9860**	**169.5909**	**0.7144**	**48.6475**	**1.0440**	**49.6915**	**13.0046**	**0.9681**	**13.9727**		**52,110.9189**	**52,110.9189**	**1.4792**	**0.0168**	**52,147.1972**

Mitigated Operational

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
	lb/day										lb/day					
Area	13.5060	9.4700e-003	1.0514	8.0000e-005		3.7300e-003	3.7300e-003		3.7300e-003	3.7300e-003		2.2651	2.2651	5.8400e-003		2.3878
Energy	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
Mobile	15.6727	37.2118	167.8971	0.7097	48.6475	0.9821	49.6296	13.0046	0.9063	13.9109		51,191.0067	51,191.0067	1.4558		51,221.5777
Total	**29.2628**	**37.9860**	**169.5909**	**0.7144**	**48.6475**	**1.0440**	**49.6915**	**13.0046**	**0.9681**	**13.9727**		**52,110.9189**	**52,110.9189**	**1.4792**	**0.0168**	**52,147.1972**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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
	lb/day										lb/day					
Unmitigated	15.6727	37.2118	167.8971	0.7097	48.6475	0.9821	49.6296	13.0046	0.9063	13.9109		51,191.0067	51,191.0067	1.4558		51,221.5777
Mitigated	15.6727	37.2118	167.8971	0.7097	48.6475	0.9821	49.6296	13.0046	0.9063	13.9109		51,191.0067	51,191.0067	1.4558		51,221.5777

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	7,110.00	2,520.00	270.00	17,643,669	17,643,669
Parking Lot	0.00	0.00	0.00		
Total	7,110.00	2,520.00	270.00	17,643,669	17,643,669

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.490213	0.060887	0.184949	0.142956	0.045319	0.007258	0.016906	0.039511	0.002069	0.002542	0.004120	0.000539	0.002732

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
NaturalGas Unmitigated	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317

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					
Junior College (2Yr)	7800	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0841**	**0.7647**	**0.6424**	**4.5900e-003**		**0.0581**	**0.0581**		**0.0581**	**0.0581**		**917.6471**	**917.6471**	**0.0176**	**0.0168**	**923.2317**

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					
Junior College (2Yr)	7.8	0.0841	0.7647	0.6424	4.5900e-003		0.0581	0.0581		0.0581	0.0581		917.6471	917.6471	0.0176	0.0168	923.2317
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0841**	**0.7647**	**0.6424**	**4.5900e-003**		**0.0581**	**0.0581**		**0.0581**	**0.0581**		**917.6471**	**917.6471**	**0.0176**	**0.0168**	**923.2317**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	13.5060	9.4700e-003	1.0514	8.0000e-005		3.7300e-003	3.7300e-003		3.7300e-003	3.7300e-003		2.2651	2.2651	5.8400e-003		2.3878
Mitigated	13.5060	9.4700e-003	1.0514	8.0000e-005		3.7300e-003	3.7300e-003		3.7300e-003	3.7300e-003		2.2651	2.2651	5.8400e-003		2.3878

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	0.7378					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.6720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0962	9.4700e-003	1.0514	8.0000e-005		3.7300e-003	3.7300e-003		3.7300e-003	3.7300e-003		2.2651	2.2651	5.8400e-003		2.3878
Total	**13.5060**	**9.4700e-003**	**1.0514**	**8.0000e-005**		**3.7300e-003**	**3.7300e-003**		**3.7300e-003**	**3.7300e-003**		**2.2651**	**2.2651**	**5.8400e-003**		**2.3878**

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	0.7378					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.6720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0962	9.4700e-003	1.0514	8.0000e-005		3.7300e-003	3.7300e-003		3.7300e-003	3.7300e-003		2.2651	2.2651	5.8400e-003		2.3878
Total	**13.5060**	**9.4700e-003**	**1.0514**	**8.0000e-005**		**3.7300e-003**	**3.7300e-003**		**3.7300e-003**	**3.7300e-003**		**2.2651**	**2.2651**	**5.8400e-003**		**2.3878**

Architectural Coating	0.7378					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.6720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0962	9.4700e-003	1.0514	8.0000e-005		3.7300e-003	3.7300e-003		3.7300e-003	3.7300e-003		2.2651	2.2651	5.8400e-003		2.3878
Total	**13.5060**	**9.4700e-003**	**1.0514**	**8.0000e-005**		**3.7300e-003**	**3.7300e-003**		**3.7300e-003**	**3.7300e-003**		**2.2651**	**2.2651**	**5.8400e-003**		**2.3878**

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	0.7378					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.6720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0962	9.4700e-003	1.0514	8.0000e-005		3.7300e-003	3.7300e-003		3.7300e-003	3.7300e-003		2.2651	2.2651	5.8400e-003		2.3878
Total	**13.5060**	**9.4700e-003**	**1.0514**	**8.0000e-005**		**3.7300e-003**	**3.7300e-003**		**3.7300e-003**	**3.7300e-003**		**2.2651**	**2.2651**	**5.8400e-003**		**2.3878**

Other Resources

Emissions for Concrete Crushing Backfill		
Emission Factor (lbs/ton)	Annual Throughput (tons)	Emission (lbs/year)
0.003	340000	1020
	Total Suspended	5.204081633
	PM2.5	0.759795918
	PM10	2.602040816

Givens	
Fine Crusher (controlled) Emission Factor (lbs/ton)	0.003
Density of Concrete (lbs/cubic yard)	4000
Crushed Concrete (lbs)	68000000
Annual Throughput (cubic yards)	17,000
lbs -> tons conversion	0.005

Emissions (tons/year)= (Annual Throughput x Emission Factor)

Source:http://www.aqmd.gov/docs/default-source/planning/annual-emission-reporting/particulate-matter-emission-factors-for-processes-equipment-at-asphalt-cement-concrete-and-aggregate-product-plants.pdf?sfvrsn=10

California Environmental Protection Agency
Air Resources Board

Top 4 Summary: Highest 4 Daily Maximum 8-Hour Ozone Averages

at Compton-700 North Bullis Road

	2012		2013		2014	
	Date	8-Hr Average	Date	8-Hr Average	Date	8-Hr Average
National:						
First High:	Sep 15	0.070	May 3	0.080	Oct 5	0.081
Second High:	Apr 8	0.066	May 12	0.065	Apr 30	0.078
Third High:	May 20	0.065	Jun 1	0.065	May 2	0.075
Fourth High:	Apr 21	0.064	Mar 24	0.063	May 3	0.073
California:						
First High:	Sep 15	0.071	May 3	0.080	Oct 5	0.082
Second High:	Apr 8	0.067	May 12	0.065	Apr 30	0.079
Third High:	May 20	0.066	Jun 1	0.065	May 2	0.075
Fourth High:	Apr 21	0.064	Mar 24	0.064	May 3	0.074
National:						
# Days Above the Standard:		0		1		2
Nat'l Standard Design Value:		0.058		*		*
National Year Coverage:		95		91		88
California:						
# Days Above the Standard:		1		1		4
California Designation Value:		0.067		0.067		0.082
Expected Peak Day Concentration:		0.067		0.069		*
California Year Coverage:		90		90		50

Notes:

Eight-hour ozone averages and related statistics are available at Compton-700 North Bullis Road between 2008 and 2014. Some years in this range may not be represented.
All averages expressed in parts per million.
An exceedance of a standard is not necessarily related to a violation of the standard.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* means there was insufficient data available to determine the value.

Available Pollutants:

8-Hour Ozone | Hourly Ozone | PM2.5 | PM10 | Carbon Monoxide | Nitrogen Dioxide | State Sulfur Dioxide | Hydrogen Sulfide

California Environmental Protection Agency
Air Resources Board

Top 4 Summary: Highest 4 Daily Maximum Hourly Ozone Measurements

at Compton-700 North Bullis Road

	2012		2013		2014	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Oct 1	0.086	May 13	0.090	Oct 5	0.094
Second High:	Oct 2	0.081	Jun 1	0.088	Apr 30	0.082
Third High:	Sep 15	0.080	Jun 29	0.087	May 2	0.082
Fourth High:	May 20	0.077	May 3	0.086	Sep 14	0.082
California:						
# Days Above the Standard:		0		0		0
California Designation Value:		0.08		0.08		0.09
Expected Peak Day Concentration:		0.080		0.083		0.088
National:						
# Days Above the Standard:		*0*		*0*		*0*
Nat'l Standard Design Value:		*0.081*		*0.086*		*0.087*
Year Coverage:		95		95		93

Notes:

Hourly ozone measurements and related statistics are available at Compton-700 North Bullis Road between 2008 and 2014. Some years in this range may not be represented.
All concentrations expressed in parts per million.
The national 1-hour ozone standard was revoked in June 2005 and is no longer in effect. Statistics related to the revoked standard are shown in *italics* or *italics* .
An exceedance of a standard is not necessarily related to a violation of the standard.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* means there was insufficient data available to determine the value.

Available Pollutants:
8-Hour Ozone | Hourly Ozone | PM2.5 | PM10 | Carbon Monoxide | Nitrogen Dioxide | State Sulfur Dioxide | Hydrogen Sulfide

California Environmental Protection Agency
Air Resources Board

Top 4 Summary: Highest 4 Daily Maximum 8-Hour Carbon Monoxide Averages

at Compton-700 North Bullis Road

	2012		2013		2014	
	Date	8-Hr Average	Date	8-Hr Average	Date	8-Hr Average
National:						
First High:	Jan 26	3.96		*		*
Second High:	Jan 15	3.94		*		*
Third High:	Jan 1	3.81		*		*
Fourth High:	Jan 4	3.48		*		*
California:						
First High:	Jan 26	3.96		*		*
Second High:	Jan 15	3.94		*		*
Third High:	Jan 1	3.81		*		*
Fourth High:	Jan 4	3.48		*		*
National:						
# Days Above the Standard:		0		0		0
California:						
# Days Above the Standard:		0		0		0
Expected Peak Day Concentration:		4.48				
Year Coverage:		45		*		*

Notes:

Eight-hour carbon monoxide averages and related statistics are available at Compton-700 North Bullis Road between 2008 and 2012. Some years in this range may not be represented.
All averages expressed in parts per million.
An exceedance of a standard is not necessarily related to a violation of the standard.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* means there was insufficient data available to determine the value.

Available Pollutants:
8-Hour Ozone | Hourly Ozone | PM2.5 | PM10 | Carbon Monoxide | Nitrogen Dioxide | State Sulfur Dioxide | Hydrogen Sulfide

Top 4 Summary: Highest 4 Daily Maximum Hourly Nitrogen Dioxide Measurements

at Compton-700 North Bullis Road

	2012		2013		2014	
	Date	Measurement	Date	Measurement	Date	Measurement
National:						
First High:	Jan 1	79.3	Oct 18	69.8	Jan 3	68.2
Second High:	Oct 17	69.9	Dec 17	67.2	Apr 8	66.6
Third High:	Jan 11	64.9	Jan 9	65.6	Apr 30	66.6
Fourth High:	Oct 16	64.6	Oct 19	63.7	Jan 14	65.6
California:						
First High:	Jan 1	79	Oct 18	69	Jan 3	68
Second High:	Oct 17	69	Dec 17	67	Apr 8	66
Third High:	Jan 11	64	Jan 9	65	Apr 30	66
Fourth High:	Oct 16	64	Feb 14	63	Jan 14	65
National:						
1-Hour Standard Design Value:		66		63		62
1-Hour Standard 98th Percentile:		63.1		61.8		59.7
# Days Above the Standard:		0		0		0
Annual Standard Design Value:		17		17		16
California:						
1-Hour Std Designation Value:		80		80		70
Expected Peak Day Concentration:		77		75		73
# Days Above the Standard:		0		0		0
Annual Std Designation Value:		18		18		17
Annual Average:		17		17		*
Year Coverage:		87		89		89

Notes:

Hourly nitrogen dioxide measurements and related statistics are available at Compton-700 North Bullis Road between 2008 and 2014. Some years in this range may not be represented.

All concentrations expressed in parts per billion.

An exceedance of a standard is not necessarily related to a violation of the standard.

Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.

* means there was insufficient data available to determine the value.

Available Pollutants:

8-Hour Ozone | Hourly Ozone | PM2.5 | PM10 | Carbon Monoxide | Nitrogen Dioxide | State Sulfur Dioxide | Hydrogen Sulfide

California Environmental Protection Agency
Air Resources Board

Top 4 Summary: Highest 4 Daily 24-Hour PM10 Averages

at North Long Beach

iADAM

	2012		2013		2014	
	Date	24-Hr Average	Date	24-Hr Average	Date	24-Hr Average
National:						
First High:	Jan 4	45.0	Aug 20	37.0		*
Second High:	Jan 10	37.0	Jan 22	35.0		*
Third High:	Dec 11	36.0	Apr 16	33.0		*
Fourth High:	May 9	35.0	Jan 4	31.0		*
California:						
First High:	Jan 4	45.0	Aug 20	37.0		*
Second High:	Jan 10	37.0	Jan 22	34.0		*
Third High:	Dec 11	36.0	Apr 16	33.0		*
Fourth High:	May 9	35.0	Jan 4	31.0		*
National:						
Estimated # Days > 24-Hour Std:		0.0		*		*
Measured # Days > 24-Hour Std:		0		0		0
3-Yr Avg Est # Days > 24-Hr Std:		0.0		*		*
Annual Average:		*23.2*		*23.2*		*
3-Year Average:		*23*		*24*		*
California:						
Estimated # Days > 24-Hour Std:		0.0		*		*
Measured # Days > 24-Hour Std:		0		0		0
Annual Average:		23.2		*		*
3-Year Maximum Annual Average:		24		24		*
Year Coverage:		99		65		*

Notes:

Daily PM10 averages and related statistics are available at North Long Beach between 1989 and 2013. Some years in this range may not be represented.
All averages expressed in micrograms per cubic meter.
The national annual average PM10 standard was revoked in December 2006 and is no longer in effect. Statistics related to the revoked standard are shown in *italics* or *italics* .
An exceedance of a standard is not necessarily related to a violation of the standard.
All values listed above represent midnight-to-midnight 24-hour averages and may be related to an exceptional event.
State and national statistics may differ for the following reasons:
State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and

national statistics may therefore be based on different samplers.
State statistics for 1998 and later are based on local conditions (except for sites in the South Coast Air Basin, where State statistics for 2002 and later are based on local conditions). National statistics are based on standard conditions.
State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.
Measurements are usually collected every six days. Measured days counts the days that a measurement was greater than the level of the standard; Estimated days mathematically estimates how many days concentrations would have been greater than the level of the standard had each day been monitored.
3-Year statistics represent the listed year and the 2 years before the listed year.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* means there was insufficient data available to determine the value.

Available Pollutants:
8-Hour Ozone | Hourly Ozone | PM2.5 | PM10 | Carbon Monoxide | Nitrogen Dioxide | State Sulfur Dioxide | Hydrogen Sulfide

California Environmental Protection Agency
Air Resources Board

Top 4 Summary: Highest 4 Daily 24-Hour PM2.5 Averages

at Compton-700 North Bullis Road

iADAM

	2012		2013		2014	
	Date	24-Hr Average	Date	24-Hr Average	Date	24-Hr Average
National:						
First High:	Dec 8	51.2	Jan 1	52.1	Jan 11	35.8
Second High:	Nov 23	30.5	Dec 24	28.5	Jan 20	33.5
Third High:	Jan 7	30.3	Oct 25	24.3	Nov 28	30.9
Fourth High:	Jan 19	26.4	Jan 16	24.1	Jan 29	30.8
California:						
First High:	Dec 8	51.2	Jan 1	52.1	Jan 11	35.8
Second High:	Nov 23	30.5	Dec 24	28.5	Jan 20	33.5
Third High:	Jan 7	30.3	Oct 25	24.3	Nov 28	30.9
Fourth High:	Jan 19	26.4	Jan 16	24.1	Jan 29	30.8
National:						
Estimated # Days > 24-Hour Std:		3.3		3.1		3.0
Measured # Days > 24-Hour Std:		1		1		1
24-Hour Standard Design Value:		31		29		29
24-Hour Standard 98th Percentile:		30.3		24.3		30.9
Annual Standard Design Value:		12.4		12.2		12.1
Annual Average:		11.6		11.9		12.6
California:						
Annual Std Designation Value:		13		13		12
Annual Average:		11.7		*		*
Year Coverage:		92		95		88

Notes:

Daily PM2.5 averages and related statistics are available at Compton-700 North Bullis Road between 2008 and 2014. Some years in this range may not be represented.
All averages expressed in micrograms per cubic meter.
An exceedance of a standard is not necessarily related to a violation of the standard.
State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and national statistics may therefore be based on different samplers.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* means there was insufficient data available to determine the value.

Available Pollutants:
8-Hour Ozone | Hourly Ozone | PM2.5 | PM10 | Carbon Monoxide | Nitrogen Dioxide | State Sulfur Dioxide | Hydrogen Sulfide

California Environmental Protection Agency
Air Resources Board

Top 4 Summary: Highest 4 Daily Maximum State 24-Hour Sulfur Dioxide Averages

at North Long Beach

	2012		2013		2014	
	Date	24-Hr Average	Date	24-Hr Average	Date	24-Hr Average
First High:	Aug 16	0.003	Jan 23	0.001		*
Second High:	Oct 2	0.003	Jan 16	0.001		*
Third High:	Oct 1	0.003	Feb 14	0.001		*
Fourth High:	Aug 17	0.003	Feb 1	0.001		*
Annual Average:		*		*		*
Year Coverage:		1		*		*

Notes:
Hourly sulfur dioxide measurements and related statistics are available at North Long Beach between 1963 and 2012. Some years in this range may not be represented.
All averages expressed in parts per million.
An exceedance of a standard is not necessarily related to a violation of the standard.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* means there was insufficient data available to determine the value.

Available Pollutants:
8-Hour Ozone | Hourly Ozone | PM2.5 | PM10 | Carbon Monoxide | Nitrogen Dioxide | State Sulfur Dioxide | Hydrogen Sulfide

APPENDIX C

Cultural Resources

Cultural Resources Technical Report

Cultural Resources Technical Report East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California

Prepared for

Los Angeles Community College District

and

Terry A. Hayes & Associates, LLC

Prepared by

SWCA Environmental Consultants

September 2009

Cultural Resources Technical Report
East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California

Prepared for

Los Angeles Community College District

Prepared by

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USGS 7.5-Minute Quadrangle
South Gate

SWCA Cultural Resources Report Database No. 2009-340

September 2009

Key Words: Cultural Resources Survey, Firestone, Los Angeles County, City of South Gate, 33 acres, Intensive Survey, Negative Archaeological Results, Positive Historic Built Results, Firestone Tire and Rubber Company, South Gate Historic District

MANAGEMENT SUMMARY/ABSTRACT

Purpose and Scope: Terry A. Hayes & Associates, LLC, retained SWCA Environmental Consultants to perform cultural resources consulting for the East Los Angeles College Satellite Campus Environmental Impact Report (EIR). The proposed project is construction and implementation of a new community college campus. SWCA conducted cultural resources studies for the proposed project in accordance with the California Environmental Quality Act (CEQA), as it relates to cultural resources. It is understood that the project will be funded solely through local and state funding; therefore Section 106 and the National Environmental Policy Act (NEPA) do not apply to the proposed project. The cultural resources inventory includes both built environment and archaeology for the proposed East Los Angeles College Satellite Campus project.

Because the footprint of the proposed project has changed from time to time, and no buildings over four stories are proposed, the Area of Potential Effects (APE or study area) is limited to evaluation of improvements on the following parcels: eastern half of the lot between Santa Fe Avenue and Firestone Boulevard (Los Angeles County Tax Assessor's Parcel Number or APN 6204-034-003) and the western half of the lot between Santa Fe Avenue and Firestone Boulevard (APN 6204-034-002). The project is approximately 33 acres and is located within the Los Angeles County, California.

Currently, the South Gate Educational Center is serving the local community, but rapid student growth has forced it to consider expanding its facilities and offerings to meet the growing community demands. The purpose of the proposed East Los Angeles College Satellite Campus Project (proposed project) is to expand and improve the South Gate Educational Center through adaptive re-use of Buildings 1 and 3, and to develop additional surface parking and a parking structure to handle the parking needs of the facility. Through this project, South Gate Educational Center hopes to accommodate rapid student growth, meet current and future community needs, provide a full-service college curriculum for up to 12,000 students, preserve historic resources, support economic growth and redevelopment, and conserve nonrenewable resources.

The California Environmental Quality Act (CEQA) and the CEQA Guidelines (California 2005) as they apply to cultural resources are also part of this project review. Under CEQA, it is necessary for a lead agency to evaluate proposed projects for the potential to cause significant impacts on "historical resources." A proposed project that may affect historical resources is submitted to the State Historic Preservation Officer (SHPO) for review and comment prior to project approval by the lead agency and before any project-related clearance, demolition, or construction activities commence.

Dates of Investigation: For the project, a cultural resources records search was conducted on August 18, 2009. At SWCA's request, a Sacred Lands File search was accomplished by the Native American Heritage Commission (NAHC) on August 20, 2009. Intensive-level surveys of the Area of Potential Effects (APE) for built environment were conducted on September, 3 2009, and for archaeology on September 14, 2009. This report was completed in September 2009.

Investigation Constraints: Buildings and paved areas cover approximately 99 percent of the project area, greatly reducing ground visibility. The remaining approximately 1 percent of the project area contains landscaped ground surface. Ground surface visibility was approximately 10 percent. Lack of access prevented an archaeological survey in the western portion of the project around Building E, the former HON Furniture building. Access to built environment resources was from public rights-of-way; no building interiors were inspected as part of this project review.

Summary of Findings: The NAHC Sacred Lands File search for traditional cultural resources failed to indicate the presence of Native American cultural resources in the immediate vicinity of the proposed project area. The NAHC response included a list of seven Native American groups or individuals who may have knowledge of cultural resources in the project area. SWCA sent letters and maps describing the proposed project via U.S. mail to these seven entities. Responses were received from one of the seven. The response is documented in Table 4. No further action is required.

The records and literature search indicated that 15 previously recorded cultural resources are located within a 0.5-mile radius of the APE, including no prehistoric archaeological sites, eight historic archaeological sites, seven buildings or historic structures, and no historic isolates. Of these 15 previously recorded resources, none are within or adjacent to the APE. The records and literature search also identified 41 previously conducted cultural resources studies within a 0.5-mile radius of the APE. Two of these studies cover portions of the project adjacent to the APE, while the remaining studies cover areas outside of the APE and within the 0.5 radius. The built environment survey found no previously documented resources within the project APE.

The archaeological survey did not reveal any historic or prehistoric archaeological resources. The records and literature search and surveys revealed a moderate sensitivity for historic-period buildings, a low sensitivity for historic-period archaeological resources, and a low sensitivity for prehistoric archaeological resources in the project area.

Five California Register-eligible buildings, a set of gateposts, one eligible outbuilding, and one eligible historic district were identified as part of the built environment survey. Five buildings, four ancillary structures, the gateposts, and one related feature were each intensively surveyed for this project and were identified as the Firestone Tire and Rubber Company, South Gate Historic District.

Recommendations: In the event of future subsurface work/activity, the lead agency shall ensure that all associated Environmental Protection Agency (EPA), Occupational Safety & Health Administration (OSHA), state, or county regulations are followed to protect against human health exposure from airborne or subsurface contamination or contact. This includes but is not limited to analytical data recovery from subsurface soil or groundwater testing and analysis and excavation or trenching activities.

Standard mitigation measures are recommended herein to minimize impacts to unanticipated discovery of belowground cultural resources during construction activities. In consideration of the low level of archaeological sensitivity, SWCA recommends no further archaeological work for this project. In the event that archaeological resources (artifacts or features more than 45 years old) are discovered during ground-disturbing activities, such as grading, grubbing, and vegetation clearing, work in the immediate area must be halted and an archaeologist who meets the Secretary of the Interior's professional qualification standards should be retained immediately to evaluate the resource(s) encountered.

Built environment mitigation measures assert that that a licensed architect with at least five years of experience in successful certified rehabilitation (tax credit) projects actively collaborate on or develop detailed project plans to effect consistent project-related conformance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings* (*Secretary's Standards*). It is recommended that plans be developed to clearly depict existing buildings, structures, objects and features versus proposed plans. The plans must be detailed to be able to clearly establish what is proposed to be retained, as well as how any character defining features would be treated or altered. An additional mitigation measure requires that an architectural historian qualified under the Secretary of the Interior's Professional Qualification Standards review and comment on the resulting developed plans to form professional judgments regarding project and building-by-building conformance with the *Secretary's Standards*. The outcome of those mitigation measures would be part of future CEQA review for this project. In order to avoid demolition of a building, it is also recommended that the project team actively collaborate on site planning, including reconsidering that demolition, and consider its reuse as part of project site planning and proposed uses. Evaluation of alternatives that would reduce or avoid impacts is recommended.

As currently proposed, plans and specifications have not been sufficiently developed to review the project for substantial adverse changes to historical resources under CEQA. Once plans have been developed to a sufficient level for review, they must be reviewed by a qualified architectural historian for conformance with the Secretary of the Interior's Standards for Rehabilitation (See Appendix E and Code of Federal Regulations, 36 CFR Part 61).

Disposition of Data: This report will be filed with Los Angeles Community College District (LACCD), Terry A. Hayes & Associates, LLC, the South Central Coastal Information Center (SCCIC), and SWCA Environmental Consultants. All field notes and records related to the project will remain on file at the South Pasadena office of SWCA.

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LIST OF ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effects
APN	assessor's parcel number
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CPHI	California Point of Historical Interest
CRHR	California Register of Historical Resources (California Register)
DPR	Department of Parks and Recreation
FAR	fire-affected rock
LACCD	Los Angeles Community College District
LAUSD	Los Angeles Unified School District
Ma	million years ago
MLD	Most Likely Descendant
msl	mean sea level
n.d.	no date
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPS	National Park Service
NRHP	National Register of Historic Places (National Register)
PQS	Professional Qualification Standards
PRC	Public Resources Code
Sanborn	Sanborn Fire Insurance Map Company
SHPO	State Historic Preservation Officer
UPRR	Union Pacific Railroad
USGS	United States Geological Survey

INTRODUCTION

Contracting Data: Under contract to Terry A. Hayes & Associates, LLC, SWCA Environmental Consultants conducted an intensive cultural resources survey for the proposed East Los Angeles College Satellite Campus project. This technical report was prepared to identify and evaluate historic properties and historical resources that may be affected by construction and implementation of the proposed project.

Regulatory Setting: Proposed work and construction for the East Los Angeles College Satellite Campus project is subject to compliance with CEQA and the CEQA Guidelines (California 2005) as they apply to cultural resources. Under CEQA, it is necessary for a lead agency to evaluate proposed projects for the potential to cause significant impacts on "historical resources." A proposed project that may affect historical resources is submitted to the SHPO for review and comment prior to project approval by the lead agency and before any project-related clearance, demolition, or construction activities are commenced. If a proposed project could be expected to cause substantial adverse change to a historical resource, environmental clearance for the project would require the evaluation of alternatives or implementation of mitigation measures, or both, to reduce or avoid impacts. If a project is expected to result in an impact on historical resources, CEQA guidelines require analysis of a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project and avoid or substantially lessen any significant impacts on the historical resource.

Properties that may be historically significant within the identified project APE were evaluated for California Register of Historical Resources (California Register) eligibility. Although there is no established age threshold for California Register, the 50-year cut-off used for National Register of Historic Places (National Register) eligibility was used for this project. Under *California Public Resources Code* (*PRC*) Section 5024.1, the California Register was established to serve as an authoritative guide to the state's significant historical and archaeological resources

The National Register was only considered in the context of California Register eligibility, because properties that are listed in or determined eligible are automatically listed in the state register. The age criterion for inclusion in the National Register is 50 years or more, except in cases of overriding significance (Criteria Consideration G). If a proposed project and its related impacts would adversely affect the values of an archaeological or built environment site that is either listed or determined eligible for inclusion in the California or National Registers, such impacts or effects would be considered significant.

Report Format: The report meets the Secretary of the Interior's Standards and Guidelines and follows contemporary professional standards for the preparation of historic resources reports, as well as *Archaeological Resource Management Reports: Recommended Contents and Format*, recommended by the California Office of Historic Preservation (1990).

Project Personnel: The report was prepared by SWCA architectural historians Sarah Edwards and Sonnier Francisco, who meet the Secretary of the Interior's Professional Qualifications Standards (PQS) (36 CFR Part 61, Archaeology and Historic Preservation: Secretary of the Interior's Standards And Guidelines [as amended and annotated]) in history and architectural history. SWCA Senior Architectural Historian Francesca Smith, who exceeds the PQSs in history and architectural history, reviewed the report. SWCA archaeologist Linda Akyüz provided technical support. SWCA Cultural Resources Principal Investigator John Dietler, who exceeds the PQS in archaeology, reviewed the archaeology section of this report. Caprice "Kip" Harper, Cultural Resources Project Manager, who exceeds the PQS in archaeology acted as Quality Control Officer. SWCA GIS Specialist Chad Flynn created the maps and figures used in the report; Elizabeth Slocum served as technical editor.

PROJECT DESCRIPTION

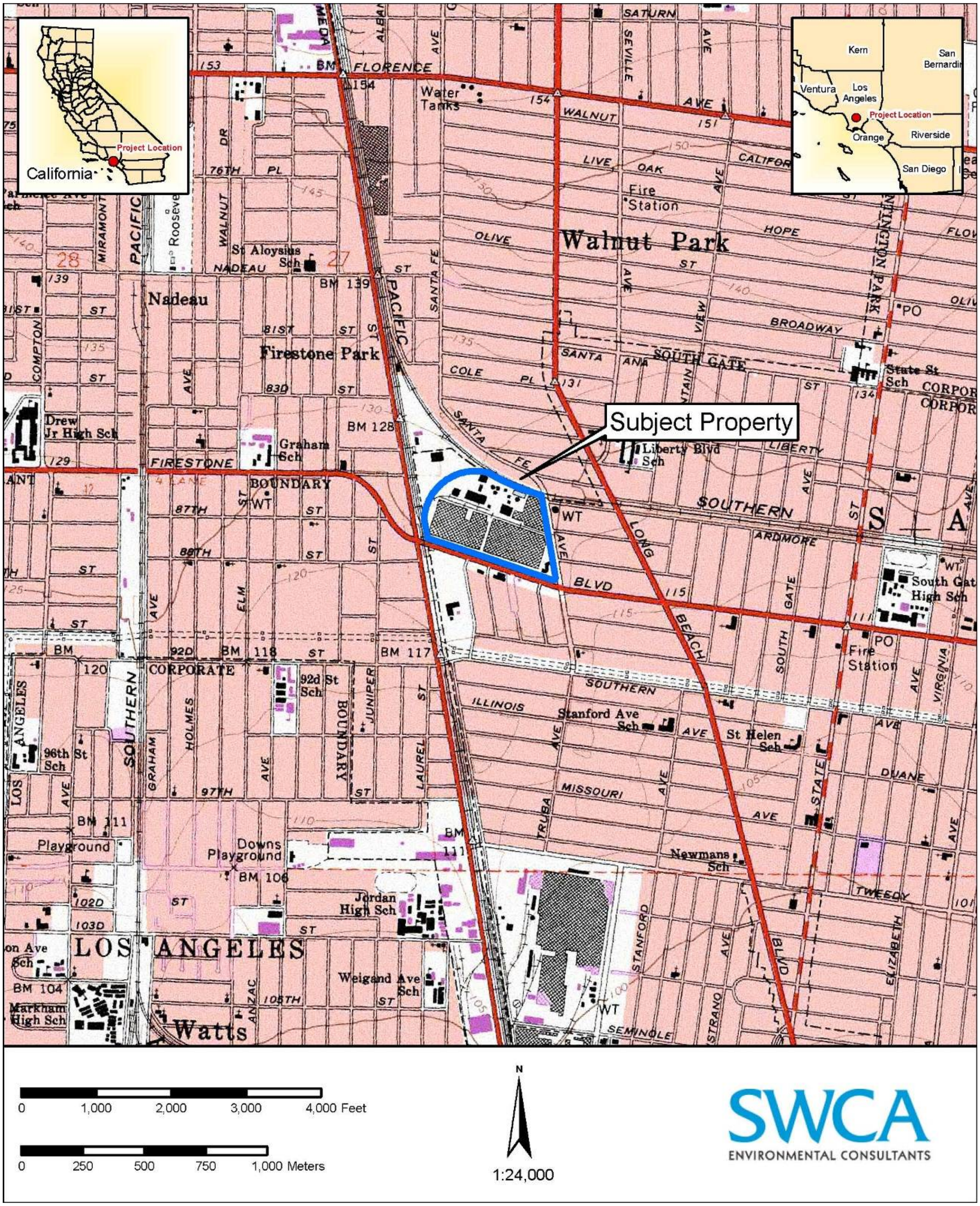
Project Site and Location: The project site is located in the City of South Gate and is bounded by Firestone Boulevard to the south, Santa Fe Avenue to the east, Union Pacific Railroad (UPRR) to the north, Alameda Street and Corridor, and UPRR to the west. Specifically it is located at the northwestern corner of the intersection of Firestone Boulevard and Santa Fe Avenue. The site is divided into two parts: eastern and western. The western part includes the HON Furniture site (2323 Firestone Boulevard, 16 acres) and consists of three one- and two-story buildings and surface parking, which is currently occupied by a warehouse/distribution facility. The eastern part of the site includes the former Firestone Tire and Rubber plant (2525 Firestone Boulevard, 17 acres) and consists of four two- to four-story buildings, three large buildings used for merchandise storage and distribution (Buildings 1, 3, and 4, Map Key A, C and D), and one building (Building 2, Map Key B) occupied by the Los Angeles Unified School District (LAUSD) for its continuation school program.

Project Background and Description: A recently released Notice of Preparation of a Draft Environmental Impact Report from the Los Angeles Community College District described the background and goals of the project as follows:

> Currently, East Los Angeles College operates the South Gate Educational Center as a satellite facility to meet the needs of communities substantially south of the main East Los Angeles College Campus in Monterey Park. The current center is located southwest of the project site at the southeast corner of the Firestone Boulevard and Alameda Street (Alameda Corridor) intersection. Due to the rapid student growth and lack of adequate facilities and curriculum offerings, the existing South Gate Educational Center is not sufficient to meet the community's current and future needs. The current center's deficiencies are highlighted by inadequate parking and the need for many students to commute to the main East Los Angeles Campus to supplement their coursework. In 2003, voters approved Bond Measure AA. The funds from this bond will provide $50 million for the purchase of a new site and for the construction that will meet the continued demand for greater educational access and opportunities for the communities currently served by the South Gate Educational Center. In addition, funds from a recently passed bond measure may also assist in funding the site.
>
> The proposed project would provide a full-service college curriculum including transfer and vocational curriculum, degree programs, certificate programs, and skill set certificates for a maximum student enrollment of 12,000. The proposed project would adaptively re-use Buildings 1 and 3, as well as develop surface parking and a parking structure. A total of approximately 418,900 gross square feet within Buildings 1 and 3 would accommodate the required administrative, academic, vocational, and other support facilities. Building 2, the LAUSD-occupied building, would not be used for the college purposes and would continue to be used by LAUSD in its current condition. Building 4 would be demolished in the course of the proposed project in order to accommodate the space needs of the proposed parking structure and a universal playing field that would be located adjacent to and west of the parking structure. No new development or college uses are proposed on the western part of the project site, and this part of the project site would continue to be used as a warehouse/distribution facility (Notice of Preparation of a Draft Environmental Impact Report, August 6, 2009).

In compliance with the above-stated goals and plans, SWCA was contracted to provide cultural resources services in support of the project Environmental Impact Report (EIR) and conduct cultural resources studies for the proposed project in accordance with CEQA.

Figure 1. Project Location, Map 1



AREA OF POTENTIAL EFFECTS

The proposed project Area of Potential Effects (APE) was delineated to ensure identification of significant historic and architectural resources that may be directly or indirectly affected by the proposed project and are listed in or eligible for inclusion in the California Register. The proposed direct or archaeological APE is the proposed project right-of-way and areas of direct ground disturbance, which includes areas for staging and temporary building activities. The direct APE is limited to areas where project-related construction activities would, or may, result in ground disturbance. Ground disturbances are not expected to exceed 5 to 10 feet below the existing ground surface.

The proposed indirect or built environment APE includes the entire parcel, bounded by county assessor parcel lot lines, from which any partial or full acquisition or other effects, including visual or audible effects, are expected to result from construction or implementation of the proposed project. As the proposed project is expected to be begin construction within the next five years, identification efforts were focused on parcels containing buildings and improvements constructed in or before 1964 (2009 − 45 years = 1964). Those resources were evaluated for National and California Register eligibility as part of the project identification phase; all previously identified historic properties and historical resources will also be noted. The APE consists of Los Angeles County Office of the Assessor parcels. Those parcels are listed in Table 1 below. See Figure 2 on the next page for the boundaries of APE. The APE is located within unsectioned portions of U.S. Geological Survey (USGS) 7.5-minute South Gate quadrangle.

Table 1. Parcels in APE

Assessor's Parcel No.	Address	APE Map Sheet	Year Built
6204-034-003	2525 Firestone Boulevard	1	1928-1951
6204-034-002	2323 Firestone Boulevard	1	1941

Figure 2. Project APE Map

CRITERIA FOR DETERMINING SIGNIFICANCE

This study was prepared to comply with requirements of the CEQA and the CEQA Guidelines (California 2005) as they apply to cultural resources. A discussion of National Register criteria is included in this report, although the project is not an undertaking as defined in Section 106. Properties that are listed in or determined eligible for listing in the National Register are automatically listed in the California Register of Historical Resources.

NATIONAL REGISTER OF HISTORIC PLACES

The National Register is the United States' official list of districts, sites, buildings, structures, and objects worthy of preservation. Currently, the National Register includes approximately 80,000 listings, including icons of American architecture, engineering, culture, and history. According to Section 106, a "historic property" is defined as:

> Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 *Code of Federal Regulations* (*CFR*) Part 800 Protection of Historic Properties, Section 800.16 Definitions l 1).

Overseen by the National Park Service (NPS), under the Department of the Interior, the National Register was authorized under the NHPA, as amended. Its listings encompass all National Historic Landmarks as well as historic areas administered by NPS.

National Register guidelines for evaluation of significance were developed to be flexible and to recognize accomplishments of all who have made significant contributions to the nation's history and heritage. Its criteria were designed to guide state and local governments, federal agencies, and others in evaluating potential entries in the National Register. For a property to be listed or determined eligible for listing, it must be demonstrated as possessing integrity and meeting at least one of the following criteria. It must be demonstrated that:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:
>
> A. Associated with events that have made a significant contribution to the broad patterns of our history; or
>
> B. Associated with the lives of persons significant in our past; or
>
> C. Embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> D. Has yielded, or may be likely to yield, information important in prehistory or history.

Integrity is defined in National Register guidance, *How to Apply the National Register Criteria,* as "the ability of a property to convey its significance. To be listed in the National Register…a property must not only be shown to be significant under the National Register criteria, but it also must have integrity" (NPS 1990). The seven aspects of integrity are location, design, setting, materials, workmanship, feeling, and association.

The National Register guidance asserts that properties be at least 50 years old to be considered for eligibility. Properties completed less than 50 years before they are evaluated must be "exceptionally important" (Criteria Consideration G) to be considered eligible for listing.

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

Under California PRC Section 5024.1, the California Register was established to serve as an authoritative guide to the state's significant historical and archaeological resources. Historical resources are defined in PRC Section 21084.1 as:

> a resource listed in, or determined eligible for listing in, the California Register of Historical Resources. Historical resources included in a local register of historical resources..., or deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1, [is] … presumed to be historically or culturally significant for purposes of this section, unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant.

Historical resources include archaeological resources; PRC Section 21083.2 applies to other "unique" archaeological resources as well.

In order for a property to be considered eligible for listing in the California Register, it must be found by the State Historical Resources Commission to be significant under at least one of the following four criteria.

If the resource:

1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2) Is associated with the lives of persons important in our past.
3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual or possesses high artistic values.
4) Has yielded, or may be likely to yield, information important in prehistory or history.

In addition to possessing one of the above-listed significance characteristics, to be eligible for listing in the California Register, resources must retain "substantial" integrity to their period of significance. California Office of Historic Preservation Technical Assistance Series No. 3, California Register guidance on the subject asserts "Simply, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance" ("What is the California Register?" September 2002). As set forth in the National Park Service–prepared "How to Apply the National Register [of Historic Places] Criteria for Evaluation," the seven aspects or qualities that, in various combinations, define integrity are: location, design, setting, materials, workmanship, feeling, and association. To retain its historic integrity, a property must possess several, and usually most, of these aspects. Properties judged not to retain requisite integrity were not evaluated for historic significance.

Individual properties that may be affected by a proposed project can be part of previously identified or unidentified historic districts. "What is the California Register?" provides the following definition of California Register–eligible historic districts:

> Historic Districts are a concentration of historic buildings, structures, objects, or sites within precise boundaries that share a common historical, cultural or architectural background. Individual resources within an historic district may lack individual significance but be considered a contributor to the significance of the historic district.

The California Register also includes properties that:

> Have been formally *determined eligible for listing in*, or are *listed in* the National Register; (emphasis added)
>
> Are registered as State Historical Landmark No. 770 and all consecutively numbered landmarks above Number 770;
>
> Are points of historical interest that have been reviewed and recommended to the State Historical Resources Commission for listing; and
>
> Are city- and county-designated landmarks or districts (if criteria for designation are determined by the California Office of Historic Preservation to be consistent with California Register criteria).

With regard to surveys, or evaluations of multiple properties conducted simultaneously to establish historic significance, PRC Section 5024.1(g) states:

> A resource identified as significant in an historical resource survey may be listed in the California Register if the survey meets all of the following criteria:
>
> 1) The survey has been or will be included in the State Historical Resources Inventory.
> 2) The survey and the survey documentation were prepared in accordance with [OHP]… procedures and requirements.
> 3) The resource is evaluated and determined by the office to have a significance rating of category 1-5 on DPR [Department of Parks and Recreation] form 523.
> 4) If the survey is five or more years old at the time of its nomination for inclusion in the California Register, the survey is updated to identify historical resources which have become eligible or ineligible due to changed circumstances or further documentation and those which have been demolished or altered in a manner that substantially diminishes the significance of the resource.

CEQA equates a "substantial adverse change" in the significance of a historical resource with a significant effect on the environment (PRC Section 21084.1). Thresholds of substantial adverse change are established in PRC Section 5020.1 as demolition, destruction, relocation, or "alteration activities that would impair the significance of the historic resource." Material impairment occurs when a project results in demolition, or materially alters in an adverse manner, the physical characteristics that convey a property's historic significance, or is the reason for that property's inclusion in an official register of historic resources (*PRC* §15064.5(b)(2.)).

If a proposed project could be expected to cause substantial adverse change to a historical resource, environmental clearance for the project would require the evaluation of alternatives or implementation of mitigation measures to reduce or avoid impacts. If a project is expected to result in an effect on historical resources, CEQA Guidelines require analysis of a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project and avoid or substantially lessen any significant effects on the historical resource.

A proposed project that may affect historical resources is submitted to the SHPO for review and comment prior to project approval by the lead agency, and before any project-related clearance, demolition, or construction activities commence.

CALIFORNIA POINTS OF HISTORICAL INTEREST

California Points of Historical Interest include "sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value" (Office of Historic Preservation 2008). Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the California Register. To be designated, a property must be demonstrated to meet at least one of the following criteria:

1) The first, last, only, or most significant of its type within the local geographic region (City or County).
2) Associated with an individual or group having a profound influence on the history of the local area.
3) A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best-surviving work in the local region of a pioneer architect, designer, or master builder.

California Historical Landmarks

Designated California Historical Landmarks are numbered sequentially as they are listed by the State Historical Resources Commission. California Historical Landmarks numbered 770 and above are automatically listed in the California Register. According to PRC Section 5031(a), to be eligible for California Historical Landmark designation, a property must be of statewide historical importance and must demonstrate its statewide significance by meeting one of the following three requirements:

1) *The property is the first, last, only, or most significant historical property of its type in the region.* The regions are Southern California, Central California, and Northern California. If a property has lost its historic appearance (integrity), it may still be listed as a site.
2) *The property is associated with an individual or group having a profound influence on the history of California.* The primary emphasis should be the place or places of achievement of an individual. Birthplace, death place, or place of interment shall not be a consideration unless something of historical importance is connected with the person's birth or death. If a property has lost its historic appearance (integrity), it may still be listed as a site.

3) *The property is a prototype of, or an outstanding example of, a period, style, architectural movement, or construction, or…it is one of the more notable works, or the best surviving work in a region of a pioneer architect, designer, or master builder.*
4) An architectural landmark must have excellent physical integrity, including integrity of location. An architectural landmark generally will be considered on its original site, particularly if its significance is basically derived from its design relationship to its site.

Note: Only preeminent examples will be listed for architectural importance. Good representative examples of a style, period, or method of construction are more appropriately nominated to other registration programs.

LOCAL DESIGNATION- SOUTH GATE

The *South Gate Municipal Code* asserts in Chapter 7.68 under "Preservation of Cultural Heritage" that "the recognition, preservation, protection, and use of cultural resources are necessary to the health, property, social and cultural enrichment and general welfare of the residents of the City of South Gate." To further this assertion, the municipal code establishes a landmark designation program. Under this program, a cultural resource may be declared a designated cultural resource if upon application to the city by any interested party; the city council is empowered to designate a culturally significant landmark if it meets one or more of the following criteria:

(a) It possesses a significant character, interest, or value attributable to the development, heritage, or cultural characteristics of the city, the southern California region, the state of California or the United States of America or if it is associated with a person whose life is historically significant; or

(b) It is the site of a historic event with a significant place in history; or

(c) It exemplifies the cultural, political, economical, social, or historical heritage of the community; or

(d) It portrays the environment in an era of history characterized by a distinctive architectural style; or

(e) It embodies those distinguishing characteristics of an architectural type or engineering specimen; or

(f) It is the work of a person or persons whose work has significantly influenced the development of the city or the Southern California region; or

(g) It contains elements of design, detail, materials, or craftsmanship which represent a significant innovation; or

(h) It is a part of or related to a distinctive area that is developed according to a specific historical, cultural, or architectural motif; or

(i) It represents an established and similar visual feature of a neighborhood or community due to its unique location or specific distinguishing characteristics; or

(j) It is, or has been, a valuable information source important to the prehistory or history of the City of South Gate, the Southern California region, the state of California, or the United States of America.

Three City of South Gate properties have been designated as landmarks since the ordinance was adopted: the tile mosaic at the west entrance of the Civic Center Community Building, 8680 California Avenue;

the South Gate Community Center (former library), 8680 California Avenue; and the Glenn T. Seaborg Residence, at 9237 San Antonio Avenue. The tile mosaic and the South Gate Community Center are located approximately 1.3 miles east, and the Seaborg Residence is located approximately 1.6 miles east of the proposed project site (LexisNexis 2009).

ENVIRONMENTAL SETTING

The project area is located in the City of South Gate, California, and is generally bounded by Firestone Boulevard to the north, Long Beach Boulevard to the east, Willow Place to the south, and Santa Fe Avenue to the west. Specifically it is located at the northwestern corner of the intersection of Firestone Boulevard and Santa Fe Avenue on the north side of Firestone Boulevard. The site is divided into two parts: eastern and western. The western part includes the HON Furniture site (16 acres) and consists of three one- and two-story buildings and surface parking, which is currently occupied by a warehouse/distribution facility. The eastern part of the site includes the former Firestone Tire and Rubber plant site (17 acres) and consists of four two- to four-story buildings, three large buildings used for merchandise storage and distribution (Buildings 1, 3, and 4), and one building (Building 2) occupied by the Los Angeles Unified School District (LAUSD) for its continuation school program. The northern and western boundaries of the project site include the UPRR and the adjacent Alameda Corridor. The project area is flat and generally at an elevation of approximately 117 to 119 feet above mean sea level.

The project area is situated in the Los Angeles basin, a sedimentary basin. Rivers that drained the highlands to the north and east transported and deposited huge volumes of coarse-grained sandstone and sandy cobble-boulder conglomerate into the basin (Yerkes et al. 1965). According to geologic mapping by Jennings (1962) and Saucedo et al. (2003), the project area is underlain by younger Quaternary alluvial deposits of Holocene age. Surficial deposits of younger Quaternary alluvium generally consist of unconsolidated gravel, sand, silt, and clay deposited in modern stream channels and fluvial slope wash. Specific to the study area, these fluvial deposits are in part derived from the nearby Los Angeles River. These young sediments overlie “older alluvium” of Pleistocene age at unknown but potentially shallow depths.

The Los Angeles River, the nearest major natural water feature, is an approximately 51-mile-long (82-km) waterway that extends from the west end of the San Fernando Valley southeast to its mouth in Long Beach. It is located approximately three miles the east of the project area. All but 3.1 miles (5 km) of the river is channelized. The Los Angeles River watershed totals approximately 834 square miles (2,135 square km). Its major tributaries include Burbank Western Channel and the Pacoima, Tujunga, and Verdugo Washes in the San Fernando Valley; and the Arroyo Seco, Compton Creek, and Rio Hondo south of the Glendale Narrows. Prior to channelization, the river meandered across the entire Los Angeles Basin and at times emptied into Ballona Creek instead of Long Beach Harbor.

The area surrounding the project is currently dominated by urban or built-up land (Anderson et al. 1976) and consists of areas of intensive use, with much of the land covered by industrial structures and urban development. While this type of land cover may provide habitat for a variety of species, it is not dominated by native vegetation. It is typically dominated by nonnative ornamental species associated with landscaped areas and invasive species in unmaintained disturbed areas. Urban or built-up lands have developed during the American period (1848 to present). Usable natural resources provided by these lands are not associated with Native American groups of the region.

The project area has generally hot, dry summers, with maximum temperatures ranging from 18.3 to 29.4 degrees Celsius (65° to 85° Fahrenheit) and winter lows ranging from 8.9 to 20 degrees Celsius (48° to 68° Fahrenheit) (City Data 2008). The average annual precipitation is 38.1 cm (15 inches) (Schoenherr 1992:316). Vegetation in the general vicinity of the project area today has been completely altered by recent anthropogenic disturbances, including urbanization and changes in hydrologic patterns, and consists primarily of urban or built-up land vegetation communities (Holland 1986) and highly disturbed areas dominated by ruderal nonnative vegetation. Prior to European settlement, natural plant communities in the immediate vicinity of the project area likely consisted of valley grassland, coastal sage scrub, Riversidian alluvial fan sage scrub, coast live oak woodland, riparian forest and scrub, and freshwater marsh. A discussion of these communities and their relevance to prehistoric life is provided below.

CULTURAL SETTING

PREHISTORY

Numerous chronological sequences have been devised to aid in understanding cultural changes within southern California. Building on early studies and focusing on data synthesis, Wallace (1955, 1978) developed a prehistoric chronology for the southern California coastal region that is widely used today and is applicable to near-coastal and many inland areas. Four periods are presented in Wallace's prehistoric sequence: Early Man, Milling Stone, Intermediate, and Late Prehistoric. Wallace's (1955) synthesis initially lacked precision because of a paucity of absolute dates (Moratto 1984:159), but thousands of radiocarbon dates obtained by southern California researchers in the last three decades have helped define the periods' durations (Byrd and Raab 2007:217). Several revisions have been made to Wallace's (1955) synthesis using radiocarbon dates and projectile point assemblages (e.g., Koerper and Drover 1983; Mason and Peterson 1994; Koerper et al. 2002). The summary of prehistoric chronological sequences for southern California coastal and near-coastal areas presented below is a composite of information in Wallace (1955) and Warren (1968) as well as more recent studies, including Koerper and Drover (1983).

HORIZON I – EARLY MAN (CA. 10,000–6,000 B.C.)

When Wallace defined the Horizon I (Early Man) period in the mid-1950s, little evidence of human presence on the southern California coast prior to 6000 B.C. had been noted. Subsequent archaeological work has identified numerous pre-8000 B.C. sites, both on the mainland coast and the Channel Islands (e.g., Erlandson 1991; Johnson et al. 2002; Moratto 1984; Rick et al. 2001:609). The earliest accepted dates for occupation are from two of the northern Channel Islands, located off the coast of Santa Barbara. On San Miguel Island, Daisy Cave establishes the presence of people in this area about 10,000 years ago (Erlandson 1991:105). On Santa Rosa Island, human remains have been dated from the Arlington Springs site to approximately 13,000 years ago (Johnson et al. 2002). Present-day Orange and San Diego counties contain several sites dating to 9,000-10,000 years ago (Byrd and Raab 2007:219; Macko 1998a:41; Mason and Peterson 1994:55–57; Sawyer and Koerper 2006).

Recent data from Horizon I sites indicate that the economy was a diverse mixture of hunting and gathering, with a major emphasis on aquatic resources in many coastal areas (e.g., Jones et al. 2002) and on Pleistocene lake shores in eastern San Diego County (see Moratto 1984:90–92). Although few Clovis-like or Folsom-like fluted points have been found in southern California (e.g., Dillon 2002; Erlandson et al., 1987), it is generally thought that the emphasis on hunting may have been greater during Horizon I than in later periods. Common elements in many sites from this period, for example, include leaf-shaped bifacial projectile points and knives, stemmed or shouldered projectile points, scrapers, engraving tools, and crescents (Wallace 1978:26–27). Subsistence patterns shifted around 6000 B.C., coincident with the gradual desiccation associated with the onset of the Altithermal climatic regime, a warm and dry period that lasted for about 3,000 years. After 6000 B.C., a greater emphasis was placed on plant foods and small animals.

HORIZON II – MILLING STONE (6000–3000 B.C.)

The Milling Stone Horizon of Wallace (1955, 1978) and Encinitas Tradition of Warren (1968) (6000-3000 B.C.) are characterized by subsistence strategies centered on collecting plant foods and small animals. Food procurement activities included hunting small and large terrestrial mammals, sea mammals, and birds; collecting shellfish and other shore species; near-shore fishing with barbs or gorges; the processing of yucca and agave; and the extensive use of seed and plant products (Kowta 1969; Reinman, 1964). The importance of the seed processing is apparent in the dominance of stone grinding implements in contemporary archaeological assemblages; namely, milling stones (metates and slabs) and handstones (manos and mullers). Milling stones occur in large numbers for the first time during this period and are more numerous still near the end of this period. Recent research indicates that Milling Stone Horizon food procurement strategies varied in both time and space, reflecting divergent responses to variable coastal and inland environmental conditions (Byrd and Raab 2007:220).

Milling Stone Horizon sites are common in the southern California coastal region between Santa Barbara and San Diego, and at many inland locations, including the Prado Basin in western Riverside County and the Pauma Valley in northeastern San Diego County (e.g., Herring 1968; Langenwalter and Brock 1985; Sawyer and Brock 1999; Sutton 1993; True 1958). Wallace (1955, 1978) and Warren (1968) relied on several key coastal sites to characterize the Milling Stone period and Encinitas Tradition, respectively. These include the Oak Grove Complex in the Santa Barbara region, Little Sycamore in southwestern Ventura County, Topanga Canyon in the Santa Monica Mountains, and La Jolla in San Diego County. The well-known Irvine site (CA-ORA-64) has occupation levels dating between ca. 6000 and 4000 B.C. (Drover et al. 1983; Macko 1998b).

Stone chopping, scraping, and cutting tools made from locally available raw material are abundant in Milling Stone/Encinitas deposits. Less common are projectile points, which are typically large and leaf-shaped, and bone tools such as awls. Items made from shell, including beads, pendants, and abalone dishes, are generally rare. Evidence of weaving or basketry is present at a few sites. Kowta (1969) attributes the presence of numerous scraper-planes in Milling Stone sites to the preparation of agave or yucca for food or fiber. The mortar and pestle, associated with pounding foods such as acorns, were first used during the Milling Stone Horizon (Wallace 1955, 1978; Warren 1968).

Cogged stones and discoidals are diagnostic Milling Stone period artifacts, and most specimens have been found within sites dating between 4000 and 1000 B.C. (Moratto 1984:149). The cogged stone is a ground stone object with gear-like teeth on its perimeter. Discoidals are similar to cogged stones, differing primarily in their lack of edge modification. Discoidals are found in the archaeological record subsequent to the introduction of the cogged stone. Cogged stones and discoidals are often purposefully buried and are found mainly in sites along the coastal drainages from southern Ventura County southward, with a few specimens inland at Cajon Pass, and heavily in Orange County (Dixon 1968:63; Moratto 1984:149). These artifacts are often interpreted as ritual objects (Eberhart 1961:367; Dixon 1968:64–65), although alternative interpretations (such as gaming stones) have also been put forward (e.g., Moriarty and Broms 1971).

Characteristic mortuary practices of the Milling Stone period or Encinitas Tradition include extended and loosely flexed burials, some with red ochre, and few grave goods such as shell beads and milling stones interred beneath cobble or milling stone cairns. “Killed” milling stones, exhibiting holes, may occur in the cairns. Reburials are common in the Los Angeles County area, with north-oriented flexed burials common in Orange and San Diego counties (Wallace 1955, 1978; Warren 1968).

Koerper and Drover (1983) suggest that Milling Stone period sites represent evidence of migratory hunters and gatherers who used marine resources in the winter and inland resources for the remainder of the year. Subsequent research indicates greater sedentism than previously recognized. Evidence of wattle-and-daub structures and walls has been identified at several sites in the San Joaquin Hills and Newport Coast area (Mason et al. 1991, 1992, 1993; Koerper 1995; Strudwick 2005), while numerous early house pits have been discovered on San Clemente Island (Byrd and Raab 2007:221–222). This architectural evidence and seasonality studies suggest semi-permanent residential base camps that were relocated seasonally (de Barros 1996; Koerper et al. 2002; Mason et al. 1997) or permanent villages from which a part of the population left at certain times of the year to exploit available resources (Cottrell and Del Chario 1981).

HORIZON III – INTERMEDIATE (3000 B.C.–A.D. 500)

Following the Milling Stone Horizon, Wallace's Intermediate Horizon and Warren's Campbell Tradition in Santa Barbara, Ventura, and Los Angles counties date from approximately 3000 B.C. to A.D. 500 and are characterized by a shift toward a hunting and maritime subsistence strategy, along with a wider use of plant foods. The Campbell Tradition (Warren 1968) incorporates David B. Rogers' (1929) Hunting Culture and related expressions along the Santa Barbara coast. In the San Diego region, the Encinitas Tradition (Warren, 1968) and the La Jolla Culture (Moriarty 1966; Rogers 1939, 1945) persist with little change during this time.

The Intermediate Horizon and Campbell Tradition saw a pronounced trend toward greater adaptation to regional or local resources. For example, an increasing variety and abundance of fish, land mammal, and sea mammal remains are found in sites along the California coast during this period. Related chipped stone tools suitable for hunting are more abundant and diversified, and shell fishhooks become part of the toolkit during this period. Larger knives, a variety of flake scrapers, and drill-like implements are common during this period. Projectile points include large side-notched, stemmed, and lanceolate or leaf-shaped forms. Koerper and Drover (1983) consider Gypsum Cave and Elko series points, which have a wide distribution in the Great Basin and Mojave deserts between ca. 2000 B.C. and A.D. 500, to be diagnostic of this period. Bone tools, including awls, were more numerous than in the preceding period, and the use of asphaltum adhesive was common.

Mortars and pestles became more common during this period, gradually replacing manos and metates as the dominant milling equipment. Hopper mortars and stone bowls, including steatite vessels, appeared in the toolkit at this time as well. This shift appears to correlate with the diversification in subsistence resources. Many archaeologists believe this change in milling stones signals a shift away from the processing and consuming of hard seed resources to the increasing importance of the acorn (e.g., Glassow et al., 1988; True, 1993). It has been argued that mortars and pestles may have been used initially to process roots (e.g., tubers, bulbs, and corms associated with marshland plants), with acorn processing beginning at a later point in prehistory (Glassow 1997:86) and continuing to European contact.

Characteristic mortuary practices during the Intermediate Horizon and Campbell Tradition included fully flexed burials, placed face down or face up, and oriented toward the north or west (Warren 1968:2-3). Red ochre was common and abalone shell dishes infrequent. Interments sometimes occurred beneath cairns or broken artifacts. Shell, bone, and stone ornaments, including charmstones, were more common than in the preceding Encinitas Tradition. Some later sites include *Olivella* spp. shell and steatite beads, mortars with flat bases and flaring sides, and a few small points. The broad distribution of steatite from the Channel Islands and obsidian from distant inland regions, among other items, attest to the growth of trade, particularly during the later part of this period. Recently, Howard and Raab have argued that the distribution of *Olivella* grooved rectangle (OGR) beads marks "a discrete sphere of trade and interaction between the Mojave Desert and the southern Channel Islands" (Byrd and Raab 2007:221).

HORIZON IV – LATE PREHISTORIC (A.D. 500–HISTORIC CONTACT)

The Late Prehistoric Horizon (Wallace 1955, 1978), which lasted from the end of the Intermediate (ca. A.D. 500) until European contact witnessed an increase in the use of plant food resources in addition to an increase in land and sea mammal hunting, A concomitant increase in the diversity and complexity of material culture during the Late Prehistoric is demonstrated by more classes of artifacts. The recovery of a greater number of small, finely chipped projectile points, usually stemless with convex or concave bases, suggests an increased use of the bow and arrow rather than the atlatl (spear thrower) and dart for hunting. Other items include steatite cooking vessels and containers, the increased presence of smaller bone and shell circular fishhooks, perforated stones, arrow shaft straighteners made of steatite, a variety of bone tools, and personal ornaments made from shell, bone, and stone. This horizon features an increased use of asphalt for waterproofing and as an adhesive.

Many Late Prehistoric sites contain beautiful and complex objects of utility, art, and decoration. Ornaments include drilled whole venus clam (*Chione* spp.) and drilled abalone (*Haliotis* spp.). Steatite effigies become more common, with scallop (*Pecten* spp. and *Argopecten* spp.) shell rattles common in middens. Mortuary customs are elaborate and include cremation and interment with abundant grave goods. By A.D. 1000, fired clay smoking pipes and ceramic vessels began to appear at some sites (Drover 1971, 1975; Meighan 1954; Warren and True 1961). The scarcity of pottery in coastal and near-coastal sites implies ceramic technology was not well developed in that area or that ceramics were obtained by trade with neighboring groups to the south and east. The lack of widespread pottery manufacture is usually attributed to the high quality of tightly woven and watertight basketry that functioned in the same capacity as ceramic vessels.

This period witnessed an increase in population size accompanied by the advent of larger, more permanent villages (Wallace 1955:223). Large populations and, in places, high population densities are characteristic, with some coastal and near-coastal settlements containing as many as 1,500 people. Many of the larger settlements were permanent villages in which people resided year-round. The populations of these villages may have also increased seasonally.

ETHNOGRAPHIC OVERVIEW

The project area is located in the heart of Gabrielino/Tongva territory (Bean and Smith 1978:538; Kroeber 1925: Plate 57). Surrounding native groups included the Chumash and Tatataviam to the north, the Serrano to the East, and the Luiseño and Juaneño to the south. Interaction between the Gabrielino and many of their neighbors through intermarriage and trade has been documented.

Gabrielino/Tongva

The name Gabrielino denotes those people who were administered by the Spanish from Mission San Gabriel, which included people from the Gabrielino area proper as well as other social groups (Bean and Smith, 1978:538; Kroeber, 1925: Plate 57). Therefore, in the post-Contact period, the name does not necessarily identify a specific ethnic or tribal group. The names by which Native Americans in southern California identified themselves have, for the most part, been lost. Many present-day Gabrielino identify themselves as descendants of the indigenous people living across the plains of the Los Angeles Basin and refer to themselves as the Tongva. This term is used in the remainder of this section to refer to the pre-Contact inhabitants of the Los Angeles Basin and their descendants.

Tongva lands encompassed the greater Los Angeles Basin and three Channel Islands, San Clemente, San Nicolas, and Santa Catalina. Their mainland territory was bounded on the north by the Chumash at Topanga Creek, the Serrano at the San Gabriel Mountains in the east, and the Juaneño on the south at Aliso Creek (Bean and Smith 1978:538; Kroeber 1925:636).

The Tongva language, as well as that of the neighboring Juaneño, Luiseño, Tatataviam, and Serrano, belongs to Takic branch of the Uto-Aztecan language family, which can be traced to the Great Basin area (Mithun 2004:539, 543–544). This language family's origin differs substantially from that of the Chumash to the north, who speak a Chumashan language, and the Ipai and Tipai/Kumeyaay/Diegueño further south. The language of the Ipai and Tipai/Kumeyaay/Diegueño is derived from the California-

Delta branch of the Yuman-Cochimi language family, which originated in the American Southwest (Mithun 2004:577). The Chumash language is unlike both the Yuman-Cochimi and Uto-Aztecan families, and may represent a separate lineage (Mithun 2004:390). The Tongva language has two main dialects, Eastern and Western; the Western included much of the coast and the Channel Island population (King 2004). Lands of the Western group encompassed much of the western Los Angeles Basin and San Fernando Valley, northward along the coast to the Palos Verdes Peninsula (McCawley 1996:47).

Tongva society was organized along patrilineal, non-localized clans, a characteristic Takic pattern. Clans consisted of several lineages, each with their own ceremonial leader. The chief, or *tómyaar*, always came from the primary lineage of the clan/village. One or two clans generally made up the population of a village. Although the Tongva did not have a distinctly stratified society, the two general classes of individuals were elites and commoners. The elites consisted of primary lineage members, other lineage leaders (who maintained a separate ceremonial language), the wealthy, and the elite families of the various villages, who commonly married among themselves. The commoner class contained those from "fairly well-to-do and long-established lineages" (Bean and Smith 1978:543). A third, lower class consisted of slaves taken in war and individuals, unrelated to the inhabitants, who drifted into the village.

The Tongva established large, permanent villages in the fertile lowlands along rivers and streams and in sheltered areas along the coast, stretching from the foothills of the San Gabriel Mountains to the Pacific Ocean. A total tribal population has been estimated at 5,000 (Bean and Smith 1978:540), but recent ethnohistoric work suggests that 10,000 seems more likely (O'Neil 2002). Several Tongva villages appear to have served as trade centers partially because of their centralized geographic position in relation to the Southern Channel Islands and to other tribes. These villages maintained particularly large populations and hosted annual trade fairs that would bring their population to 1,000 or more for the duration of the event (McCawley 1996:113–114).

Houses constructed by the Tongva were large, circular, domed structures made of willow poles thatched with tule that could hold up to 50 people (Bean and Smith, 1978). Other structures served as sweathouses, menstrual huts, ceremonial enclosures, and probably communal granaries. Cleared fields for races and games, such as lacrosse and pole throwing, were created adjacent to Tongva villages (McCawley 1996:27).

The Tongva subsistence economy was based on gathering and hunting. The surrounding environment was rich and varied, and the tribe exploited mountains, foothills, valleys, and deserts as well as riparian, estuarine, and open and rocky coastal eco-niches. As for most native Californians, acorns were the staple food (an established industry by the time of the early Intermediate period). Acorns were supplemented by the roots, leaves, seeds, and fruits of a wide variety of flora (e.g., islay, cactus, yucca, sages, and agave). Fresh- and saltwater fish, shellfish, birds, reptiles, and insects, as well as large and small mammals, were also consumed (Bean and Smith 1978:546; Kroeber 1925:631–632; McCawley 1996:119–123, 128–131).

A wide variety of tools and implements was employed by the Tongva to gather and collect food resources. These included the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks. Many plant foods were collected with woven seed beaters, several forms of burden baskets, carrying nets, and sharpened digging sticks, sometimes with stone weights fitted onto them. Groups residing near the ocean used oceangoing plank canoes (known as a Ti'At) and tule balsa canoes for fishing, travel, and trade between the mainland and the Channel Islands. The oceangoing canoes were capable of holding 6 to 14 people and were also used for travel and trade between the mainland and the Channel Islands. The tule balsa canoes were used for near-shore fishing (Blackburn 1963; McCawley 1996:117–127).

Tongva people processed food with a variety of tools, including portable and bedrock mortars, pestles, basket hopper mortars, manos and metates, hammerstones and anvils, woven strainers and winnowers, leaching baskets and bowls, woven parching trays, knives, bone saws, and wooden drying racks. Food was consumed from a number of woven and carved wood vessels. The ground meal and unprocessed hard seeds were stored in large, finely woven baskets, and the unprocessed acorns were stored in large granaries woven of willow branches and raised off the ground on platforms. Santa Catalina Island steatite was used to make comals, ollas, and cooking vessels that would not crack after repeated firings. In addition to cooking vessels, steatite was used to make effigies, ornaments, and arrow straighteners (Blackburn 1963; Kroeber 1925:629; McCawley 1996:129–138).

The Tongva participated in an extensive exchange network, trading coastal goods for inland resources. They exported Santa Catalina Island steatite products, roots, seal and otter skins, fish and shellfish, red ochre, and lead ore to neighboring tribes, as well as people as far away as the Colorado River. In exchange they received ceramic goods, deerskin shirts, obsidian, acorns, and other items. This burgeoning trade was facilitated by the use of craft specialists, a standard medium of exchange (*Olivella* bead currency), and the regular destruction of valuables in ceremonies, which maintained a high demand for these goods (McCawley 1996:112–115).

At the time of Spanish contact, the basis of Tongva religious life was the Chinigchinich cult, centered on the last of a series of heroic mythological figures. Chinigchinich gave instruction on laws and institutions, and also taught the people how to dance, the primary religious act for this society. He later withdrew into heaven, where he rewarded the faithful and punished those who disobeyed his laws (Kroeber 1925:637–638). The Chinigchinich religious movement seems to have been relatively new when the Spanish arrived. It was spreading south into the southern Takic groups even as Christian missions were being built and may represent a mixture of native and Christian belief and practices (McCawley 1996:143–144).

Deceased Tongva were either buried or cremated, with inhumation more common on the Channel Islands and the neighboring mainland coast and cremation predominant on the remainder of the coast and in the interior (Harrington 1942; McCawley 1996:157). Cremation ashes have been found in archaeological contexts buried within stone bowls and in shell dishes (Ashby and Winterbourne 1966:27), as well as scattered among broken ground stone implements (Cleland et al. 2007). Archaeological data such as this correspond with ethnographic descriptions of an elaborate mourning ceremony that included a wide variety of offerings, including seeds, stone grinding tools, otter skins, baskets, wood tools, shell beads, bone and shell ornaments, and projectile points and knives. Offerings varied with the sex and status of the deceased (Dakin, 1978:234–235; Johnston, 1962:52–54; McCawley, 1996:155–165). At the behest of the Spanish missionaries, cremation essentially ceased during the post-Contact period (McCawley 1996:157).

Native American Communities Near South Gate

Ethnohistoric data indicate that the Gabrielino ethnographic village of *Yaanga* (Yang-na, Yabit, or other spellings) was located in or near the original Pueblo of Los Angeles, about seven miles north of the project area. In 1852, Hugo Reid indicated that *Yang-na* and Los Angeles were one and the same (Dakin, 1978:220). Gabrielino informant José Zalvidea told ethnographer J. P. Harrington that *Yaanga* "is the old name of the site of the Los Angeles plaza" and the name means "it is alkali, like the earth is salty" (McCawley, 1996:57). Alternate names associated with the community include *Iyakha* (meaning "poison oak" in Luiseño) and *Wenot* (meaning "river" in Gabrielino). *Yaanga* was abandoned prior to 1836 but was succeeded by a series of Native American settlements in the same area. The community of *Geveronga*, which contributed 31 neophytes to the San Gabriel Mission between 1788 and 1809, may have been located nearby (McCawley, 1996:57).

The precise location of Contact-era (late seventeenth century) Native American communities within downtown Los Angeles, including *Yaanga, Geveronga*, and related settlements, is unclear. Historical records place *Yaanga* in the vicinity of the pueblo plaza, although historians and archaeologists have presented multiple possible village locations within this general area (Applied Earthworks, 1999:153). The archaeological evidence for these settlements is not clearcut. Early Spanish period Native American deposits have been identified in several locations, the most significant being the cemetery next to what is now Union Station. It is unclear whether this cemetery was adjacent to, affiliated with, or precisely contemporary with *Yaanga* (Applied Earthworks, 1999:154–159). The preponderance of the available evidence indicates that early historic Native American communities in the area were situated near the Los Angeles River, which is currently located approximately three miles east of the project.

The village of *Chokiishnga* is believed to have been located near the current fork of the Los Angeles and Rio Hondo rivers, approximately three miles southeast of the project area. Its exact location is unknown. The village of *Huutnga* was located near *Chokiishnga*, but its exact location is also not known (McCawley 1996:58). These are the closest known ethnohistoric villages to the project area. McCawley (1996: 57) states that Rancho Tajauta, the land grant just southwest of the land grant of Rancho San Antonio that contains the project area, was named for the Gabrielino/Tongva placename of *Tajáuta* (Kroeber 1925:897). McCawley (1996:58) suggests that the name was a Spanish distortion of *Huutnga*. Harrington mentioned in 1918 that a spring site existed there and that tule used to grow at the spring (McCawley 1996:57).

HISTORIC OVERVIEW

Post-Contact history for the state of California is divided into three periods: the Spanish, Mexican, and American periods, each of which is described below.

Spanish Period (1769–1822)

The first Europeans to observe what became southern California were members of the A.D. 1542 expedition of Juan Rodriguez Cabrillo. Cabrillo and other early explorers sailed along the coast and made limited expeditions into Alta (upper) California between 1529 and 1769. Spanish, Russian, and British explorers briefly visited Alta California during this nearly 250-year span. Eventual Spanish settlement of California in the spring of 1769 marked the devastating disruption of the indigenous cultures.

Gaspar de Portolá established the first Spanish settlement in Alta California at San Diego in 1769, and with Father Junipero Serra founded the first of 21 missions (Mission San Diego de Alcalà) built by the Spanish and Franciscan Order between 1769 and 1823. Portolá continued north, reaching San Francisco Bay on October 31, 1769. Pedro Fages, who sought a site for a mission, and Lt. Colonel Juan Bautista De Anza, a Spanish military officer from Tubac, Arizona, who surveyed an overland trail from the Mexican interior to San Francisco Bay, made later expeditions to Alta California in 1772 and 1774, respectively (Grunsky 1989:2–3). De Anza's diary provides the first recorded Euro-American entry into the region. De Anza later led a group of colonists and their livestock through the San Jacinto Valley and across the Santa Ana Narrows on their way to settle San Francisco Bay between 1775 and 1776. The Juan Bautista de Anza National Historic Trail—approved by Congress in 1990 and mapped by the National Park Service in 1996—and the National Millennial Trail (designated in 1999) both commemorate the trail as a heritage tourism automobile route (California Highways 2004).

The process of converting the local Native American population to Christianity through baptism and relocation to mission grounds began in this region by the Franciscan padres at the San Gabriel Mission, which was established in 1771 (Engelhardt 1927a). The San Fernando Mission was founded 26 years later, its location chosen as a stopping point between the San Gabriel and San Buenaventura missions (Engelhardt 1927b). The majority of the Native Americans from the Los Angeles Basin were persuaded to settle in the vicinity of the two missions. These included the Eastern Gabrielino of the plains as far south as the Santa Ana River and west to the Los Angeles River. The padres also proselytized to the Serrano of the San Gabriel and San Bernardino Mountains, as well as the Vanyume Serrano of the Mojave Desert, many of the western Cahuilla in the Coachella and San Jacinto valleys, some Luiseño of the San Jacinto Valley, and Western Gabrielino of the plains west of the Los Angeles River, the San Fernando Valley and the southern Channel Islands. The missions were charged with administering to the Indians within their areas. Although mission life gave the Indians skills needed to survive in their rapidly changing world, the close quarters and regular contact with Europeans transmitted diseases for which they had no immunity, decimating their population (McCawley 1996).

Mexican Period (1822–1848)

After the end of the Mexican Revolution against the Spanish crown (1810–1821), all Spanish holdings in North America (including both Alta and Baja California) became part of the new Mexican republic. Word of this change did not reach Alta California until 1822. An era of extensive land grants began with the onset of the Mexican Period. Most of the land grants to Mexican citizens in California (*Californios*) were in the interior and were granted in order to increase the population in areas far from the more settled coastal areas where the Spanish concentrated their settlements. The Mexican Period is also marked by exploration by American fur trappers west of the Sierra Nevada Mountains.

American Period (1848–Present)

The Mexican-American War ended with the signing of the Treaty of Guadalupe Hidalgo in 1848, making California a territory of the United States. The discovery of gold in 1848 at Sutter's Mill near Sacramento and the resulting Gold Rush era greatly influenced the history of the state and the nation. The tens of thousands of people who rushed to the gold fields had a devastating effect on the lives of indigenous Californians, with the introduction and concentration of diseases, the loss of land and territory (including traditional hunting and gathering locales), violence, malnutrition, and starvation. Thousands of settlers and immigrants continued to pour into the state, particularly after the completion of the transcontinental railroad in 1869.

One year after gold was discovered, nearly 90,000 people journeyed to the California gold fields. A portion of Captain John Sutter's Mexican land grant, known as New Helvetia, became the bustling Gold Rush boomtown of Sacramento. California became the 31st state in 1850, largely as a result of the Gold Rush. By 1853, the population of the state exceeded 300,000; Sacramento was named the state capital in 1854.

Greater Los Angeles

Settlement of the Los Angeles region continued in the early American Period. The County of Los Angeles was established on February 18, 1850, one of 27 counties established in the months prior to California acquiring official statehood in the U.S. (County of Los Angeles n.d.). Many of the ranchos in the county were sold or otherwise acquired by Americans, and most were subdivided into agricultural parcels or towns. Nonetheless, ranching retained its importance; by the late 1860s, Los Angeles was one of the top dairy production centers in the country (Rolle 2003). By 1876, Los Angeles County reportedly had a population of 30,000 persons (Dumke 1944).

On April 4, 1850, only two years after the Mexican-American War and five months prior to California receiving statehood, the City of Los Angeles was formally incorporated. Los Angeles maintained its role as a regional business center in the early American Period, and the transition of many former rancho lands to agriculture, as well as the development of citriculture in the late 1800s, further strengthened this status (Caughey and Caughey 1977). These factors, combined with the expansion of port facilities and railroads throughout the region, contributed to the impact of the real estate boom of the 1880s on the City of Los Angeles (Caughey and Caughey 1977; Dumke 1944). The boom's fiscal impact can be observed through the City's tax assessments: in 1886, Los Angeles was assessed $18,000,000; three years later (1889), the total had more than doubled to $46,000,000 (Dumke 1944). Despite the real estate boom largely occurring in surrounding areas, Los Angeles, as the commercial center, reaped substantial benefits from the explosive growth.

The City of Los Angeles recognized the need for water to sustain the growing population in the late 1800s; Irish immigrant William Mulholland personified the City's efforts for a stable water supply (Dumke 1944; Nadeau 1997). The City purchased large tracts of land in the Owens Valley, and Mulholland planned and directed the construction of the 240-mile aqueduct that brought the valley's water to the city by 1913 (Nadeau 1997).

Los Angeles continued to grow in the twentieth century, in part due to the discovery of oil in the area and its strategic location as a wartime port. The county's mild climate and successful economy continued to draw new residents in the late 1900s, with much of the county transformed from ranches and farms into residential subdivisions surrounding commercial and industrial centers. Hollywood's development into the so-called entertainment capital of the world and southern California's booming aerospace industry were key factors in the county's growth in the late 1900s.

South Gate

The proposed project area is part of what was Rancho San Antonio, a nearly 30,000-acre Spanish land grant made in 1810 to Don Antonio María Lugo (1772–1860). The enormous, original rancho included the land now included in the project site, along with portions of the cities of Bell, Bell Gardens, Commerce, Compton, Cudahy, Huntington Park, Lynwood, Montebello, Monterey Park, South Gate, and the unincorporated communities of East Los Angeles (Kyle 2002:157).

In the last decades of the nineteenth century, much of the southern California landscape was stimulated and transformed by the arrival of railroad. The first railroad in the region, the Los Angeles & San Pedro, was built in 1869, followed by the Southern Pacific Railroad in 1876, both of which linked Los Angeles with the new port and greatly influenced development activities (Dumke 1944). The previously agricultural community changed rapidly as construction was completed on significant industrial buildings, including warehouses and properties such as lumber yards, blacksmiths, foundries, and wagon manufacturers. The advent of industrial development rapidly displaced fields, grazing lands, vineyards, and groves along the new railroad rail rights-of-way (Perry 1995). Population of the area increased exponentially as new residents flocked to the southern California region for a better life, improved climate, and the visual beauty California had to offer. Real estate promoters capitalized on those conditions, and emigration to southern California and particularly Los Angeles continued unabated.

According to the "History of South Gate" under "South Gate Gardens," the development of the area is described (see City of South Gate 2008a):

> As far as the eye could see, Rancho San Antonio was covered with thousands of head of grazing cattle, sheep and horses, large fertile fruit orchards and fields of cauliflower, beets, barley, beans, as well as dairy farms with rich butter and cheese. But change was in the air. It was almost noon on September 23, 1917, when an important part of that change took place—the selling of land that would eventually be the foundation for the beautiful city of South Gate.
>
> "Southgate Gardens—Gateway to the Sea" had been highly advertised from Santa Monica to Santa Ana. Realtor Charles B. Hooper [1880–1966] [California Death Index 2008] had arranged for…buses to pick up people along routes through the various towns. Excursionists travelled [*sic*] in everything from the latest Model 'T' Fords to high-powered Packards. The buses traveled in a procession east from Long Beach Boulevard down a dirt road about a half-mile to the Cudahy Ranch House, located on present day Santa Ana Street. The house was surrounded on three sides by cauliflower fields, as far as

the eye could see. Realtor Hooper sold 268 parcels, mostly in one-half acre lots, in a subdivision with no streets, no sewers, and no water system. Parallel furrows had been plowed 50 feet apart, to indicate streets of the future; amazingly, signs stuck in imaginary intersections bore the same names which many of the city streets carry today. Some $25,000 worth of land was sold on opening day.

By the end of 1918, 125 houses had been constructed. The population was estimated at 500. Shade trees and flowers had been planted along the parkways. The community of Southgate Gardens now extended east from Long Beach Boulevard to Otis and south from Santa Ana to Independence and was still growing. The streets of Post, State and Victoria were designated the "business district" and two large lots were reserved for a school and a church. The inhabitants had already begun to crystallize into an unincorporated town.

The first school, now known as State Street School, was established with 52 pupils, opening September 8, 1919. At that time it was called Southgate Gardens School and consisted of a small frame building located on Madison near Independence. It was later moved to a site at State and Santa Ana streets, where it has been ever since. To this day, according to "Ripley's Believe It or Not," it holds a unique position because of its location between three political jurisdictions. It is located at the junction of [the communities of] Huntington Park, Walnut Park and South Gate.

America's famous aviatrix, Amelia Earhart, learned to fly at Kinner Field, a dirt field located on Century Boulevard at Long Beach Boulevard. She was born in Kansas in 1897 and came to California with her parents in 1921. She attended an air show in Long Beach and was immediately drawn to the idea of flying a plane. She took flying lessons from pioneer aviatrix Anita "Neta" Snook. By 1922, she had acquired her pilot's license. In 1932, Amelia became the first woman to fly solo across the Atlantic Ocean. She was also the first woman to receive the Distinguished Flying Cross, which was awarded to her by the United States Congress. Amelia vanished without a trace in 1937 during an attempt to fly around the world.

In autumn of 1922, a petition for incorporating the town of South Gate was circulated by I. W. Lampman. The petition was signed by more than 50 qualified electors and presented to the Los Angeles County Board of Supervisors. An election was held on January 2, 1923, to determine the will of the people. On January 20, 1923, the Board of Supervisors formally declared the incorporation of the "City of South Gate." The population at that time was 2,500 people.

Commercial Development

In 1883, a large part of Rancho San Antonio was purchased by John S. Slauson. Just after the turn of the twentieth century, his descendants are said to have sold the land for about $500 per acre. In the late 1920s some of that property was sold to Firestone Tire and Rubber Company of California (Federal Writers' Project 1941: 338). After the arrival of Firestone and B.F. Goodrich in 1927, Los Angeles became the second most prolific rubber manufacturing center in the nation, after Akron, Ohio. Automobile and aircraft manufacturing came shortly thereafter, followed by other related plants.

Firestone Tire and Rubber Company was established by Harvey S. Firestone in 1900. He was born in Ohio in 1868 to a successful farming family, but after working for a relative's buggy company, became interested in rubber carriage tires. After establishing a tire dealership, he moved to nearby Akron, which had become the center of the American rubber business. The entrepreneur rapidly established Firestone Tire and Rubber Company as an important producer of automobile tires, starting with carriage and bike tires. When Ford started manufacturing the Model T in 1905, the new company received a large order for automobile tires, which launched the company's name and reputation nationally (Boyer 2001: n.p.).

By the 1920s and 1930s Firestone was a well-known industrialist, transforming

> his company into a vertically integrated corporation that participated in all aspects of tire production and distribution. He developed rubber plantations overseas, textile plants, specialized factories, a full line of tire-oriented products, retail stores, and a worldwide marketing organization. Firestone scorned growth through mergers with competing companies; instead, emphasiz[ing] his own brand-name products, which he promoted relentlessly through advertising and public-relations activities, such as camping trips with Thomas Edison, Henry Ford , and other notables (Boyer 2001: n.p.).

Firestone was president of the company 1902 to 1932 and was chairman form 1932 to 1938. The South Gate branch plant was opened in December 1928 amid much celebration. Los Angeles quickly became the center of the rubber industry, with Goodyear Tire & Rubber Company (1925, Jules E, Weyl, architect, South Los Angles, Samson Tire & Rubber Company/US Tire & Rubber Co/Uniroyal Tire (Morgan Wall & Clements, 1930, Commerce, closed 1978, now Citadel Mall) and Desser Tire & Rubber (1918, Huntington Park, moved to Montebello, 1994, Smith, 2007:15). Mr. Firestone maintained "personal control" and insisted on family management. Like many other Los Angeles area manufacturers attracted by the fact that unions had little presence in the area, Firestone fiercely opposed organized labor. By the mid-1930s though, the Firestone plant in South Gate was organized under United Rubber Workers Local 100. All the major tire-related companies in Los Angeles became unionized concurrently.

Harvey Firestone died in 1938. By the outset of World War II, more than 900 factories existed in South Gate and the two-mile surrounding area (Nicolaides 2002:20). General Motors had opened a local factory in 1936, attracted by inexpensive real estate and the pervasive weak labor force organization (open shops) in the area. Other local factories included Rheem Manufacturing and Purex. As much of southern California grew in the years following the war, speculative development, followed by population in South Gate, increased at a rapid pace. Richard Longstreth described the observable fact in *City Center to Regional Mall*, "In communities such as South Gate… the freestanding house set verdant yard along a quiet street, rather than the tenement or flat became a standard. Realtors promoted the difference strenuously and sometimes with élan" (Longstreth 1997:11).

Firestone Tire and Rubber Company remained under family control until the 1970s. Leading up to that time, it had been one of the largest employers in South Gate. The industry giant eventually unwillingly relinquished its dominance, in part by failing to "respond effectively to new technology" including the radial tire. That weakness was exaggerated by not identifying or meeting the threat of aggressive, global competition. As a corporation, Firestone tried to meet the completion by "accelerating activities that had contributed to its past success" rather than changing their business model (Sull, 1999: 430). Firestone, which had once been the leader in tire and rubber innovation, became an industry dinosaur. Forever in the shadow of Harvey Firestone's tight reign, their weak response was "constrained by… existing strategic frames and values… the company's processes and longstanding relationships with customers and employees" (Sull, 1999: 430). The company was acquired by Japanese titan, Bridgestone in 1980 and the South Gate factory, once the largest employer in local commerce, closed its doors.

Population

In the 1930s, in part because of the Dust Bowl environmental catastrophe, a large number of "Okies" and "Arkies" (the negative nicknames commonly used to describe people from Oklahoma, Arkansas, or neighboring states) moved to the Los Angeles area, including South Gate and the surrounding cities, in the search for employment. This population, characterized in large part as white and working-class, brought racial biases from their home states to California. The Caucasian, blue-collar populace prospered in manufacturing jobs and under government welfare programs in the years following World War II. Their advances led to greater economic gains than their African-American and other ethnic counterparts. The combination of racial prejudices, newfound prosperity, and the proximity of expanding, disadvantaged, African-American neighborhoods caused “heightened anxieties about neighborhood stability” for the white middle classes (Avila 2006:31–32). As was prevalent at the time, South Gate residents fiercely defended segregation boundaries with its neighbors in the 1950s and attempted to keep the nearby expanding African-American, Asian-American, and Latino communities out of the city by exercising deed restrictions.

“White flight” from the area began after racial covenants restricting real estate (*Shelley v. Kraemer*, 334 U.S. 1, (1948)) and school segregation (*Brown v. Board of Education*, 347 U.S. 483 (1954)) were overturned by the United States Supreme Court and eventually enforced. A variety of other factors, including patterns of decline in local manufacturing, rapid growth of new suburbs in the San Gabriel and San Fernando valleys and in Orange County, political unrest in Mexico and South America, and changes in immigration policies, coupled with collapse of the aerospace and defense industries in the 1970s and the later rapid implosion of the Southern California real estate boom of the early 1990s, all resulted in the wholesale departure of nearly all of the Western European population from South Gate and other surrounding communities by the mid-1990s.

The large manufacturers have, for the most part, departed from South Gate: Weiser Lock ceased operations in 1979, Firestone closed in 1980, and General Motors finally laid off all 4,000 of its employees in 1983. Although new manufacturers have taken the place of some of the old companies, South Gate is considered part of Los Angeles’ “Rust Belt,” and most of the newly created jobs’ pay and benefits are not commensurate with the previous positions (Nicolaides 2000: 329). Emblematic of the change, part of the former Firestone Tire & Rubber Company’s vast plant, once ruled by the Congress of Industrial Organizations United Rubber Workers Local 100, was most recently occupied by a non-union furniture manufacturer.

As of 2006, the local population was just over 98,000 persons, of whom about 92 percent were Hispanic (in 2000; United States Census Bureau 2008). The community is now an example of what is called the newly “emergent ‘Latino metropolis’,” a growing trend in Hispanic-focused culture in southwestern cities and towns (Davis 2000). South Gate has grown to be the sixteenth-largest city in Los Angeles County and occupies approximately 7.5 square miles.

According to the City website, there are approximately 24,000 housing units in South Gate. There are nearly 10 parks in the community, occupying more than 65 acres of recreation area. The 96-acre South Gate Park is home to the Municipal Auditorium, Girls' Clubhouse, Sports Center, Senior Citizen Building, a three-par golf course, indoor swimming pool, tennis courts, basketball courts, and baseball fields.

Political scandal rocked South Gate local government in the early twenty-first century, but investigations, voter recalls, and criminal convictions have been completed, closing the book on that era. The city currently has a council-manager form of government; the city council consists of five members, elected “at large” by city voters (with no districts), who serve four-year terms. The offices of mayor and vice mayor are each elected for one-year terms by the city council.

BACKGROUND RESEARCH

CHRIS LITERATURE SEARCH

A cultural resources records search for the project was performed by staff of the California Historical Resources Information System (CHRIS) South Central Coastal Information Center (SCCIC) on August 18, 2009 (Appendix A). In addition to official maps and records, the following sources of information at the SCCIC were consulted as part of the records search:

National Register of Historic Places – Listed Properties (2006, updated to present)
California Register of Historical Resources (2006)
California Inventory of Historical Resources (1976)
California State Historical Landmarks (1996 and updates)
California Points of Historical Interest (1992 and updates)
Office of Historic Preservation Historic Property Directory and Determinations of Eligibility (2009)

The records search focused on obtaining information on private lands located within the APE and a 0.5-mile search radius outside the APE. The results of the records search conducted at the California Historical Resources Information System (CHRIS), located at California State University, Fullerton, indicated that the project area had not been previously surveyed for cultural resources.

Previous Studies in 0.5-Mile Radius of APE

The SCCIC records search identified 41 previously conducted cultural resources studies within a 0.5-mile radius of the proposed project. All of these studies are listed in Table 2. Two of these studies cover areas adjacent to the APE. The remaining studies are outside of the APE but within the 0.5-mile radius.

Table 2. Prior Cultural Resources Studies in a 0.5-Mile Radius

SCCIC Report No.	Author(s)	Year	Study	Appears on All Topographical Quadrangles Listed	Proximity to the APE
LA-00155	Stickel, Gary E.	1988	A Cultural Resources Assessment of the Bikeway Greenway Project, City of South Gate	South Gate	outside
LA-02577	Wlodarski, Robert J.	1992	Results of a Records Search Phase Conducted for the Proposed Alameda Corridor Project, Los Angeles County, California	Long Beach, South Gate	outside
LA-02644	Wlodarski, Robert J.	1992	The Results of a Phase 1 Archaeological Study for the Proposed Alameda Transportation Corridor Project, Los Angeles County, California	Los Angeles, South Gate	outside
LA-02950	Peak and Associates, Inc.	1992	Consolidated Report: Cultural Resource Studies for the Proposed Pacifica Pipeline Project	South Gate	outside
LA-03036	Maki, Mary K.	1994	A Phase 1 Cultural Resources Survey of .66 Acre at 2004 E. 88th Street, Los Angeles County, California	South Gate	outside

SCCIC Report No.	Author(s)	Year	Study	Appears on All Topographical Quadrangles Listed	Proximity to the APE
LA-03593	Wlodarski, Robert J.	1997	Phase 1 Archaeological Study: Bandera Senior Housing Project City of Watts, County of Los Angeles	South Gate	outside
LA-03980	McLean, Deborah LSA Associates, Inc.	1998	Archaeological Assessment for Pacific Bell Mobile Services Telecommunications Facility La156-03, 3170 Firestone Boulevard, City of South Gate, County of Los Angeles, California	South Gate	outside
LA-04470	Unknown	1999	Negative Phase 1 Archaeological Survey and Impact Assessment of .65 Acre for the Latchford Glass Phase Ii Project Los Angeles County, California	South Gate	outside
LA-04625	Starzak, Richard Myra L. Frank & Associates	1994	Historic Property Survey Report for the Proposed Alameda Corridor from the Ports of Long Beach and Los Angeles to Downtown Los Angeles in Los Angeles County, California	Long Beach, Los Angeles and South Gate	outside
LA-04737	Maki, Mary K.	1999	Negative Phase 1 Archaeological Survey and Impact Assessment of .9 Acre for the 7300 Roseberry Avenue Housing Project Cdc Project No. Jj7101, Hmd001, G89101 Florence, Los Angeles County, California	South Gate	outside
LA-04834	Ashkar, Shahira	1999	Cultural Resources Inventory Report for Williams Communications, Inc. Proposed Fiber Optic Cable System Installation Project, Los Angeles to Anaheim, Los Angeles and Orange Counties	Anaheim, Hollywood, La Habra, Long Beach, Los Alamitos, Los Angeles, South Gate, Whittier	adjacent
LA-04836	Science Applications International Corporation	2000	Phase 1 Archaeological Survey Along Onshore Portions of the Global West Fiber Optic Cable Project	Hollywood, Inglewood, Los Angeles, South Gate, Venice	outside
LA-05577	Wells, Helen Fairman	1996	Phase 1 Cultural Resources Investigation of Franklin Delano Roosevelt Park, Los Angeles County, California	South Gate	outside
LA-05685	Duke, Curt	2002	Cultural Resources Assessment Cingular Wireless Facility No. Sm 066-03 Los Angeles County, California	South Gate	outside
LA-05952	Christy, Juliet L.	2002	Phase 1 Archaeological Survey Fire Station No. 65 in Watts Los Angeles, California	South Gate	outside
LA-05956	Mason, Roger D.	2001	Proposed American Tower Corporation Facility: Church Radio Tower (la 825n1) in the City of South Gate, Los Angeles County, California	South Gate	outside
LA-06105	Bonner, Wayne H.	2000	Sprint PCS Facility la40xc869a (the Carnation Site) Located at 103 Long Beach Boulevard, Lynwood in Los Angeles County, California	South Gate	outside
LA-06225	Duke, Curt LSA Associates, Inc.	2002	Cultural Resource Assessment AT&T Wireless Services Facility No. 04252 Los Angeles County, California	South Gate	outside
LA-07060	Pardon, Beth	2002	Results from the Archaeological Records Search for South Gate Sewer Rehabilitation Project, Los Angeles County	South Gate	outside

SCCIC Report No.	Author(s)	Year	Study	Appears on All Topographical Quadrangles Listed	Proximity to the APE
LA-07627	Bonner, Wayne H. Affiliation: Michael Brandman Associates	2004	Records Search Results and Site Visit for Sprint Telecommunications Facility Candidate la60x180c (Mitchell) 7702 Maie Avenue, Los Angeles, Los Angeles County, California	South Gate	outside
LA-07637	Bonner, Wayne H.	2006	Cultural Resources Records Search Results and Site Visit for T-Mobile USA Candidate La03051a (California Body Shop), 9303 South Alameda Street, Los Angeles, Los Angeles County, California	South Gate	outside
LA-07646	Rehberger, Linda H., and Scott Savastio	2004	Archaeological Monitoring Report Fire Station No. 65 in Watts, 1825 East Century Boulevard, Los Angeles, California	South Gate	outside
LA-07664	Thai, Sean	2005	Historic Survey Report and Viewshed Analysis Cultural Resource Assessment for the Truba (California-6346b) Cellular Facility on 2906 Laurel Place, South Gate, Los Angeles County, California	South Gate	outside
LA-07667	Maki, Mary K.	2004	Phase 1 Archaeological Investigation of18.3 Acres for the Florence & Alameda Commercial Center Project Walnut Park, Los Angeles County, California	South Gate	outside
LA-07952	Livingstone, David M., Dennis McDougall, Susan K. Goldberg, and Wendy M. Nettles	2006	Trails to Rails: Transformation of a Landscape: History and Historical Archaeology of the Alameda Corridor, Volume 1	Long Beach, Los Angeles, South Gate	outside
LA-07978	Wlodarski, Robert J.	2006	Records Search and Field Reconnaissance for the Proposed Royal Street Communications Wireless Telecommunications Site La0325b (s bc Switch South Gate	South Gate	outside
LA-08253	McKenna, Jeanette A.	1992	A Phase 1 Cultural Resources Investigation of the Proposed Puente Hills landfill Expansion Project Area, Los Angeles County, California	Baldwin Park, El Monte	outside
LA-08319	Wood, Catherine Jones and Stokes	2007	Archaeological Survey Report for the McCoy Plaza: A Residential Building Project, 9305-9321 Fifth Boulevard, Los Angeles County, California	South Gate	outside
LA-08499	Shaver, Noelle C.S. Jones and Stokes	2007	A Phase 1 Archaeological Study for the South Region High School No. 12, Community of Walnut Park, Unincorporated Los Angeles County, California	South Gate	outside
LA-08852	Bonner, Wayne	2006	Cultural Resources Records Search and Site Visit Results for Royal Street Communications, LLC, Candidate la0331a (s. Alameda), 10127 South Alameda Street, Los Angeles, Los Angeles County, California	South Gate	outside
LA-08853	Bonner, Wayne	2007	Cultural Resources Records Search and Site Visit for T-Mobile Candidate La13082a (Leon Elster), 8145 Beach Street, South Gate, Los Angeles County, California	South Gate	outside

SCCIC Report No.	Author(s)	Year	Study	Appears on All Topographical Quadrangles Listed	Proximity to the APE
LA-09186	Bonner, Wayne	2007	Cultural Resources Records Search and Site Visit for T-Mobile Candidate LA03102D (Brookdale Lot), 2809 Tweedy Boulevard, South Gate, Los Angeles County, California	South Gate	outside
LA-09187	Bonner, Wayne	2007	Cultural Resources Records Search and Site Visit for T-Mobile Candidate LA03049C (Liberty Plaza), 8308 Long Beach Boulevard, South Gate, Los Angeles County, California	South Gate	outside
LA-09190	Bonner, Wayne	2007	Cultural Resources Records Search and Site Visit for T-Mobile Candidate LA03051D (SCE Caldon), near 8866 Juniper Street, Southeast Corner of 88th Street and Juniper Street, Los Angeles, Los Angeles County, California	South Gate	adjacent
LA-09633	Bonner, Wayne	2008	Cultural Resources Records Search and Site Visit Results for T-Mobile USA Candidate LA33391A (Trumbo Property), 7812 State Street, Huntington Park, Los Angeles County, California	South Gate	outside
LA-09640	Maki, Mary K. Conejo Archaeological Consultants	2008	Alameda Seniors Housing Project, Huntington Park	South Gate	outside
LA-09641	Smith, Francesca, and Caprice D. Harper SWCA Environmental Consultants	2008	Cultural Resources Initial Technical Report and Phase 1 Site Investigation Proposed South Region Middle School No. 3 Project, Walnut Park, Los Angeles County, California	South Gate	outside
LA-09642	Smith, Francesca, and Caprice D. Harper SWCA Environmental Consultants	2008	Cultural Resources Intensive Survey Report, Proposed South Region Middle School No. 3 Project, Walnut Park, Los Angeles County, California	South Gate	outside
LA-09643	Smith, Francesca, and Caprice D. Harper SWCA Environmental Consultants	2008	Cultural Resources Initial Technical Report and Phase 1 Site Investigation, Proposed South Region Elementary School No. 9 Project, South Gate, Los Angeles County, California	South Gate	outside
LA-09644	Smith, Francesca, and Caprice D. Harper SWCA Environmental Consultants	2008	Cultural Resources Intensive Survey Report Proposed South Region Elementary School No. 9 Project, South Gate, Los Angeles County, California	South Gate	outside
LA-10029	Mirro, Vanessa A., Dennis McDougall, Sherri Gust, and Carole Denardo	2005	An Investigation of Human Skeletal Remains Volume 2 of Treatment of Historic Properties Discovered During the Alameda Corridor Project	Long Beach, South Gate	outside

Previously Recorded Cultural Resources within 0.5-Mile Radius of APE

The SCCIC records search indicates there are no prehistoric archaeological sites, eight historic archaeological sites, seven buildings and/or historic structures, and no historic isolates within a 0.5-mile radius of the APE. One of the properties is listed in the National Register. All seven of the previously recorded resources are outside of the APE; of these, 1 is adjacent to the APE (Table 3). Discussion of the previously recorded cultural resources follows the table.

Table 3. Previously Recorded Cultural Resources within 0.5-mile to APE, Including National Register–Listed or –Eligible Sites

Primary No.	Trinomial	Resource Description	Quadrangle Name	California Historical Resources Status Code	Recorded by and Year	Proximity to APE
19-002838	CA-LAN-2838	AE-AC-2001H: brick foundation	South Gate	6Z	Applied Earthworks. 2000.	outside
19-002839	CA-LAN-2839	AE-AC-2004H: refuse deposit	South Gate	6Z	Applied Earthworks. 2000.	outside
19-002840	CA-LAN-2840	AE-AC-2006H: brick foundation	South Gate	6Z	Applied Earthworks. 2000.	outside
19-002847	CA-LAN-2847	AE-AC-2016H: brick foundation	South Gate	Not Listed	Applied Earthworks. 2000.	outside
19-002856	CA-LAN-2856	AE-AC-2038H: refuse deposit	South Gate	6Z	Applied Earthworks. 2000.	outside
19-002868	CA-LAN-2868	AE-AC-2031H: railroad ties	South Gate	6Z	Applied Earthworks. 2000.	outside
19-002872	CA-LAN-2872	AE-AC-2035H: wooden storage vault	South Gate	6Z	Applied Earthworks. 2000.	outside
19-100486	--	Fire Station 65-Watts-isolate	South Gate	not listed	A. Hale. 2004.	outside
19-186110/ 30-176630 Supplement	--	Union Pacific Railroad, Hobart Tower	Los Angeles	3S, 3CS	Applied EarthWorks. 2002.	adjacent
19-186742	--	7812 State Street	South Gate	6Z	D. Parker. 2002.	outside
19-188281	--	2782 Firestone Boulevard	South Gate	6Z	SWCA Environmental Consultants. 2008.	outside
19-188282	--	2773-2777 Willow Place bungalow court	South Gate	6Z	SWCA Environmental Consultants. 2008.	outside
19-188398	--	McDonnell's Plantation, 2828 Firestone Boulevard	South Gate	3CS	SWCA Environmental Consultants. 2008.	outside
19-188399	--	7538 Marbrisa Avenue	South Gate	6Z	SWCA Environmental Consultants. 2008.	outside
19-188400	--	Glenn E. Henderson House	South Gate	6Z	SWCA Environmental Consultants. 2008.	outside

Historic Archaeological Sites:

P-19-002838m (AE-AC-2001H): A brick foundation was found approximately 80 feet east of the center of West Alameda Street and 152 feet south of the northeast corner of 8103 West Alameda Street between 2 feet, 10 inches and 2 feet below ground surface in a trench excavation for an MCI utility relocation. It is oriented north to south and constructed from machine-pressed bricks with Portland cement mortar. There were no other associated cultural materials found with the foundation. The resource lacks integrity, as the attached building is no longer present. Based on past survey information obtained through the records search, SWCA assigned California Historical Resources Status Code 6Z for the site.

P-19-002839 (AE-AC-2004H): A historical refuse deposit containing early twentieth century household and light industrial refuse was found in the City of Walnut Park, along the eastern edge of West Alameda Street, to the east of 7401 to 7435 West Alameda Street. The deposit was contaminated with heavy metals and hydrocarbons. All refuse and surrounding sediments were removed by the contractor. Past survey work was completed in 2000. No information was found on the California Historical Resources Status Code. Based on past survey information obtained through the records search, SWCA assigned California Historical Resources Status Code 6Z for the site.

P-19-002840 (AE-AC-2006H): A brick foundation or footing was found in the City of Walnut Park, directly west from 7930 East Alameda Street, approximately 140 feet south of Nadeau Street and approximately 40 feet west of the center of East Alameda Street. All bricks were machine-pressed. The feature is similar to that found at site AE-AC-2001H and was dated to the early 1900s. Given the demolition of the associated building, the site lacks integrity. Past survey work was completed in 2000. Based on past survey information obtained through the records search, SWCA assigned California Historical Resources Status Code 6Z for the site.

P-19-002847 (AE-AC-2016H): A brick foundation was discovered within the City of Walnut Park, approximately 70 feet south of the intersection of short and East Alameda Streets and to the east of South Alameda Street. The foundation is from the Spur’s Florence Station building, which has been demolished. The foundation was composed of machine-pressed red bricks consistent with bricks used during the late nineteenth and early twentieth centuries in the area. The foundation was documented and reburied in-situ. Further research was recommended at the time of the June 2000 survey to confirm or deny eligibility for listing in the California or National Registers. No updated information has been found, and no California Historical Resources Status Code was listed in the 2000 survey.

P-19-002856 (AE-AC-2038H): The site contains four primary refuse deposits that were discovered within the City of Walnut Park, approximately 100 feet south of the intersection of 92nd Avenue and Alameda Street. The deposits contain domestic and commercial artifacts from the early twentieth century. The items found were reported as typical and not significant. Past survey work was completed in 2000. Based on past survey information obtained through the records search, SWCA assigned California Historical Resources Status Code 6Z for the site.

P-19-002868 (AE-AC-2031H): The site contains two railroad-related features, a set of redwood ties and two rough hewn timbers, both running north-south and located within the City of South Gate, approximately 48 feet north of Tweedy Boulevard. Survey evaluation of the features suggests that they date to the turn of the twentieth century. The features were removed during the course of an ACP-related construction. Based on past survey information obtained through the records search, SWCA assigned California Historical Resources Status Code 6Z for the site.

P-19-002872 (AE-AC-2035H): The site contains a circa 1920 wooden storage vault and glass rectifier and is located within the City of Lynwood, between Wisconsin Avenue and Tweedy Boulevard along the east curb of West Alameda Street. The items from the site are thought to be part of a power distribution system for the nearby railroad spur and crossing. The vault was removed during ACP construction after the site was recorded. Past survey work was completed in 2000. Based on past survey information obtained through the records search, SWCA assigned California Historical Resources Status Code 6Z for the site.

P-19-100486 (Fire Station 65-Watts-isolate): The site contains a one-cubic-yard trash pit found 2 feet below the surface that contained bottles consistent with 1920s residential buildings within the vicinity of the project site. Past survey work was completed in 2000. No further information was found on its California Historical Resources Status Code.

Built Environment Resources:

P-19-186110 Supplement (Hobart Tower): The Union Pacific Railroad architectural feature, Hobart Tower, was the last operational signal tower west of Omaha, Nebraska, until 2002. According to past survey findings from 2002, there are currently no plans to relocate or preserve the building or associated equipment. Based on information obtained from past survey documents, SWCA has assigned California Historical Resources Status Codes 3S, 3CS to the subject property. The building is located within the 0.5-mile radius of the project APE.

P-19-186742 (7812 State Street): The subject property is a two-story Spanish Eclectic commercial building that is located in the City of Huntington Park. The property was found for listing in the California or National Registers through survey evaluation (California Historical Resources Status Code 6Z) in 2002. The subject property is located within the 0.5-mile radius of the project APE.

P-19-188281 (Marsal's Café, 2782 Firestone Boulevard): The subject property is a single-story, Streamline Art Moderne/International style commercial building, built in 1946 and located in the City of South Gate. The property was found not eligible for listing in the California or National Registers through survey evaluation (California Historical Resources Status Code 6Z) in 2008 by SWCA. The subject property is located within the 0.5-mile radius of the project APE.

P-19-188282 (K. Hohman bungalow court, 2773-2777 Willow Place bungalow court): The subject property is a Spanish Eclectic/low style vernacular style, single-story, multi-family residential bungalow court complex consisting of six separate units and two small garages at the rear of the property located in the City of South Gate. The property was found not eligible for listing in the California or National Registers through survey evaluation (California Historical Resources Status Code 6Z) in 2008 by SWCA. The subject property is located within the 0.5-mile radius of the project APE.

P-19-188398 (McDonnell's Plantation, 2828 Firestone Boulevard): The subject property is an evolved 1941 commercial building, designed by Wayne McAllister as a drive-in restaurant located in the City of South Gate. The building retains adequate integrity to its original appearance. The building was most recently surveyed in 2008 by SWCA and was found eligible for listing in the California Register (California Historical Resources Status Code 3CS). The subject property is located within the 0.5-mile radius of the project APE.

P-19-188399 (Edna and Henry Williams House, 7538 Marbrisa Avenue): The subject property contains two Colonial Revival-influenced buildings, a residence and garage, and is located within the City of South Gate. The property was found not eligible for listing in the California or National Registers through survey evaluation (California Historical Resources Status Code 6Z) in 2008 by SWCA. The subject property is located within the 0.5-mile radius of the project APE.

P-19-188400 (Glenn E. Henderson House, 7419-7421 Santa Fe Avenue): The subject property contains three Spanish Eclectic style buildings, a main residence (1939), a multi-unit building (1942), and garage, located within the City of South Gate. The property was found not eligible for listing in the California or National Registers through survey evaluation (California Historical Resources Status Code 6Z) in 2008 by SWCA. The subject property is located within the 0.5-mile radius of the project APE.

Historic Maps

Early USGS, Sanborn Fire Insurance Company (Sanborn), and other maps were reviewed for additional information regarding the development of the area in the project APE. SWCA reviewed Sanborn maps that cover the direct APE to assess the archaeological sensitivity of areas of project-related ground disturbance.

Figure 3. Sanborn Maps, Map 3
Firestone Tire and Rubber Company, South Gate Historic District outlined in red. District contributors outlined in blue, pedestrian bridge dashed.
Sanborn Fire Insurance Co., *Map of Los Angeles,* 1906 updated to 1930 and 1951, Volume 16, Sheets 2857, 2858 and 2859.

NATIVE AMERICAN COORDINATION

SWCA Cultural Resources Specialist Sam Murray contacted the California Native American Heritage Commission (NAHC) by letter on August 17, 2009, to request a review of the Sacred Lands File for traditional cultural resources. The reply from the NAHC, dated August 18, 2009, stated that the results of the Sacred Lands File search failed to indicate the presence of Native American cultural resources in the immediate vicinity of the proposed project area. The NAHC reply included a list of seven Native American groups or individuals for Los Angeles County who may have knowledge of cultural resources in the project area. SWCA sent letters describing the proposed project and its related APE, along with location maps, via U.S. mail to these seven entities on August 20, 2009 (Appendix B). The list below contains all of Native American groups and individuals that were contacted for the project:

- Bernie Acuna Gabrielino-Tongva Tribe
- Cindi Alvitre, Ti'At Society
- Ron Andrade, Director of LA City/County Native American Indian Commission
- Robert Dorame, Gabrielino Tongva Indians of California Tribal Council
- Sam Dunlap, Gabrielino Tongva Nation
- Anthony Morales, Gabrieleno/Tongva San Gabriel Band of Mission Indians
- John Tommy Rosas, Tongva Ancestral Territorial Tribal Nation

Only one of the seven responded to the request, John Tommy Rosas of the Tongva Ancestral Territorial Tribal Nation. In the response, received via e-mail on August 20, 2009, he stated concerns regarding toxic materials and cultural resources.

LOCAL HISTORIC GROUP/LOCAL GOVERNMENT COORDINATION

SWCA Cultural Resources Specialist Sam Murray sent letters via U.S. mail to four local government, local historic preservation, and history advocacy groups to request information regarding potential historic resources that may be located within the project APE. Letters describing the proposed project and its related APE, along with location maps, were mailed to the following four groups on August 20, 2009 (Appendix C):

- City of South Gate, Community Development
- Historical Society of Southern California, Patricia Adler-Ingram, Ph.D., Executive Director
- Los Angeles City Historical Society, Ann Shea, President
- Los Angeles Conservancy, Mike Buhler, Director of Advovcacy

No responses have been received.

METHODS

ARCHAEOLOGICAL FIELD SURVEY

SWCA Archaeologist Linda Akyüz conducted an archaeological survey of the project area on September 14, 2009, for the presence of surface archaeological deposits where ground visibility was present and access was possible. She took digital photographs and kept a photo log. These photos include details and general overviews of the project area and depict ground surface visibility and characteristics. All field notes, digital photographs, and records related to this survey are on file at the SWCA South Pasadena, California, office.

Buildings and paved areas cover approximately 99 percent of the project area. The remaining approximately 1 percent of the project area contains unpaved landscaped and irrigated ground surface. Mean ground surface visibility in this landscaped and irrigated ground surface was approximately 10 percent but ranged from 0 to 100 percent.

Ms. Akyüz surveyed all accessible ground surfaces that were not paved or occupied by buildings in one- to two-meter transects. Most of these ground surface areas were less than one meter wide. Lack of access prevented an archaeological survey in the western portion of the project area inside the fence that surrounds the area around Building 5 or E. However, 40 percent of the ground surface inside the fenced area around Building E could be adequately observed through the fence from the public right-of-way along the southern boundary of the project area. This area is elevated from the sidewalk at a level ranging from 0.5 to 1 meter above it, and visibility was good. The distance of the ground surface from the surveyor in this portion of the survey mimicked the characteristics of a 1-meter-transect survey.

BUILT ENVIRONMENT FIELD SURVEY

SWCA architectural historians Sonnier Francisco and Sarah Edwards conducted an intensive-level built environment survey of the APE on September 3, 2009. Each parcel in the direct and indirect APE containing improvements completed in or before 1964 was digitally photographed and researched using data from the Los Angeles County Office of the Assessor. Because construction-year records were not entirely reliable, all properties in the APE were field-checked to verify whether or not their construction may have occurred more than 45 years ago. SWCA reviewed all improvements completed more than 45 years ago in the field and performed subsequent building permit research on properties. Those properties were further studied to establish and research the identities of architects, builders, owners, and tenants as well as events that were known to have taken place in the area, to make professional judgments regarding their historic significance.

RESULTS

ARCHAEOLOGICAL FIELD SURVEY

No archaeological resources were observed during the field survey. Evidence of native soil was not observed during the survey. The project area has been subject to multiple ground disturbances related to the construction of numerous commercial buildings, roadways, water conveyances, and the railroad, along with associated pavement and landscaping. Irrigation and fire prevention water conveyances were observed. Sanborn Fire Insurance Company (1951) maps show underground piping in the project area. The entire unpaved ground surface in between and around buildings and along fences has been disturbed by landscaping and associated irrigation.

Buildings and paved areas cover approximately 99 percent of the project area. The remaining approximately 1 percent of the project area contains unpaved landscaped and irrigated ground surface. Mean ground surface visibility in this landscaped and irrigated ground surface was approximately 10 percent but ranged from 0 to 100 percent. In some areas the unpaved ground was completely covered with lawn grass or mulch; in others, the ground surface was completely visible. The landscaped area along the southern boundary of the western portion of the project area appears to have been elevated above street level through the addition of imported fill soils.

BUILT ENVIRONMENT FIELD SURVEY

The proposed APE consists of approximately 33 acres, contained on two parcels containing multiple buildings that were constructed more than 45 years ago as required under CEQA requirements.

SIGNIFICANCE EVALUATIONS

California DPR series 523 forms were prepared for each building, structure or object completed in or before 1964, to evaluate California Register eligibility. The results of those evaluations, in support of this section, are included in Appendix F. The following table (Table 6) shows all properties in the project APE that contain improvements completed more than 45 years ago, according to Los Angeles County tax assessor records and/or building permits. These properties were evaluated for historical significance and were recorded on DPR 523 forms.

**Table 4. Properties in Project APE Built in or Prior to 1964
Evaluated for National and California Register Eligibility Surveyed by SWCA**

APN	Name and Address	Building No.	Map No.	Year Built	Findings
6204-034-003	Firestone Tire and Rubber Company 2525 Firestone Boulevard	1	A	1928/1929	3CB (eligible for California Register both individually and as a contributor to a California Register-eligible district through a survey evaluation)
6204-034-003	Firestone Tire and Rubber Company 2525 Firestone Boulevard	2	B	1928	3CB (eligible for California Register both individually and as a contributor to a California Register-eligible district through a survey evaluation
6204-034-003	Firestone Tire and Rubber Company 2525 Firestone Boulevard	3	C	1928/1929	3CB (eligible for California Register both individually and as a contributor to a California Register-eligible district through a survey evaluation
6204-034-003	Firestone Tire and Rubber Company 2525 Firestone Boulevard	4	D	1951	3D (eligible for California Register as a contributor to a California Register-eligible district through a survey evaluation)
6204-034-002	Firestone Tire and Rubber Company, HON Furniture 2323 Firestone Boulevard	5	E	1941	3D (eligible for California Register as a contributor to a California Register-eligible district through a survey evaluation)

IMPACT ANALYSIS/CONSIDERATIONS

ARCHAEOLOGICAL RESOURCES

No unique archaeological resources were identified within the project area as a result of the records search, Sacred Lands File Search, or Phase I intensive archaeological survey. Most of the previously recorded archaeological resources are associated with the railroads and were found during archaeological monitoring of construction of the adjacent Alameda Corridor Project. Additional railroad-related archaeological resources are not expected to occur within the project APE. The Phase I archaeological site investigation identified a low sensitivity for unique archaeological resources; therefore, no further archaeological work is recommended for this project.

Subsurface ground disturbance was noted throughout the property. While prehistoric resources may have been present before historic and modern settlement in the area, the project area is approximately three miles west of the modern course of the Los Angeles River and approximately three miles northwest of the nearest known prehistoric village. This location makes the discovery of prehistoric resources under the ground surface unlikely. The distance from water sources and from known rancho buildings makes the discovery of subsurface historic resources that reflect ranching activities unlikely. Moreover, the constant disturbance of the ground surface that has occurred since the building of the railroad makes the discovery of historic artifacts from that period forward unlikely.

Recommendations

The following standard mitigation measures should be incorporated to minimize impacts to unanticipated discovery of belowground cultural resources during construction activities. Implementation of these mitigation measures in the event that unanticipated cultural resources are identified during construction would reduce the level of impacts to less than significant.

CR MM-1 Inadvertent Discoveries

In the event that archaeological resources (artifacts or features) are exposed during ground-disturbing activities, an archaeologist who meets the Secretary of the Interior’s professional qualification standards shall be retained. Construction activities (e.g., grading, grubbing, vegetation clearing) in the immediate vicinity of the discovery shall be halted while the resources are evaluated for significance. Construction activities could continue in other areas. If the discovery proves to be significant, additional work, such as data recovery excavation, may be warranted and would be discussed in consultation with the lead agency.

Prehistoric materials within the APE might include flaked or ground stone tools, tool-making debris, pottery, culturally modified animal bone, fire-affected rock (FAR), or soil darkened by cultural activities (midden). Historic materials might include building or railroad remains, metal, glass, ceramic artifacts, or other debris greater than 45 years old.

CR MM-2 Human Remains

The discovery of human remains is always a possibility during construction activities; State of California Health and Safety Code Section 7050.5 addresses these findings. This code section states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The County Coroner must be notified of the find immediately. If the human remains are determined to be prehistoric, the Coroner will notify the Native American Heritage

Commission, which will determine and notify a Most Likely Descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

BUILT ENVIRONMENT RESOURCES

Recommendations

Within the project APE for the East Los Angeles College Satellite Campus in South Gate, California, there are five California Register-eligible buildings, one eligible ancillary outbuilding, and one eligible historic district. The identified period of significance for the Firestone Tire and Rubber Company, South Gate Historic District is 1928-1954. Five buildings, four ancillary structures, a set of gateposts, and one related feature were each intensively surveyed for this project and have been identified as the Firestone Tire and Rubber Company, South Gate Historic District (District). All resources were recorded on Series 523 Department of Recreation and Parks (DPR) forms.

Of those, all five buildings, the gateposts and only one of the four ancillary structures were found to be contributors; the related feature and three of the ancillary structures do not contribute to the significance of the historic district. The District is eligible for listing in the California Register under Criterion 1 for its association with events that made a significant contribution to the broad patterns of California's history and cultural heritage. Its eligibility is based on its association with the Firestone Tire and Rubber Company, including direct associations with the Harvey S. Firestone family, development of the tire and rubber industries in California, the automobile revolution and subsequent culture, and the early twentieth century industrial boom of Los Angeles. The facility was the first Firestone plant to be built outside of Akron, Ohio. The company also greatly affected the local and regional economy by creation of thousands of jobs. Firestone Tire and Rubber Company was partly responsible for transforming what had been a predominately agricultural landscape into a thriving industrial complex. The plant further assisted in implementing the concept that working class families could afford modest, single-family homes.

The District is also eligible under Criterion 3, as it embodies the distinctive characteristics of a type (industrial and manufacturing), period (1928-1954), region (southern California), and as fine examples of their work, represents the work of important creative individuals, Alec Curlett and Claud Belman. Its eligibility is based on their expression of the Italianate Mediterranean Revival style, and as the work of a prominent Los Angeles-based architecture firm. The use of Mediterranean Revival architectural styles in Southern California was particularly popular in the 1920s, a movement rooted in concepts and ideals emerging at the time about the development of California's regional identity. The Mediterranean Revival architectural style of Firestone's plant in South Gate is a direct connection with then-developing California regionalism. Character defining features of the complex include *terra cotta* roof tiles, arched and rectangular multi-light metal sash windows, stringcourse detailing, pyramidal-roofed portals and towers, *bas-relief* medallions that depict production and transportation, corbels with sculpted faces, copper ornamental sconces, the prominently-featured clock that breaks the roofline of the tower and a sculpted copper capped steeple atop the tower at Building 2. Some of Curlett & Beelman's other well known works included: Union Oil Building, Merchants National Bank Building, Roosevelt Building, Farmers & Merchants Bank and the Security Trust and Savings Building (Gebhard 103, 233, 498, Withey n.p.). The subject property buildings additionally serve as important representations of early twentieth century factory planning and architecture, based on the industrial design principles, theories and practices of the highly acclaimed twentieth century factory architect, Albert Khan. While most of his works were centralized in the Midwest, his ideas revolutionized industrial complex design. Examples of Khan's principles of design seen at the Firestone complex include: reinforced concrete walls and highly stylized exteriors reflecting popular styles with large, unobstructed interior spaces for manufacturing. Three buildings in the complex, Buildings 1, 2, and 3, are individually eligible for listing in the California Register under Criteria 1 and 3, with the same significance as described for the district.

Because historical resources are identified in this Technical Report and will be affected by the proposed project, the proposed project may have an effect on the environment. The proposed project would adaptively re-use Buildings 1 and 3, as well as develop surface parking and a parking structure. A total of approximately 418,900 gross square feet within Buildings 1 and 3 would accommodate the required administrative, academic, vocational, and other support facilities. Building 2, the LAUSD-occupied building, would not be used for the college purposes and would continue to be used by LAUSD in its current condition. Building 4 would be demolished in the course of the proposed project in order to accommodate the space needs of the proposed parking structure and a universal playing field that would be located adjacent to and west of the parking structure. No new development or college uses are proposed on the western part of the project site, and this part of the project site would continue to be used as a warehouse/distribution facility (Notice of Preparation of a Draft Environmental Impact Report, August 6, 2009).

An overview of expected effects and proposed mitigation measures are listed in the following table:

Table 5. Expected Effects of the Proposed Project on Built Environment Resources

Proposed Action	Conformance with *Standards*	Impacts	Mitigation Measures
Adaptively re-use Buildings 1 and 3	unknown	Unknown. Buildings are historical resources under CEQA. Proposed project may include "alteration activities that would impair the significance of the historic resource" (*PRC* §5020.1). Proposed project may materially alter in an adverse manner, the physical characteristics that convey the property's historic significance, or the reason for that property's inclusion in an official register of historic resources (*PRC* §15064.5(b)(2.)) May result in substantial adverse change if proposed alterations are not found to be in conformance with *Standards for Rehabilitation.*	CR MM-3 An architect with at least five years of experience in successful certified rehabilitation projects shall actively collaborate on or develop detailed project plans, including for adaptive reuse of Buildings 1 and 3. CR MM-4 A qualified architectural historian with proven experience in industrial and manufacturing facilities shall prepare a character-defining features report for the historic district contributors. The resulting report, prepared in accordance with National Park Service-prepared "Building Interior Spaces, Features and Finishes," (Technical Preservation Services, http://www.nps.gov/history/hps/tps/standguide/rehab/rehab_spacefeatfinish.htm), must be completed prior to initiation of any project-related alteration or demolition activates and will identify primary and secondary spaces as well. The report will include plans or photographs identifying those spaces, as well as listing or annotating features and objects recommended for salvage. The services of a tire industry expert or engineer may be required to identify features and equipment. CR MM-5 A qualified architectural historian shall review and comment on resulting developed plans for conformance with the *Secretary's Standards*. Notes Project team shall take setting and other indirect effects into account. If Mitigation Measures do not reduce impacts to cultural resources to less than significant levels, the lead agency would determine the need for and formulate additional project-specific mitigation measures to help offset any potentially significant project related impacts as part of future CEQA review.
Develop surface parking and a parking structure	unknown	Unknown. Property is historical resource under CEQA. May include "alteration activities that would impair the significance of the historic resource" (*PRC* §5020.1). May materially alter in an adverse manner, the physical characteristics that convey the property's historic significance, or the reason for that property's inclusion in an official register of historic resources (*PRC* 15064.5 (b)(2.)) May result in substantial adverse change if not found to be in conformance with *Secretary's Standards*	CR MM-6 An architect with at least five years of experience in successful certified rehabilitation projects shall actively collaborate on or develop detailed project plans, including development of parking facilities. CR MM-5 A qualified architectural historian shall review and comment on resulting developed plans conformance with the *Secretary's Standards*. Notes Project team shall avoid affecting setting by addition of parking facilities. Take setting and other indirect effects into account. If Mitigation Measures do not reduce impacts to cultural resources to less than significant levels, the lead agency would determine the need for and formulate additional project-specific mitigation measures to help offset any potentially significant project related impacts as part of future CEQA review.

Proposed Action	Conformance with *Standards*	Impacts	Mitigation Measures
Building 2, continue to be used by LAUSD in its current condition	unknown	Unknown. Building is an historical resource under CEQA. Consider setting and other indirect effects.	CR MM-7 An architect with at least five years of experience in successful certified rehabilitation projects shall actively collaborate on or develop detailed project plans, including any actions that may affect Building 2 or its setting. CR MM-5 A qualified architectural historian shall review and comment on resulting developed plans conformance with the *Secretary's Standards*. Notes Project team shall avoid incompatible alterations to the setting and environment of Building 2, in conformance with the *Secretary's Standards* . Take setting and other indirect effects into account. If Mitigation Measures do not reduce impacts to cultural resources to less than significant levels, the lead agency would determine the need for and formulate additional project-specific mitigation measures to help offset any potentially significant project related impacts as part of future CEQA review.
Demolish Building 4 to accommodate the space needs of the proposed parking structure and a universal playing field that would be located adjacent to and west of the parking structure	Does not conform to the *Standards*.	Building 4 is an historical resource, under CEQA. Demolition, destruction and "alteration activities that would impair the significance of the historic resource" (*PRC* §5020.1). Would materially alter in an adverse manner, the physical characteristics that convey the property's historic significance, or is the reason for that property's inclusion in an official register of historic resources (*PRC* §15064.5(b)(2.))	CR MM-8 Project design team including an architect with at least five years of experience in successful certified rehabilitation projects shall actively collaborate on site planning, including reconsidering demolition of Building 4. Consider its reuse as part of project site planning and proposed uses. Evaluate alternatives that would reduce or avoid impacts. Notes Analyze a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project and avoid or substantially lessen any significant impacts on the historical resource. Provide that justification for use in future CEQA review
No new development or college uses proposed on western part of the project site, this part of the project site would continue to be used as a warehouse/ distribution facility	unknown	Unknown. Buildings are historical resources under CEQA. Consider setting and other indirect effects on historical resources.	CR MM-9 An architect with at least five years of experience in successful certified rehabilitation projects shall actively collaborate on or develop detailed project plans, including any activities that would affect Building 5, its contributing outbuildings or its settings. CR MM-5 A qualified architectural historian shall review and comment on resulting developed plans conformance with the *Secretary's Standards*. Notes Project team shall avoid incompatible alterations to the setting and environment of Building 5, in conformance with the *Secretary's Standards* . Take setting and other indirect effects into account. If Mitigation Measures do not reduce impacts to cultural resources to less than significant levels, the lead agency would determine the need for and formulate additional project-specific mitigation measures to help offset any potentially significant project related impacts as part of future CEQA review.

Proposed project plans have not yet been developed to the level of detail necessary to perform the necessary analysis of its proposed effects. Once project plans have been developed to a reasonable level of completeness and detail, they must be reviewed for conformance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings* (*Secretary's Standards*, see Attachment E). The principal standard for this project is rehabilitation. The *Secretary's Standards* recommend rehabilitation as the appropriate treatment "when repair and replacement of deteriorated features are necessary; when alterations or additions to the property are planned for a new or continued use; and when its depiction at a particular period of time is not appropriate, rehabilitation may be considered as a treatment."

California Environmental Quality Act (CEQA) relies on California Register criteria for identification of historical resources eligibility under statutes §21084.1, as carried out for the proposed project. It provides that the effects of projects found to be "consistent with" the *Secretary's Standards* "shall generally be considered mitigated below a level of significance and thus *is not significant*" under §15126.4(b)(1) (emphasis added). Further, CEQA provides an exemption for projects "limited to… rehabilitation… in a manner consistent with" the *Secretary's Standards* under regulations §15331.

It is recommended in Cultural Resources Mitigation Measures 3, 5, 7 and 8 that a licensed architect with at least five years of experience in successful certified rehabilitation (tax credit) projects actively collaborate on or develop detailed project plans to effect consistent project-related conformance with the *Secretary's Standards.* It is recommended that plans be developed to clearly depict existing buildings, structures, objects and features versus proposed plans. The plans must be detailed to be able to clearly establish what is proposed to be retained, as well as how any character defining features would be treated or altered.

Mitigation Measure 4 requires that an architectural historian qualified under the Secretary of the Interior's Professional Qualification Standards (see Attachment E) review and comment on the resulting developed plans to form professional judgments regarding project and building-by-building conformance with the *Secretary's Standards*. The outcome of those mitigation measures would be part of future CEQA review for this project.

As currently proposed, plans and specifications have not been sufficiently developed to review the project for substantial adverse changes to historical resources under CEQA. Once plans have been developed to a sufficient level for review, they must be reviewed by a qualified architectural historian for conformance with the *Secretary of the Interior's Standards for Rehabilitation* (See Appendix E and Code of Federal Regulations, 36 CFR Part 61).

If Cultural Resources Mitigation Measures 3-8 are implemented in good faith, the proposed project should have a less than significant effect on the environment, as described in CEQA Guidelines §15064.5(b)(3):

> Generally, a project that follows the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings*, (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historical resource.

Thus, the policy above as well as the Class 31 exemption contained in CEQA Guidelines §15331 indicates that a project found to be in conformance with the *Secretary of the Interior's Standards for the*

Treatment of Historic Properties can be mitigated to a less than significant level or otherwise be categorically exempt.

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1993 *Newport Coast Archaeological Project: Results of Data Recovery at the Pelican Hills Sites, CA-ORA-662, CA-ORA-677, CA-ORA-678, CA-ORA-1206, CA-ORA-1210, CA-ORA-676 and CA-ORA-1203*, Volume 1. Report on file, South Central Coastal Information Center, California State University, Fullerton.

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2008b "South Gate–The New City." Electronic document, http://www.sogate.org/index.cfm/fuseaction/detail/navid/34/cid/69/, accessed September 9, 2009.

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1961 The San Dieguito Complex and Its Place in California Prehistory. *Archaeological Survey Annual Report for 1960-1961*: 246–337. University of California, Los Angeles.

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APPENDIX A:
Records Search Results

SCCIC Bibliography: East L.A. College Campus

LA-00155

Author(s): Stickel, Gary E.
Year: 1988
Title: A Cultural Resources Assessment of the Bikeway Greenway Project, City of South Gate
Affiliation: Environmental Research Archaeologists
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-02577

Author(s): Wlodarski, Robert J.
Year: 1992
Title: Results of a Records Search Phase Conducted for the Proposed Alameda Corridor Project, Los Angeles County, California
Affiliation: Historical, Environmental, Archaeological, Research, Team
Resources: 19-000007, 19-000098, 19-000385, 19-000389, 19-000390, 19-000887, 19-001112, 19-001575
Quads: LONG BEACH, SOUTH GATE
Pages:
Notes:

LA-02644

Author(s): Wlodarski, Robert J.
Year: 1992
Title: The Results of a Phase 1 Archaeological Study for the Proposed Alameda Transportation Corridor Project, Los Angeles County, California
Affiliation: Historical, Environmental, Archaeological, Research, Team
Resources: 19-000385, 19-000389
Quads: LOS ANGELES, SOUTH GATE
Pages:
Notes:

LA-02950

Author(s): Anonymous
Year: 1992
Title: Consolidated Report: Cultural Resource Studies for the Proposed Pacific Pipeline Project
Affiliation: Peak & Associates, Inc.
Resources: 19-000007, 19-000021, 19-000034, 19-000089, 19-000251, 19-000357, 19-000385, 19-000389, 19-000390, 19-000407, 19-000409, 19-000668, 19-000781, 19-000830, 19-000887, 19-000901, 19-000963, 19-001097, 19-001112, 19-001124, 19-001575, 19-001620
Quads:
Pages:
Notes:

LA-03036

Author(s): Maki, Mary K.
Year: 1994
Title: A Phase I Cultural Resources Survey of 0.66-acre at 2004 E. 88th Street Los Angeles County, California
Affiliation: Fugro West Inc.
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-03593

Author(s): Wlodarski, Robert J.
Year: 1997
Title: Phase I Archaeological Study: Bandera Senior Housing Project City of Watts, County of Los Angeles
Affiliation: Historical, Environmental, Archaeological, Research, Team
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-03980

Author(s): McLean, Deborah K.
Year: 1998
Title: Archaeological Assessment for Pacific Bell Mobile Services Telecommunications Facility La156-03, 3170 Firestone Boulevard, City of South Gate, County of Los Angeles, California
Affiliation: LSA Associates, Inc.
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-04470

Author(s): Unknown
Year: 1999
Title: Negative Phase I Archaeological Survey and Impact Assessment of .65 Acre for the Latchford Glass Phase Ii Project Los Angeles County, California
Affiliation: Conejo Archaeological Consultants
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-04625

Author(s): Starzak, Richard
Year: 1994
Title: Historic Property Survey Report for the Proposed Alameda Corrid or From the Ports of Long Beach and Los Angeles to Downtown Los Angeles in Los Angeles County, California
Affiliation: Myra L. Frank & Associates
Resources: 19-174982, 19-174983, 19-174986, 19-174989, 19-174991, 19-174992, 19-174993, 19-180778, 19-180779, 19-180780, 19-180781, 19-180782, 19-180783, 19-180784, 19-180785
Quads: LONG BEACH, LOS ANGELES, SOUTH GATE
Pages:
Notes:

LA-04737

Author(s): Maki, Mary K.
Year: 1999
Title: Negative Phase I Archaeological Survey and Impact Assessment of .9 Acres for the 7300 Roseberry Avenue Housing Project Cdc Project No. Jj7101, Hmd001, G89101 Florence, Los Angeles County, California
Affiliation: Conejo Archaeological Consultants
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-04834

Author(s): Ashkar, Shahira
Year: 1999
Title: Cultural Resources Inventory Report for Williams Communications, Inc. Proposed Fiber Optic Cable System Installation Project, Los Angeles to Anaheim, Los Angeles and Orange Counties
Affiliation: Jones & Stokes Associates, Inc.
Resources: 19-186110, 19-186111, 30-176630
Quads: ANAHEIM, HOLLYWOOD, LA HABRA, LONG BEACH, LOS ALAMITOS, LOS ANGELES, SOUTH GATE, WHITTIER
Pages:
Notes: Same as OR2094

LA-04836

Author(s):
Year: 2000
Title: Phase I Archaeological Survey Along Onshore Portions of the Global West Fiber Optic Cable Project
Affiliation: Science Applications International Corporation
Resources:
Quads: HOLLYWOOD, INGLEWOOD, LOS ANGELES, SOUTH GATE, VENICE
Pages:
Notes:

LA-05577

Author(s): Wells, Helen Fairman
Year: 1996
Title: Phase I Cultural Resources Investigation of Franklin Delano Roosevelt Park Los Angeles County , California
Affiliation: Helen Fairman Wells
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-05685

Author(s): Duke, Curt
Year: 2002
Title: Cultural Resource Assessment Cingular Wireless Facility No. Sm 066-03 Los Angeles County, California
Affiliation: LSA Associates, Inc.
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-05952

Author(s): Christy, Juliet L.
Year: 2002
Title: Phase I Archaeological Survey Fire Station No. 65 in Watts Los Angeles, Ca
Affiliation: Greenwood and Associates
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-05956

Author(s): Mason, Roger D.
Year: 2001
Title: Proposed American Tower Corporation Facility: Church Radio Tower (la 825n1) in the City of South Gate, Los Angeles County, California
Affiliation: Chambers Group, Inc.
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-06105

Author(s): Bonner, Wayne H.
Year: 2000
Title: Sprint Pcs Facility La40xc869a (the Carnation Site) Located at 103 Long Beach Boulevard, Lynwood in Los Angeles County, California
Affiliation: Michael Brandman Associates
Resources:
Quads: SOUTH GATE
Pages:
Notes:

SCCIC Bibliography: East L.A. College Campus

LA-06225

Author(s): Duke, Curt
Year: 2002
Title: Cultural Resource Assessment at & T Wireless Services Facility No. 04252 Los Angeles County, California
Affiliation: LSA Associates, Inc.
Resources: 19-186742
Quads: SOUTH GATE
Pages:
Notes:

LA-07060

Author(s): Padon, Beth
Year: 2002
Title: Results From the Archaeological Records Search for South Gate Sewer Rehabilitation Project, Los Angeles County
Affiliation: Discovery Works, Inc.
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-07627

Author(s): Bonner, Wayne H.
Year: 2004
Title: Records Search Results and Site Visit for Sprint Telecommunications Facility Candidate La60x180c (mitchell) 7702 Maie Avenue, Los Angeles, Los Angeles County, California
Affiliation: Michael Brandman Associates
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-07637

Author(s): Bonner, Wayne H.
Year: 2006
Title: Cultural Resources Records Search Results and Site Visit for T-mobile Usa Candidate La03051a (california Body Shop), 9303 South Alameda Street, Los Angeles, Los Angeles County, California
Affiliation: Michael Brandman Associates
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-07646

Author(s): Rehberger, Linda H. and Scott Savastio
Year: 2004
Title: Archaeological Monitoring Report Fire Station No. 65 in Watts 1825 East Century Boulevard, Los Angeles, California
Affiliation: Linda H. Rehberger and Scott Savastio
Resources: 19-100486
Quads: SOUTH GATE
Pages:
Notes:

LA-07664

Author(s): Thal, Sean
Year: 2005
Title: Historic Survey Report and View Shed Analysis Cultural Resource Assessment for the Truba (CA-6346b) Cellular Facility on 2906 Laurel Place, South Gate, Los Angeles County, Ca
Affiliation: EarthTouch, Inc.
Resources: 19-186110
Quads: SOUTH GATE
Pages:
Notes:

LA-07667

Author(s): Maki, Mary K.
Year: 2004
Title: Phase 1 Archaeological Investigation of 18.3 Acres for the Florence & Alameda Commercial Center Project Walnut Park, Los Angeles County, California
Affiliation: Conejo Archaeological Consultants
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-07952

Author(s): Livingstone, David M., McDougall, Dennis, Goldberg, Susan K., and Nettles, Wendy M.
Year: 2006
Title: Trails to Rails: Transformation of a Landscape: History and Historical Archaeology of the Alameda Corridor, Volume 1
Affiliation: Applied EarthWorks, Inc.
Resources: 19-002121, 19-002749, 19-002753, 19-002757, 19-002770, 19-002786, 19-002792, 19-002793, 19-002795, 19-002796, 19-002834, 19-002835, 19-002836, 19-002837, 19-002838, 19-002839, 19-002840, 19-002841, 19-002842, 19-002843, 19-002844, 19-002845, 19-002846, 19-002848, 19-002849, 19-002850, 19-002853, 19-002854, 19-002855, 19-002856, 19-002858, 19-002859, 19-002860, 19-002861, 19-002862, 19-002863, 19-002864, 19-002865, 19-002866, 19-002867, 19-002868, 19-002869, 19-002870, 19-002871, 19-002872, 19-002874, 19-002877, 19-002878, 19-002879, 19-002880, 19-002881, 19-002882, 19-002883, 19-002884, 19-002941, 19-002942, 19-002943, 19-003042, 19-003043, 19-003044, 19-003045, 19-003046, 19-003047, 19-003048, 19-003049, 19-003050, 19-003051, 19-003052, 19-003053, 19-003054, 19-003055
Quads: LONG BEACH, LOS ANGELES, SOUTH GATE
Pages:
Notes: report located on oversozed shelf

LA-07978

Author(s): Wlodarski, Robert J.
Year: 2006
Title: Records Search and Field Reconnaissance for the Proposed Royal Street Communications Wireless Telecommunications Site La0325b (sbc Switch South Gate), Located at 9420 Long Beach Boulevard. South Gate, California 90280
Affiliation: Cellular, Archaeological Resource, Evaluations
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-08253

Author(s): McKenna, Jeanette A.
Year: 1992
Title: A Phase I Cultural Resource Investigation of the Proposed Puente Hills Landfill Expansion Project Area, Los Angeles County, California
Affiliation:
Resources: 19-000967
Quads: BALDWIN PARK, EL MONTE
Pages:
Notes:

LA-08319

Author(s): Wood, Catherine M.
Year: 2007
Title: Archaeological Survey Report for the Mccoy Plaza a Residential Building Project, 9305-9321 Firth Boulevard, Los Angeles County, California
Affiliation: Jones & Stokes
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-08499

Author(s): Shaver, Noelle C.S.
Year: 2007
Title: A Phase I Archaeological Study for the South Region High School No. 13, Community of Walnut Park, Unincorporated Los Angeles County, California
Affiliation: Jones & Stokes Associates, Inc.
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-08852

Author(s): Bonner, Wayne H.
Year: 2006
Title: Cultural Resources Records Search and Site Visit Results for Royal Street Communications, Llc, Candidate La0331a (s. Alameda), 10127 South Alameda Street, Los Angeles, Los Angeles County, California
Affiliation: Michael Brandman Associates
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-08853

Author(s): Bonner, Wayne H.
Year: 2006
Title: Cultural Resources Records Search and Site Visit Results for T-mobile Candidate La13082a (leon Elster), 8145 Beach Street, Los Angeles, Los Angeles County, California
Affiliation: Michael Brandman Associates
Resources:
Quads: SOUTH GATE
Pages:
Notes:

LA-09186

Author(s): Bonner, Wayne H.
Year: 2007
Title: Cultural Resources Records Search and Site Visit Results for T-Mobile Canidate LA03102D (Brookdale Lot), 2809 Tweedy Boulevard, South Gate, Los Angeles County, California
Affiliation: Michael Brandman Associates
Resources: 19-002868, 19-002872
Quads: SOUTH GATE
Pages: 14
Notes:

LA-09187

Author(s): Bonner, Wayne H.
Year: 2007
Title: Cultural Resources Records Search and Site Visit Results for T-Mobile Canidate LA03049C (Liberty Plaza), 8308 Long Beach Boulevard, South Gate, Los Angeles
Affiliation: Michael Brandman Associates
Resources: 19-002838, 19-002847
Quads: SOUTH GATE
Pages: 14
Notes:

LA-09190

Author(s): Bonner, Wayne H.
Year: 2007
Title: Cultural Resources Records Search and Site Visit Results for T-Mobile Canidate LA03051D (SCE Caldon), Near 8866 Juniper Street, Southeast Corner of 88th Street and Juniper Street, Los Angeles, Los Angeles County, California
Affiliation: Michael Brandman Associates
Resources: 19-002856, 19-186110
Quads: SOUTH GATE
Pages: 14
Notes:

LA-09633

Author(s): Bonner, Wayne H.
Year: 2008
Title: Cultural Resources Records Search and Site Visit Results for T-Mobile USA Candidate LA33391A (Trumbo Property), 7812 State Street, Huntington Park, Los Angeles County, California.
Affiliation: Michael Brandman Associates
Resources: 19-186742
Quads: SOUTH GATE
Pages: 11
Notes:

LA-09640

Author(s): Maki, Mary K.
Year: 2008
Title: Alameda Seniors Housing Project, Huntington Park
Affiliation: Conejo Archaeological Consultants
Resources:
Quads: SOUTH GATE
Pages: 11
Notes:

LA-09641

Author(s): Smith, Francesca and Caprice D. Harper
Year: 2008
Title: Cultural Resources Initial Technical Report and Phase I Site Investigation Proposed South Region Middle School No. 3 Project, Walnut Park, Los Angeles County, California.
Affiliation: SWCA Environmental Consultants
Resources: 19-188399, 19-188400
Quads: SOUTH GATE
Pages: 94
Notes:

SCCIC Bibliography: East L.A. College Campus

LA-09642

Author(s): Smith, Francesca and Caprice D. Harper
Year: 2008
Title: Cultural Resources Intesnive Survey Report, Proposed South Region Middle School No. 3 Project, Walnut Park, Los Angeles County, California.
Affiliation: SWCA Environmental Consultants
Resources: 19-188399, 19-188400
Quads: SOUTH GATE
Pages: 27
Notes:

LA-09643

Author(s): Smith, Francesca G. and Kip Harper
Year: 2008
Title: Cultural Resources Initial Technical Report and Phase 1 Site Investigation, Proposed South Region Elementary School No. 9 Project, South Gate, Los Angeles County, California.
Affiliation: SWCA
Resources: 19-188281, 19-188282
Quads: SOUTH GATE
Pages: 78
Notes:

LA-09644

Author(s): Smith, Francesca and Caprice D. Harper
Year: 2008
Title: Cultural Resources Intensive Survey Report Proposed South Region Elementary School No. 9 Project, South Gate, Los Angeles County, California.
Affiliation: SWCA Environmental Consultants
Resources: 19-188281, 19-188282, 19-188398
Quads: SOUTH GATE
Pages: 30
Notes:

LA-10029

Author(s): Mirro, Vanessa A., Dennis McDougall, Sherri Gust, and Carole Denardo
Year: 2005
Title: An Investigation of Human Skeletal Remains Volume 2 of Treatment of Historic Properties Discovered During the Alameda Corridor Project.
Affiliation: Applied EarthWorks, Inc.
Resources: 19-002682, 19-002757, 19-002792, 19-002796
Quads: LONG BEACH, SOUTH GATE
Pages: 210
Notes:

APPENDIX B:
Sacred Lands File Search and Native American Consultation

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

August 18, 2009

Ms. Samantha Murray
SWCA Environmental Consultants
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030

Sent by FAX to: 626-240-0607
No. of Pages: 3

Re: Request for a Sacred Lands File search and Native American Contacts List **for a Proposed East Los Angeles College Satellite Campus Project**; located in the City of South Gate; Los Angeles County, California

Dear Ms. Murray:

The Native American Heritage Commission (NAHC), the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources (c.f. CA Public Resources Code §21070), was able to perform a record search of its Sacred Lands File (SLF) for the affected project area (APE) requested. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the California Code of Regulations §15064.5(b)(c)(f) CEQA guidelines). Section 15382 of the 2007 CEQA Guidelines defines a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." The NAHC SLF search **did not indicate** the presence of Native American cultural resources within one-half - mile radius of the project area (APE) of the proposed project (APE).

This letter includes state and federal statutes relating to Native American historic properties of religious and cultural significance to American Indian tribes and individuals as 'consulting parties' under both state and federal law.

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Enclosed are the names of the nearest tribes and interested Native American individuals that the NAHC recommends as 'consulting parties,' for this purpose, that may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We recommend that you contact persons on the attached list of Native American contacts. A Native American Tribe or Tribal Elder may be the only source of information about a cultural resource.. Furthermore we suggest that you contact the California Historic Resources Information System (CHRIS) at the Office of Historic Preservation Coordinator's office (at (916) 653-7278, for referral to the nearest Information Center of which there are 11..

Consultation with tribes and interested Native American consulting parties, on the NAHC list ,should be conducted in compliance with the requirements of federal NEPA (42 U.S.C. 4321-43351) and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 [f)]*et se)*, and NAGPRA (25 U.S.C. 3001-3013), as appropriate..

Lead agencies should consider avoidance, as defined in Section 15370 of the California Environmental Quality Act (CEQA) when significant cultural resources could be affected by a project. Also, Public Resources Code Section 5097.98 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery. Discussion of these should be included in your environmental documents, as appropriate.

The response to this search for Native American cultural resources is conducted in the NAHC Sacred Lands Inventory, established by the California Legislature (CA Public Resources Code §5097.94(a) and is exempt from the CA Public Records Act (c.f. California Government Code §6254.10) although Native Americans on the attached contact list may wish to reveal the nature of identified cultural resources/historic properties. Confidentiality of "historic properties of religious and cultural significance' may also be protected the under Section 304 of the NHPA or at the Secretary of the Interior' discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C, 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APE and possibly threatened by proposed project activity.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Attachment: Native American Contacts List (NOTE: we further recommend that other forms of 'proof of mailing or proof of contact be utilized instead of 'Return Receipt Requested' Certified or Registered Mail.) Further, we suggest a follow-up telephone call to the contacts if the replies are not received or need clarification.

08/18/2009 12:38 FAX 916 657 5390 NAHC 003/003

Native American Contact
Los Angeles County
August 17 2009

LA City/County Native American Indian Comm
Ron Andrade, Director
3175 West 6th Street, Rm. 403
Los Angeles , CA 90020
(213) 351-5324
(213) 386-3995 FAX

Gabrielino Tongva Nation
Sam Dunlap, Tribal Secretary
P.O. Box 86908
Los Angeles , CA 90086
samdunlap@earthlink.net
(909) 262-9351 - cell
Gabrielino Tongva

Ti'At Society
Cindi Alvitre
6515 E. Seaside Walk, #C
Long Beach , CA 90803
calvitre@yahoo.com
(714) 504-2468 Cell
Gabrielino

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Tribal Chair/Cultural Resources
P.O. Box 490
Bellflower , CA 90707
gtongva@verizon.net
562-761-6417 - voice
562-925-7989 - fax
Gabrielino Tongva

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Admin.
,
tattnlaw@gmail.com
310-570-6567
Gabrielino Tongva

Gabrielino-Tongva Tribe
Bernie Acuna
501 Santa Monica Blvd, # 500
Santa Monica , CA 90401
(310) 587-2203
(310) 428-7720 - cell
(310) 587-2281
Gabrielino

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693
San Gabriel , CA 91778
(626) 286-1262 -FAX
(626) 286-1632
(626) 286-1758 - Home
(626) 286-1262 Fax
Gabrielino Tongva

This list is current only as of the date of this document.
Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code. and federal NEPA (42 USC 4321-43351), NHPA Sections 106, 4(f) (16 USC 470(f) and NAGPRA (25 USC 3001-3013)

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed East Los Angeles College Satellite Campus Project; located in the City of South Gate; Los Angeles County, California for which a Sacred Lands File search and Native American Contacts list were requested.

SWCA ENVIRONMENTAL CONSULTANTS
Sound Science. Creative Solutions.

Pasadena Office
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030
Tel 626.240.0587 Fax 626.240.0607
www.swca.com

August 20, 2009

Bernie Acuna
Gabrielino-Tongva Tribe
501 Santa Monica Boulevard, #500
Santa Monica, CA 90401

Sent Via U.S. Mail

RE: East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California

Dear Mr. Acuna:

SWCA Environmental Consultants has been retained to conduct a cultural resources study for the East Los Angeles College Satellite Campus Project in the City of South Gate, Los Angeles County, California. As part of the process of identifying cultural resources issues for this project, the Native American Heritage Commission (NAHC) was contacted by SWCA to conduct a Sacred Lands File (SLF) search and to provide a list of Native American individuals and/or tribal organizations that may have knowledge of cultural resources in or near the project area. The SLF search "did not indicate the presence of Native American cultural resources within one-half mile of the project area," but the NAHC recommend that we consult with you directly regarding your knowledge of the presence of cultural resources that may be impacted by this project.

The project area is located at 2525 Firestone Boulevard on the former Firestone Tire & Rubber Co. plant property, on the northwest corner of Firestone Boulevard and Santa Fe Avenue, in the City of South Gate, Los Angeles County, California. The project area is depicted on an unsectioned portion of the South Gate 7.5' U.S. Geological Survey Quadrangle (see enclosed Project Location Map).

If you have any knowledge of cultural resources that may exist within or near the project area, please contact me at (626) 240-0587, smurray@swca.com, or at the above address at your earliest convenience. Thank you for your assistance.

This consultation is project-specific and is not intended to constitute as SB 18 consultation.

Sincerely,

Samantha Murray
Cultural Resources Specialist

Enclosure: Project Location Map

SWCA®
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Pasadena Office
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South Pasadena, CA 91030
Tel 626.240.0587 Fax 626.240.0607
www.swca.com

August 20, 2009

Cindi Alvitre **Sent Via U.S. Mail**
Ti'At Society
6515 E. Seaside Walk #C
Long Beach, CA 90803

RE: East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California

Dear Ms. Alvitre:

SWCA Environmental Consultants has been retained to conduct a cultural resources study for the East Los Angeles College Satellite Campus Project in the City of South Gate, Los Angeles County, California. As part of the process of identifying cultural resources issues for this project, the Native American Heritage Commission (NAHC) was contacted by SWCA to conduct a Sacred Lands File (SLF) search and to provide a list of Native American individuals and/or tribal organizations that may have knowledge of cultural resources in or near the project area. The SLF search "did not indicate the presence of Native American cultural resources within one-half mile of the project area," but the NAHC recommend that we consult with you directly regarding your knowledge of the presence of cultural resources that may be impacted by this project.

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Sincerely,

Samantha Murray
Cultural Resources Specialist

Enclosure: Project Location Map

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South Pasadena, CA 91030
Tel 626.240.0587 Fax 626.240.0607
www.swca.com

August 20, 2009

Ron Andrade, Director **Sent Via U.S. Mail**
LA City/County Native American Indian Commission
3175 West 6th Street, Room 403
Los Angeles, CA 90020

RE: East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California

Dear Mr. Andrade:

SWCA Environmental Consultants has been retained to conduct a cultural resources study for the East Los Angeles College Satellite Campus Project in the City of South Gate, Los Angeles County, California. As part of the process of identifying cultural resources issues for this project, the Native American Heritage Commission (NAHC) was contacted by SWCA to conduct a Sacred Lands File (SLF) search and to provide a list of Native American individuals and/or tribal organizations that may have knowledge of cultural resources in or near the project area. The SLF search "did not indicate the presence of Native American cultural resources within one-half mile of the project area," but the NAHC recommend that we consult with you directly regarding your knowledge of the presence of cultural resources that may be impacted by this project.

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Sincerely,

Samantha Murray
Cultural Resources Specialist

Enclosure: Project Location Map

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625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030
Tel 626.240.0587 Fax 626.240.0607
www.swca.com

August 20, 2009

Robert Dorame
Gabrielino Tongva Indians of California Tribal Council
P.O. Box 490
Bellflower, CA 90707

Sent Via U.S. Mail

RE: East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California

Dear Mr. Dorame:

SWCA Environmental Consultants has been retained to conduct a cultural resources study for the East Los Angeles College Satellite Campus Project in the City of South Gate, Los Angeles County, California. As part of the process of identifying cultural resources issues for this project, the Native American Heritage Commission (NAHC) was contacted by SWCA to conduct a Sacred Lands File (SLF) search and to provide a list of Native American individuals and/or tribal organizations that may have knowledge of cultural resources in or near the project area. The SLF search "did not indicate the presence of Native American cultural resources within one-half mile of the project area," but the NAHC recommend that we consult with you directly regarding your knowledge of the presence of cultural resources that may be impacted by this project.

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Sincerely,

Samantha Murray
Cultural Resources Specialist

Enclosure: Project Location Map

SWCA ENVIRONMENTAL CONSULTANTS
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South Pasadena, CA 91030
Tel 626.240.0587 Fax 626.240.0607
www.swca.com

August 20, 2009

Sam Dunlap
Gabrielino Tongva Nation
P.O. Box 86908
Los Angeles, CA 90086

Sent Via U.S. Mail

RE: East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California

Dear Mr. Dunlap:

SWCA Environmental Consultants has been retained to conduct a cultural resources study for the East Los Angeles College Satellite Campus Project in the City of South Gate, Los Angeles County, California. As part of the process of identifying cultural resources issues for this project, the Native American Heritage Commission (NAHC) was contacted by SWCA to conduct a Sacred Lands File (SLF) search and to provide a list of Native American individuals and/or tribal organizations that may have knowledge of cultural resources in or near the project area. The SLF search "did not indicate the presence of Native American cultural resources within one-half mile of the project area," but the NAHC recommend that we consult with you directly regarding your knowledge of the presence of cultural resources that may be impacted by this project.

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Sincerely,

Samantha Murray
Cultural Resources Specialist

Enclosure: Project Location Map

SWCA
ENVIRONMENTAL CONSULTANTS
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Pasadena Office
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030
Tel 626.240.0587 Fax 626.240.0607
www.swca.com

August 20, 2009

Anthony Morales
Gabrieleno/Tongva San Gabriel Band of Mission Indians
P.O. Box 693
San Gabriel, CA 91778

Sent Via U.S. Mail

RE: East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California

Dear Mr. Morales:

SWCA Environmental Consultants has been retained to conduct a cultural resources study for the East Los Angeles College Satellite Campus Project in the City of South Gate, Los Angeles County, California. As part of the process of identifying cultural resources issues for this project, the Native American Heritage Commission (NAHC) was contacted by SWCA to conduct a Sacred Lands File (SLF) search and to provide a list of Native American individuals and/or tribal organizations that may have knowledge of cultural resources in or near the project area. The SLF search "did not indicate the presence of Native American cultural resources within one-half mile of the project area," but the NAHC recommend that we consult with you directly regarding your knowledge of the presence of cultural resources that may be impacted by this project.

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This consultation is project-specific and is not intended to constitute as SB 18 consultation.

Sincerely,

Samantha Murray
Cultural Resources Specialist

Enclosure: Project Location Map

SWCA
ENVIRONMENTAL CONSULTANTS
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Pasadena Office
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030
Tel 626.240.0587 Fax 626.240.0607
www.swca.com

August 20, 2009

John Tommy Rosas
Tongva Ancestral Territorial Tribal Nation
tattnlaw@gmail.com

Sent Via E-mail

RE: East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California

Dear Mr. Rosas:

SWCA Environmental Consultants has been retained to conduct a cultural resources study for the East Los Angeles College Satellite Campus Project in the City of South Gate, Los Angeles County, California. As part of the process of identifying cultural resources issues for this project, the Native American Heritage Commission (NAHC) was contacted by SWCA to conduct a Sacred Lands File (SLF) search and to provide a list of Native American individuals and/or tribal organizations that may have knowledge of cultural resources in or near the project area. The SLF search "did not indicate the presence of Native American cultural resources within one-half mile of the project area," but the NAHC recommend that we consult with you directly regarding your knowledge of the presence of cultural resources that may be impacted by this project.

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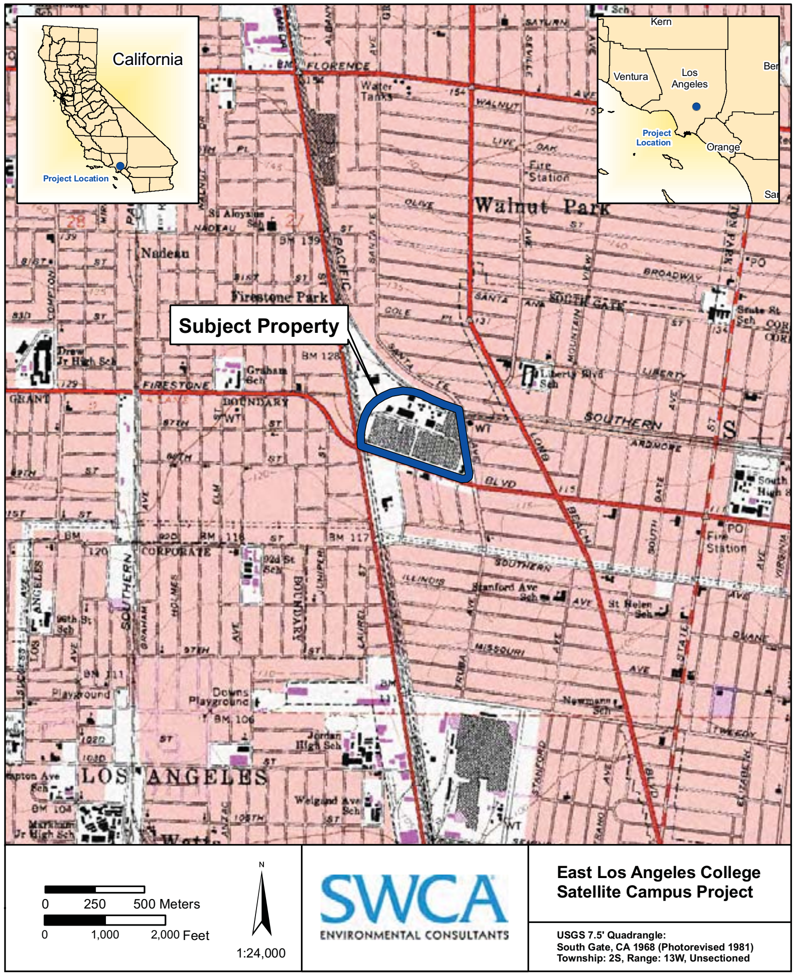
This consultation is project-specific and is not intended to constitute as SB 18 consultation.

Sincerely,

Samantha Murray
Cultural Resources Specialist

Enclosure: Project Location Map



Sam Murray

From: Johntommy Rosas [tattnlaw@gmail.com]
Sent: Thursday, August 20, 2009 1:16 PM
To: Sam Murray; Dave Singleton
Subject: Re: East L.A. College Satellite Campus Project

GOOGLE MAPS SAYS ITS SOUTH GATE ADULT LEARNING CENTER AND CITY OF SOUTH GATE CLAIMS OWNERSHIP?

ALSO WE HAVE COCERNS ABOUT THE TOXIC MATERIALS THERE AND CULTURAL RESOURCES-ETC-

WE NEED MORE INFORMATION TO RESPOND ANY FURTHER-

SO PLEASE DISCLOSE THE PLANS AND INTENT- THANKS JOHNTOMMY

On Thu, Aug 20, 2009 at 12:56 PM, Sam Murray <smurray@swca.com> wrote:

> Dear Mr. Rosas,
>
> SWCA Environmental Consultants has been retained to conduct a cultural resources study for the East Los Angeles College Satellite Campus Project in the City of South Gate, Los Angeles County, California. A NAHC Sacred Lands File search failed to indicate the presence of Native American cultural resources within the project area, but the NAHC recommended that we contact you regarding your knowledge of any cultural resources that may be impacted by this project.
>
> Attached is a letter and project location map that provides more information about the project. Please contact me with any questions or concerns regarding this project. We appreciate your assistance.
>
> Sincerely,

Samantha Murray

Cultural Resources Specialist

SWCA Environmental Consultants

625 Fair Oaks Avenue, Suite 190

South Pasadena, CA 91030

Ph: (626) 240-0587

Fax: (626) 240-0607

www.swca.com

--

JOHN TOMMY ROSAS
TRIBAL ADMINISTRATOR
TRIBAL LITIGATOR
TONGVA ANCESTRAL TERRITORIAL TRIBAL NATION
OFFICIAL TATTN E-MAIL CONFIDENTIAL

TRUTH IS OUR VICTORY AND HONOR IS OUR PRIZE >TATTN ©

APPENDIX C:
Consultation with Local Historic Groups

SWCA
ENVIRONMENTAL CONSULTANTS
Sound Science. Creative Solutions.

Pasadena Office
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030
Tel 626.240.0587 Fax 626.240.0607
www.swca.com

August 20, 2009

Patricia Adler-Ingram, Ph.D., Executive Director
Historical Society of Southern California
P.O. Box 93487
Pasadena, CA 91109

Sent Via U.S. Mail

RE: East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California

Dear Ms. Adler-Ingram:

SWCA Environmental Consultants (SWCA) has been retained to conduct cultural resources surveys for the East Los Angeles College Satellite Campus Project in the City of South Gate, Los Angeles County, California. Specifically, the project area is located at 2525 Firestone Boulevard on the former Firestone Tire & Rubber Co. plant property on the northwest corner of Firestone Boulevard and Santa Fe Avenue. The project area is depicted on an unsectioned portion of the South Gate 7.5′ U.S. Geological Survey Quadrangle (see enclosed Project Location Map).

The purpose of this letter is to request your input on potential or known historic resources or other cultural resources in the project area. We have checked previously identified sources of information on historic resources including the Historic Property Data File for Los Angeles County, maintained at the South Central Coastal Information Center at California State University, Fullerton. As part of our survey effort, we will be evaluating any properties that may be affected by the proposed project for listing in the National Register of Historic Places and the California Register of Historical Resources.

A Cultural Resources Technical Report is being prepared by our staff. However, we acknowledge that some areas and properties may contain values not readily apparent and would appreciate any information you can provide. Please notify us in writing, if you have information on potential or identified historical resources in the project study area by no later than close of business, **Thursday, September 3, 2009**. Please contact me with any applicable comments:

- Phone: (626) 240-0587
- Fax: (626) 240-0607
- E-mail: smurray@swca.com
- Street address: 625 Fair Oaks Ave. Suite 190, South Pasadena, California 91030

Thank you, in advance, for your cooperation and participation.

Sincerely,

Samantha Murray
Assistant Architectural Historian

Enclosure:
Project Location Map

SWCA
ENVIRONMENTAL CONSULTANTS
Sound Science. Creative Solutions.

Pasadena Office
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030
Tel 626.240.0587 Fax 626.240.0607
www.swca.com

August 20, 2009

Mike Buhler, Director of Advocacy
Los Angeles Conservancy
523 W Sixth Street, Suite 826
Los Angeles, CA 90014

Sent Via U.S. Mail

RE: East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California

Dear Mr. Buhler:

SWCA Environmental Consultants (SWCA) has been retained to conduct cultural resources surveys for the East Los Angeles College Satellite Campus Project in the City of South Gate, Los Angeles County, California. Specifically, the project area is located at 2525 Firestone Boulevard on the former Firestone Tire & Rubber Co. plant property on the northwest corner of Firestone Boulevard and Santa Fe Avenue. The project area is depicted on an unsectioned portion of the South Gate 7.5' U.S. Geological Survey Quadrangle (see enclosed Project Location Map).

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- Phone: (626) 240-0587
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- E-mail: smurray@swca.com
- Street address: 625 Fair Oaks Ave. Suite 190, South Pasadena, California 91030

Thank you, in advance, for your cooperation and participation.

Sincerely,

Samantha Murray
Assistant Architectural Historian

Enclosure:
Project Location Map

SWCA
ENVIRONMENTAL CONSULTANTS
Sound Science. Creative Solutions.

Pasadena Office
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030
Tel 626.240.0587 Fax 626.240.0607
www.swca.com

August 20, 2009

Attn: City Planner
Community Development
City of South Gate
8650 California Avenue
South Gate, CA 90280

Sent Via U.S. Mail

RE: East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California

To whom it may concern:

SWCA Environmental Consultants (SWCA) has been retained to conduct cultural resources surveys for the East Los Angeles College Satellite Campus Project in the City of South Gate, Los Angeles County, California. Specifically, the project area is located at 2525 Firestone Boulevard on the former Firestone Tire & Rubber Co. plant property on the northwest corner of Firestone Boulevard and Santa Fe Avenue. The project area is depicted on an unsectioned portion of the South Gate 7.5' U.S. Geological Survey Quadrangle (see enclosed Project Location Map).

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- Fax: (626) 240-0607
- E-mail: smurray@swca.com
- Street address: 625 Fair Oaks Ave. Suite 190, South Pasadena, California 91030

Thank you, in advance, for your cooperation and participation.

Sincerely,

Samantha Murray
Assistant Architectural Historian

Enclosure:
Project Location Map

SWCA
ENVIRONMENTAL CONSULTANTS
Sound Science. Creative Solutions.

Pasadena Office
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030
Tel 626.240.0587 Fax 626.240.0607
www.swca.com

August 20, 2009

Ann Shea, President
Los Angeles City Historical Society
P.O. Box 41046
Los Angeles, CA 90041

Sent Via U.S. Mail

RE: East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California

Dear Ms. Shea:

SWCA Environmental Consultants (SWCA) has been retained to conduct cultural resources surveys for the East Los Angeles College Satellite Campus Project in the City of South Gate, Los Angeles County, California. Specifically, the project area is located at 2525 Firestone Boulevard on the former Firestone Tire & Rubber Co. plant property on the northwest corner of Firestone Boulevard and Santa Fe Avenue. The project area is depicted on an unsectioned portion of the South Gate 7.5′ U.S. Geological Survey Quadrangle (see enclosed Project Location Map).

The purpose of this letter is to request your input on potential or known historic resources or other cultural resources in the project area. We have checked previously identified sources of information on historic resources including the Historic Property Data File for Los Angeles County, maintained at the South Central Coastal Information Center at California State University, Fullerton. As part of our survey effort, we will be evaluating any properties that may be affected by the proposed project for listing in the National Register of Historic Places and the California Register of Historical Resources.

A Cultural Resources Technical Report is being prepared by our staff. However, we acknowledge that some areas and properties may contain values not readily apparent and would appreciate any information you can provide. Please notify us in writing, if you have information on potential or identified historical resources in the project study area by no later than close of business, **Thursday, September 3, 2009**. Please contact me with any applicable comments:

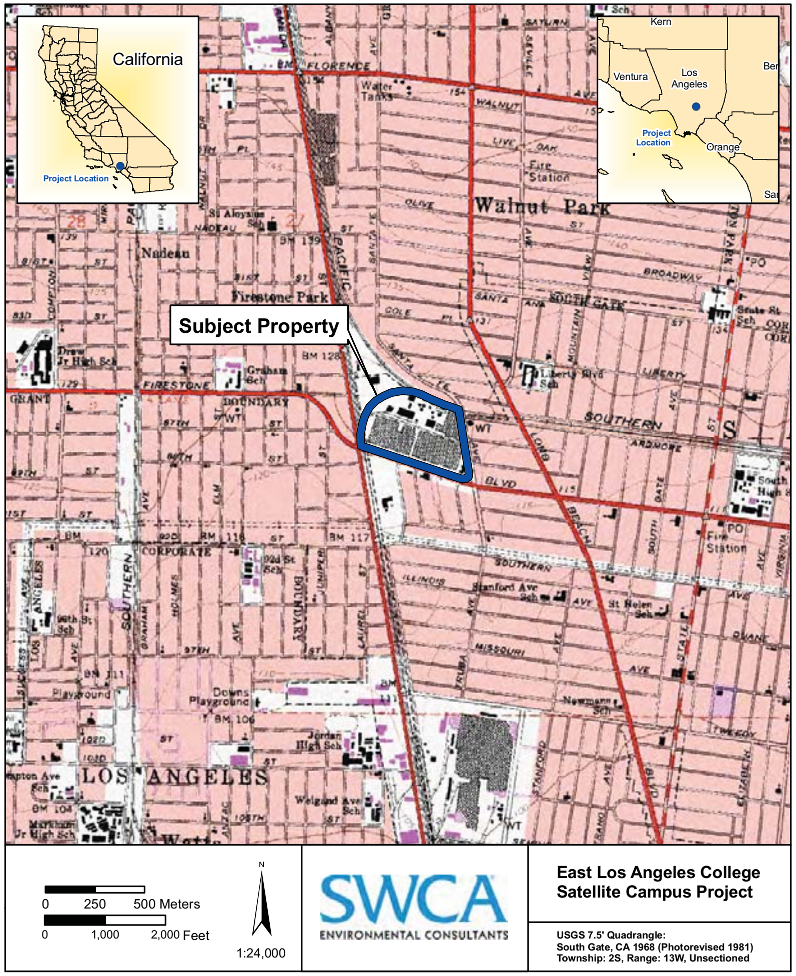
- Phone: (626) 240-0587
- Fax: (626) 240-0607
- E-mail: smurray@swca.com
- Street address: 625 Fair Oaks Ave. Suite 190, South Pasadena, California 91030

Thank you, in advance, for your cooperation and participation.

Sincerely,

Samantha Murray
Assistant Architectural Historian

Enclosure:
Project Location Map



APPENDIX D:
California Department of Parks & Recreation Series 523 Forms

State of California — The Resources Agency | **Primary #**
DEPARTMENT OF PARKS AND RECREATION | **HRI #**
DISTRICT RECORD
Trinomial

Page 1 of 11 ***NRHP Status Code:** 3CB

***Resource Name or #** (Assigned by recorder)**:** Firestone Tire and Rubber Company, South Gate Historic District

D1. Historic Name: Firestone Tire and Rubber Company D2. Common Name: Firestone Tire and Rubber Company

***D3. Detailed Description**

The Firestone Tire and Rubber Company, South Gate Historic District (District) is a large, closely built complex of industrial and commercial buildings in the City of South Gate, on the north side of Firestone Boulevard between Santa Fe Avenue and Alameda Street. The complex was designed in the Italianate Mediterranean Revival style, by Los Angeles-based architectural firm, Curlett & Beelman. Contributing resources included in the District are: 2525 Firestone Boulevard (Buildings 1-4) and 2323 Firestone Boulevard with five related outbuildings (each known as Building 5). See associated Primary Records and mapping for additional descriptions, locations and significance of contributing resources in the District.

***D4. Boundary Description** (Describe limits of district and attach map showing boundary and district elements.):

The district is generally bounded by Firestone Boulevard to the south, Santa Fe Avenue to the east, Union Pacific Railroad (UPRR), Alameda Street and Alameda Corridor to the north and west. Specifically it is located at the northwestern corner of the intersection of Firestone Boulevard and Santa Fe Avenue on the north side of Firestone Boulevard. See attached Location Map and Sketch Map for boundaries and keyed resources.

***D5. Boundary Justification:**

The District includes multiple resources historically associated with, directly related to and influenced by the Firestone Tire and Rubber Company (Firestone) in the City of South Gate. The district boundary includes the parcels and all improvements on the north side of Firestone Boulevard bounded by Santa Fe Avenue to the east, Alameda Street to the west and UPRR to the north and west.

***D6. Significance:** **Theme:** Heavy Industrial Development **Area:** Greater Los Angeles, California
Period of Significance: 1928-1955 **Applicable Criteria:** 1, 3

Firestone began construction of its South Gate facility, their first plant outside of Akron, Ohio, in 1927 (*Los Angeles Times*, June 22, 1980). The first complex of buildings were completed by 1928 (*Los Angeles Times* 1927). In 1928, it included three buildings, identified as Buildings 1, 2, and 3, all contained on one large parcel, APN: 6204-934-003. The first buildings set the tone for others, designed in a distinctive interpretation of Italianate Mediterranean Revival style by noted architects, Alec Curlett & Claud Beelman. Since its inception in 1927, the plant expanded to meet growing demands of the automobile and later the aerospace industry in the West. It is unknown if the architects or architecture firm were retained to design later additions to the complex in 1929, 1942, 1951, and 1954. Two of these later additions were on the adjacent parcel to the west, APN: 6204-034-002. Buildings 1-4 (Sketch Map Items A-D) are on the east parcel, and Building 5, the gateposts, four related, ancillary outbuildings and one related feature (Sketch Map Item E) are on the west parcel. A variety factors influenced the development of the property including: supply and demand for Firestone products, availability of products to West Coast markets, availability of rubber from African and Asian markets, proximity to the shipping ports already receiving raw materials for Firestone products, availability of labor forces, availability of inexpensive land for future expansion and proximity to railroad lines (1928 Chamber of Commerce pamphlet (CCP) 40-41, 1929 CCP 51-52, 1939 CCP n.p., Kronzek 370-371, and Lief 114, 173-174, 267). New work areas, conveyor lines, storage facilities, utility buildings, and manufacturing areas were all part of the booming tire and rubber complex. Not only was Firestone a major factor in the transportation industry, the company greatly affecteded the local economy with the creation of thousands of jobs. It helped transformed the predominately agricultural landscape into a thriving industrial complex. (See Continuation Sheet)

***D7. References** (Give full citations including the names and addresses of any informants, where possible.):

City of South Gate, various building permits.
Bicentennial Heritage Commission, *South Gate: 1776-1976*. South Gate, South Gate Press.
Gebhard, David and Robert Winter. *An Architectural Guidebook to Los Angeles*. 2003, Gibbs Smith, Utah.
www.historicaerials.com, 1952, 1972, 1980, 2003, 2004, 2005.
Kronzek, Lynn C., *Los Angeles: Place of Possibilities.* Carlsbad, Heritage Media Corporation.
Lief, Alfred. *The Firestone Story: A History of the Firestone Tire and Rubber Company.* McGraw Hill, 1951.
Los Angeles County Pamphlet, issued by the Chamber of Commerce. Carl A. Bundy Quill and Press, Los Angeles, 1928, p. 40-41. Contained in bound *California Pamphlets, Volume 5*.
Los Angeles County Pamphlet, issued by the Chamber of Commerce. Wayside Press, Los Angeles, 1929, p. 51-52. Contained in bound *California Pamphlets, Volume 5.*
Los Angeles County Pamphlet, issued by the Chamber of Commerce, 1939. Contained in bound *California Pamphlets, Volume 12*.
Los Angeles Times
1927 _____. "City Garners Title of 'Akron of West' " *Los Angeles Times*, 18 December: 4
1980 _____. "Firestone to Leave 'Last Major Parcel,' " 22 June: K23.
1980 Kauffman, Wendy. "Firestone to Close 6 Factories; 7,000 Workers Lose Jobs," 20 March: F1.
1980 Harris, Art. "The Day the Recession Hit Home in South Gate," 20 March: A3.
1982 Klunder, Jan. "South Gate Gets $2.75-Million Grant." 7 October: LB1.
Sanborn Fire Insurance Company Maps, 1928, 1930 revised 1950, and revised 1966.
Withey, Henry F. and Elsie Rathburn Withey, *Biographical Dictionary of American Architects*, New Age Publishing, Los Angeles, 1956.

***D8. Evaluator:** F. Smith, S. Francisco, and S. Edwards **Date:** September 3, 2009
Affiliation and Address: SWCA Environmental Consultants, 625 Fair Oaks Avenue, Suite 190, South Pasadena, CA 91030

***Recorded by:** F. Smith, S. Francisco, and S. Edwards ***Date:** September 3, 2009 ☒ Continuation ☐ Update

In 1954, operations were expanded to include a Guided Missile Division that manufactured the Corporal guided missile and related ground handling equipment (Kronzek 370-371, *Los Angeles Times* 1943, Sanborn rev. 1966). Firestone occupied the facility until its 1980 closure due to economic constraint and hardship. In that same year, the complex was divided, and the west parcel at 2323 Firestone Boulevard was sold to HON Furniture Company. Contributors to the District are Buildings 1, 2, 3, and 4 at 2525 Firestone Boulevard, and Building 5 and one ancillary Quonset hut outbuilding at 2323 Firestone Boulevard. Non-Contributors to the District are one shed structure, one circular, raised concrete platform and two small pump station structures at 2323 Firestone Boulevard.

Despite limited alterations, contributing buildings and the District retain sufficient integrity to be recognizable to their original appearance. The District is eligible for listing in the California Register under Criterion 1 for its association with broad patterns of development in Southern California including associations with the Harvey S. Firestone family, development of the tire and rubber industries in California, the automobile revolution and subsequent culture, and the early twentieth century industrial boom of Los Angeles. The District is also eligible under Criterion 3 because of its representation of Italianate Mediterranean Revival style architecture in 1920s Southern California. The use of Mediterranean Revival architectural styles in Southern California was particularly popular in the 1910s and 1920s, a movement rooted in concepts and ideals emerging at the time about the development of California's regional identity. As the first manufacturing facility for Firestone Tire and Rubber Company outside of Akron, Ohio, the Mediterranean Revival architectural style of Firestone's plant in South Gate is a direct connection to its expression of California regionalism. It is also significant under Criterion 3 as the work of the Los Angeles-based architectural firm Curlett & Beelman. Some of the firm's other well known works included: Union Oil Building, Merchants National Bank Building, Roosevelt Office Building, Farmers and Merchants Bank Building and the Security Trust and Savings Building (Gebhard 103, 233, 498, Withey n.p.). The buildings also serve as important representations of early twentieth century factory planning and architecture, based on the industrial design principles, theories and practices of the highly acclaimed twentieth century factory architect Albert Khan. While most of his works were centralized in the Midwest, his ideas revolutionized industrial complex design. Examples of Khan's principles of design seen at the Firestone complex include: reinforced concrete walls and highly stylized exteriors reflecting popular styles with large unobstructed interior spaces for manufacturing.

P1. Other Identifier: Firestone Tire and Rubber Company Historic District

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** Los Angeles

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** South Gate, CA Date: 1964 (Photorevised 1981) **T** 2 S **R** 13 W **Unsectioned** S.B. **B. M.**

c. Address: 2323 Firestone Boulevard and 2525 Firestone Boulevard City: South Gate Zip: 90208

d. UTM: Zone: ; mE/ mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation:

APNs: 6204-034-002, 6204-034-003. See attached Location Map (see Page 3) and Sketch Map (see Page 4) for boundaries and keyed resources.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries) Firestone Tire and Rubber Company, South Gate Historic District (District) is a complex of commercial and industrial buildings in the City of South Gate, California. The district is on the north side of Firestone Boulevard bounded by Santa Fe Avenue to the east and Union Pacific Railroad (UPRR) and Alameda Street (Alameda Corridor) to the north and west. The District encompasses two large parcels, separated by a north-south driveway. Construction began in 1927 and was completed by the summer of 1928 (*Los Angeles Examiner*, December 18, 1927). The three buildings completed in 1928, Buildings 1, 2, and 3, were designed in an Italianate Mediterranean Revival style. Character defining features include the tan stucco cladding, curved red terra cotta roof tiles, arched and rectangular multi-light metal sash windows, simple stringcourse detailing, pyramidal-roofed portals and towers, sculpted medallions that depict production and transportation, corbels with sculpted faces, copper ornamented sconces, and a prominently-featured clock that breaks the roofline of the tower and a sculpted copper capped steeple atop the tower at Building 2. In 1929, Buildings 1 and 3 were expanded, symmetrically adding six bays each on either sides, and the Xylos Rubber Company building was constructed to the rear of the western parcel (demolished after 1966, Sanborn). The building at 2323 Firestone was built in 1941 and expanded in 1954; its design modestly conformed to the architectural style of its predecessors. Building 4 was constructed in 1951 and occupies the northeast corner of the eastern parcel. It is a two-story utilitarian building with an irregular plan, and although it is not designed in the Italianate Mediterranean Revival style, it retains the same color and exterior cladding as the other buildings original to the complex. Other ancillary buildings and related features on-site include a Quonset hut, one shed structure, two small pump station structures, and one circular, raised concrete platform, all of which occupy the northern portion of the parcel at 2323 Firestone Boulevard. Vegetation is limited to the perimeter of the lot and areas immediately surrounding Buildings 1 and 2 at 2525 Firestone Boulevard, and Building 5 at 2323 Firestone Boulevard, and consists of grass lawn, and mature trees and shrubs.

***P3b. Resource Attributes:** HP6. 1-3 story commercial building, HP8. Industrial building

***P4. Resources Present:** ☒Building ☐ Structure ☐Object ☐Site ☒District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #) View northeast, Buildings 1 and 2, September 7, 1950, Photograph #jpg2.lapl.org/pics24/00046501.jpg . Los Angeles Public Library

***P6. Date Constructed/Age and Sources:** ☒ Historic ☐Prehistoric ☐Both 1928-1954, Los Angeles Assessor

***P7. Owner and Address:** Various

P8. Recorded by: (Name, affiliation, and address)
F. Smith, S. Francisco and S. Edwards
SWCA Environmental Consultants
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030

***P9. Date Recorded:** September 3, 2009

***P10. Survey Type:** (Describe) Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Cultural Resources Technical ReportEast Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California. (SWCA Environmental Consultants 2009)

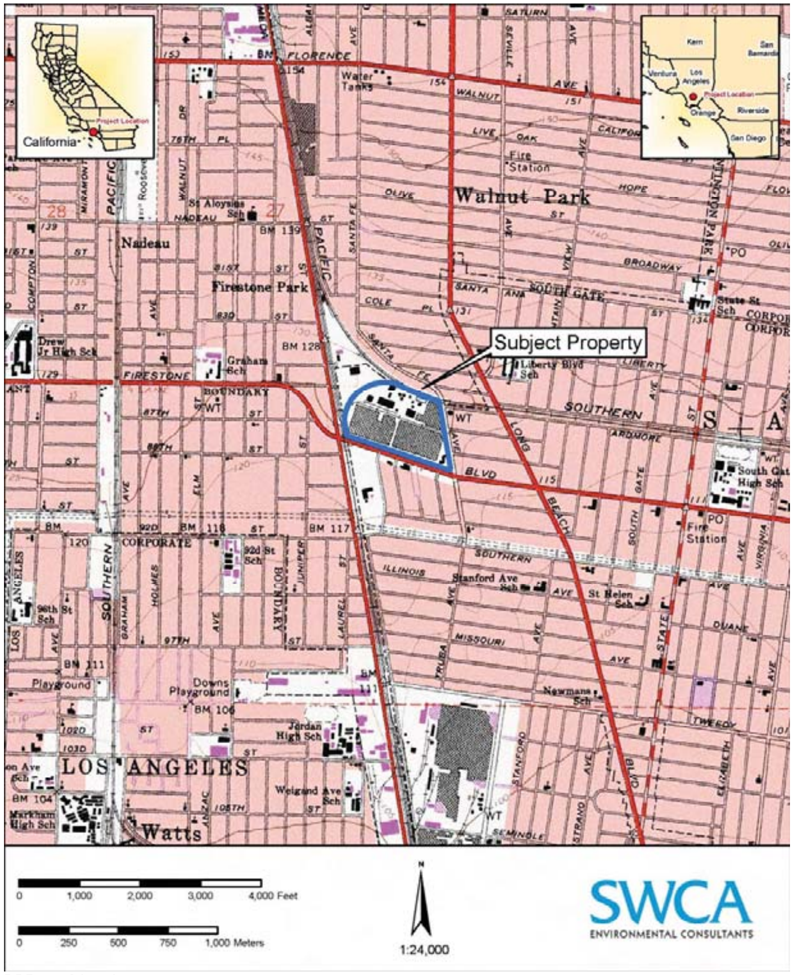
***Attachments:** ☐NONE ☒ Location Map ☒ Sketch Map ☐Continuation Sheet ☐ Building, Structure, and Object Record ☐Archaeological Record ☒ District Record ☐ Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #
HRI#
Trinomial

Page 4 of 11 ***Resource Name or #:** Firestone Tire and Rubber Company, South Gate Historic District

***Map Name:** South Gate, California ***Scale:** 1:24,000 ***Date of Map:** 1964 (Photorevised 1981)



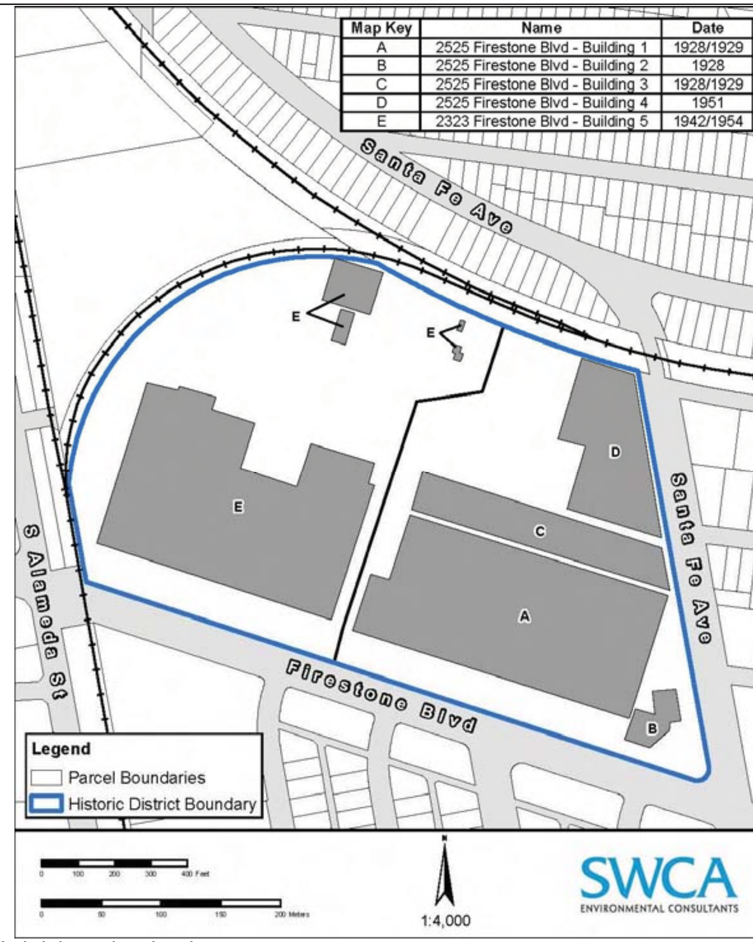
DPR 523J (1/95) *Required information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary #
HRI#
Trinomial

Page 5 **of** 11 ***Resource Name or #** Firestone Tire and Rubber Company, South Gate Historic District

***Drawn By: Chad Flynn** ***Date: September 2009**



Map Key	Name	Date
A	2525 Firestone Blvd - Building 1	1928/1929
B	2525 Firestone Blvd - Building 2	1928
C	2525 Firestone Blvd - Building 3	1928/1929
D	2525 Firestone Blvd - Building 4	1951
E	2323 Firestone Blvd - Building 5	1942/1954

NOTE: Include bar scale and north arrow.

DPR 523K (1/95) *Required information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 3CB

Other Listings
Review Code Reviewer Date

 *Resource Name or #: Building 1 at 2525 Firestone Boulevard (Sketch Map Item A)

P1. Other Identifier: Building 1

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** Los Angeles
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad:** South Gate **Date:** 1964 (Photorevised 1981) **T** 2 South; **R** 13 West; **Unsectioned** S.B. **B.M.**
c. Address: 2525 Firestone Boulevard City: Southgate Zip: 90280
d. UTM: Zone: ; mE/ mN (G.P.S.)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation:
APN 6204-034-003.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The subject property (Sketch Map Item A) is a one and a half story; commercial/industrial warehouse building that was built in 1928 for the Firestone Tire and Rubber Company (Firestone). The building is rectangular in plan and abuts Building 3 to the rear. An enclosed sky bridge at the second story connects Building 1 to Building 2 to the right. Clad in tan stucco and red terra cotta roof tile, the building was designed in an Italianate Mediterranean Revival Style. The roofline is also adorned with simple stringcourses that add some depth to the façade. The use of Mediterranean Revival architectural styles in Southern California was particularly popular at the turn of the century to the 1920s, a movement rooted in concepts and ideals emerging at the time about the development of California's regional identity. The subject property's front elevation is roughly symmetrical, with few variations in fenestration and entryways. It is approximately 750' wide, consisting of 25 bays and five simply-detailed and evenly-spaced square portals that mark the building's points of access. Each is topped with a square, pyramidal roof that projects modestly above the shallow slope of the tiled horizontal roofline. The center portal is the tallest, extending approximately ten feet above the roofline. The center portal also features a large arched multi-light, metal-sash window. Set behind the building façade, series of saw tooth-edged roofs with clearstory windows allow light throughout the expansive building. Fenestration consists of multi-light metal sash windows in ribbons that span bays from column to column at the first and second stories. Some bays feature garage doors and loading docks at the first level. Window awnings are not original to the subject property and it is unknown when they were added. The original building in 1928 was significantly smaller – it doubled in size in 1929, when it was expanded on both sides by six bays each, terminating in low portals that matched the originals. The subject property is mid-block, spanning nearly the entire width of the parcel and approximately half of the depth. The majority of the lot is paved, with tended lawns at the perimeter of the lot, and few mature trees and shrubs planted near the front of the building and at the edges of the lot. The lot is enclosed by low walls and posts clad in stucco, and chain link fence. The subject property retains adequate integrity to its original appearance and is eligible for listing in the California register under criteria 1 and 3, and as a contributing resource to the Firestone Tire and Rubber Company, South Gate Historic District.

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial building, HP6. 1-3 story commercial building

***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☒Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #) View: East, August 20, 2009, Photograph # 2525 Firestone Blvd-Building 1 South Elevation_082009

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1928 / 1929, Sanborn Maps, Los Angeles, CA, Volume 28, Sheets 2857-2858, 1966.

***P7. Owner and Address:**

***P8. Recorded by:** (Name, affiliation, and address)
S.Francisco, S. Edwards, and F. Smith
SWCA Environmental Consultants
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030

***P9. Date Recorded:** September 3, 2009

***P10. Survey Type:** (Describe) Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Cultural Resources Technical Report East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California (SWCA Environmental Consultants 2009).

***Attachments:** ☐NONE ☒Location Map ☒Sketch Map ☐Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☒District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 3CB

Other Listings
Review Code Reviewer Date

 *Resource Name or #: Building 2 at 2525 Firestone Boulevard (Sketch Map Item B)

P1. Other Identifier: Building 2, Firestone Education & Career Center, Southgate Community Adult School

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** Los Angeles
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad:** South Gate Date**:** 1964 (Photorevised 1981) **T** 2 South; **R** 13 West; Unsectioned S.B. **B.M.**
c. Address: 2525 Firestone Boulevard City: Southgate Zip: 90280
d. UTM: Zone: mE/ mN (G.P.S.)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation:
APN 6204-034-003.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The subject property is a two-story, commercial building that was built in 1928 for the Firestone Tire and Rubber Company (Firestone). It is symmetrical in plan and composed of a central, square tower flanked by two wings that radiate outward to the rear of the building at about 30 degrees from the tower. Clad in tan stucco and red terra cotta roof tile, the building was designed in an Italianate Mediterranean Revival Style. The use of Mediterranean Revival architectural styles in Southern California was particularly popular in the 1920s, a movement rooted in concepts and ideals emerging at the time about the development of California's regional identity. Other character defining features include sculpted medallions that depict production and transportation, a prominently-featured clock that breaks the roofline of the tower, corbels with sculpted faces, copper ornamented sconces, and a sculpted copper capped steeple atop the tower. The roof is mostly flat with a truncated hip, and the roof of the tower is pyramidal, with chamfered corners. Concrete steps lead to the front of the central tower, and the building is entered by a large multi-light glass door with arched glass transom above. Fenestration consists of multi-light metal sash windows arranged in pairs. Window awnings are not original to the subject property and it is unknown when they were added. The subject property is at the front right corner of the parcel, in a southeasterly orientation. The majority of the lot is paved, with tended lawns at the perimeter of the lot, and few mature trees and shrubs planted near the front of the building and at the edges of the lot. The lot is enclosed by low walls and posts clad in stucco, and filled in with chain link fence. The subject property retains adequate integrity to its original appearance and is eligible for listing in the California register under criteria 1 and 3, and as a contributing resource to the Firestone Tire and Rubber Company, South Gate Historic District.

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial building, HP6. 1-3 story commercial building

***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☒Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #) View: Northwest, June 16, 2009, Photograph # LAUSD-Building 2

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1928, Los Angeles County Office of the Assessor

***P7. Owner and Address:**

***P8. Recorded by:** (Name, affiliation, and address)
S. Francisco, S. Edwards, and F. Smith
SWCA Environmental Consultants
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030

***P9. Date Recorded:** September 3, 2009

***P10. Survey Type:** (Describe) Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Cultural Resources Technical Report East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California (SWCA Environmental Consultants 2009).

***Attachments:** ☐NONE ☒Location Map ☒Sketch Map ☐Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☒District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 3CB

Other Listings
Review Code   Reviewer   Date

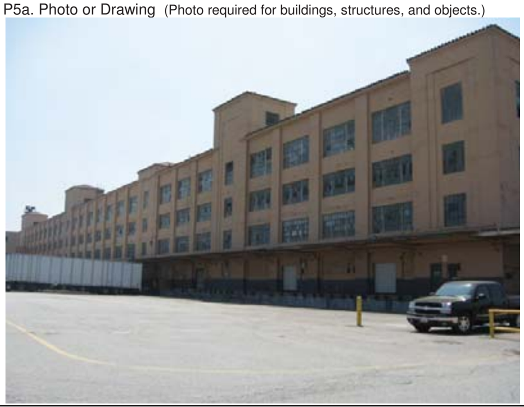
Page 8 of 11   ***Resource Name or #:** Building 3 at 2525 Firestone Boulevard (Sketch Map Item C)

P1. Other Identifier: Building 3
***P2. Location:** ☐ Not for Publication ☒ Unrestricted   ***a. County:** Los Angeles
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad:** South Gate Date**:** 1964 (Photorevised 1981) **T** 2 South; **R** 13 West; Unsectioned S.B. **B.M.**
c. Address: 2525 Firestone Boulevard   City: Southgate   Zip: 90280
d. UTM: Zone: mE/ mN (G.P.S.)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation:
APN 6204-034-003.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The subject property (Sketch Map Item C) is a four-story; commercial/industrial building that was built in 1928 for the Firestone Tire and Rubber Company (Firestone). The building is rectangular in plan and abuts Building 1 along the rear of the building's long axis. The building is not visible from major roadways such as Firestone Boulevard and Santa Fe Avenue. The building is mid-block, recessed behind Building 1. Clad in tan stucco and red terra cotta roof tile, the building was designed in a simplified Italianate Mediterranean Revival style. The subject property's primary elevation is roughly symmetrical, except for the heights of projecting towers. It is approximately 750' wide, consisting of 25 bays and five simply-detailed and evenly-spaced square towers that modestly project above the shallow slope of the tiled, truncated-hip roofline. Each is topped with a square, pyramidal roof. The center and west-terminating towers are the shortest, barely extending above the roofline, while all others extend approximately ten feet above. Set behind the building façade, series of saw tooth-edged roofs with clearstory windows allow light throughout the long, narrow building. Fenestration consists of large, multi-light metal sash windows that span bays from column to column at the second through fourth stories. Some bays feature doors, garage doors and loading docks at the first level. The original building in 1928 was significantly smaller – it doubled in size in 1929, when it was expanded on both sides by six bays each in conjunction with an expansion of Building 1. The subject property is mid-block, spanning nearly the entire width of the parcel and approximately half of the depth. The subject property retains adequate integrity to its original appearance and is eligible for listing in the California Register under criteria 1 and 3, and as a contributing resource to the Firestone Tire and Rubber Company, South Gate Historic District.

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial building, HP6. 1-3 story commercial building
***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☒Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #)
View southeast, August 20, 2009, Photograph # 2525 FirestoneBlvd_north elevation building 3_08202009

***P6. Date Constructed/Age and Sources:**
☒Historic ☐Prehistoric ☐Both
1928/1929, Sanborn Maps, Los Angeles, CA, Volume 28, Sheets 2857-2858, 1966.

***P7. Owner and Address:**

***P8. Recorded by:** (Name, affiliation, and address)
S. Francisco, S. Edwards, and F. Smith
SWCA Environmental Consultants
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030

***P9. Date Recorded:** September 3, 2009

***P10. Survey Type:** (Describe) Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Cultural Resources Technical Report East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California (SWCA Environmental Consultants 2009).

***Attachments:** ☐NONE ☒Location Map ☒Sketch Map ☐Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☒District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 3CD

Other Listings
Review Code   Reviewer   Date

Page 9 **of** 11   ***Resource Name or #:** Building 4 at 2525 Firestone Boulevard (Sketch Map Item D)

P1. Other Identifier: Building 4
***P2. Location:** ☐ Not for Publication ☒ Unrestricted   ***a. County:** Los Angeles
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad:** South Gate Date**:** 1964 (Photorevised 1981) **T** 2 South; **R** 13 West; Unsectioned S.B. **B.M.**
c. Address: 2525 Firestone Boulevard   City: South Gate   Zip: 90280
d. UTM: Zone: mE/ mN (G.P.S.)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation:
APN 6204-034-003.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The subject property (Sketch Map Item D) is a two-story utilitarian commercial/industrial building, built in 1951 for the Firestone Tire and Rubber Company (Firestone). The building is a later addition to its neighboring buildings designed in an Italianate Mediterranean Revival Style; however the building retains the same color and exterior cladding as its predecessors despite its utilitarian, informal design. Exterior walls are clad in stucco and all visible windows are small, evenly-spaced, multi-light, metal sash. The building has an irregular plan with mostly rectilinear walls except for its east wall that was constructed to follow a diagonal orientation facing onto Santa Fe Avenue. The roof is flat and set behind a continuous, straight parapet. The rear elevation faces railroad active tracks to the north, and features railroad dock door openings. The building occupies the northeast corner of the parcel, and is visible from Santa Fe Avenue. Alterations include the infill of windows on the building's west elevation with masonry and stucco. "Ghosted" outlines of previously-existing windows are still visible. Despite limited alterations, the subject property retains adequate integrity to its original appearance and is eligible for listing in the California register under criterion 1, as a contributing resource to the Firestone Tire and Rubber Company, South Gate Historic District.

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial building, HP6. 1-3 story commercial building
***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☒Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #)
View southeast, August 20, 2009, Photograph # 2525 Firestone Blvd_building 4_082009

***P6. Date Constructed/Age and Sources:**
☒Historic ☐Prehistoric ☐Both
1951, Los Angeles County Office of the Assessor

***P7. Owner and Address:**

***P8. Recorded by:** (Name, affiliation, and address)
S. Francisco, S. Edwards, and F. Smith
SWCA Environmental Consultants
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030

***P9. Date Recorded:** September 3, 2009

***P10. Survey Type:** (Describe) Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Cultural Resources Technical Report East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California (SWCA Environmental Consultants 2009).

***Attachments:** ☐NONE ☒Location Map ☒Sketch Map ☐Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☒District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 3CD

Other Listings
Review Code | Reviewer | Date

 ***Resource Name or #:** Building 5 at 2323 Firestone Boulevard (Sketch Map Item E)

P1. Other Identifier: Building 5, HON Office Furniture Building

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** Los Angeles

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** South Gate **Date:** 1964 (Photorevised 1981) **T** 2 South **R** 13 West **Unsectioned** S.B. **B.M.**

c. Address: 2323 Firestone Boulevard City: South Gate Zip: 90280

d. UTM: Zone: ; mE/ mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) APN# 6204-034-002

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The subject property (Sketch Map Item E) is a two-story, Italianate Mediterranean Revival style commercial/industrial block that was built in 1941 for the Firestone Tire and Rubber Company (Firestone) (Los Angeles Assessor). The building has an irregular plan with an asymmetrical facade, with a few variations in fenestration and entryways, including a section of glass blocks that replaced the original metal sash, multi-light windows. The façade is comprised of 24 bays with four simply-detailed and evenly-spaced square portals each topped with a pyramidal, terracotta tile roof marking a point of entry. The east section of the façade is slightly recessed and shorter by 10-12 feet than the center and western sections. The predominant roof material is terracotta tile, but there are examples of metal roofing seen on the rear and side elevations. The façade of the building is consistent with the other Firestone buildings in the following ways: use of stucco and metal sash. There are a series of loading docks, open canopies and work areas visible on the other elevations. The west elevation runs along the railroad tracks and features a variety of punched openings and loading areas consistent with extensive use of the railroad for commerce and transportation by the Firestone Tire and Rubber Company.

By 1942, Firestone used the building for the manufacturing of fuel cells and in 1954 the building was expanded for the Guided Missile Division (Sanborn rev. 1951, *Los Angeles: Place of Possibilities* 370-371). By 1980, HON Furniture Company purchased the property from Firestone and began an extensive rehabilitation with the assistance of a 2.75 million dollar economic development grant from the city of South Gate (*Los Angeles Times*, 1982). (See Continuation Sheet).

***P3b. Resource Attributes:** (List attributes and codes) HP6. 1-3 story Commercial building, HP8. Industrial building

***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☒Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #) View northwest, September 3, 2009, South Elevation_2323 Firestone Blvd.

***P6. Date Constructed/Age and Sources:**
1941, Los Angeles County Office of the Assessor

☒Historic ☐Prehistoric ☐Both

***P7. Owner and Address:**

***P8. Recorded by:** (Name, affiliation, and address)
S. Francisco, S. Edwards and F. Smith
SWCA Environmental Consultants
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030

***P9. Date Recorded:** September 3, 2009

***P10. Survey Type:** (Describe) Intensive

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Cultural Resources Technical Report East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California (SWCA Environmental Consultants 2009).

***Attachments:** ☐NONE ☒Location Map ☒Sketch Map ☒Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☒District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #
HRI#
Trinomial

 ***Resource Name or #** Building 5-2323 Firestone Boulevard (Sketch Map Item E)

***Recorded by:** F. Smith, S. Edwards, and S. Francisco ***Date:** September 3, 2009 ☒ Continuation ☐ Update

After HON Furniture acquired the property, several alterations were made (primarily to Building 5): cut two 12' high openings in concrete block wall between Buildings 3 and 5 (Building Permit, or BP#6458, 1981), cut opening for new overhead door (BP#36772, 1981), removed 2,840 SF of steel sash windows and installed concrete block filler wall and applied stucco to east wall (BP#37302, 1981), installed exit door and built up concrete step (BP#39496, 1982), added 15' X 13' steel room for pumps with steel roof (BP#0773, 1987), one-story storage and paint mixing room (BP#6442, 1988), addition of 2 dock boards, 3 roll-up doors and concrete slab (BP#4877, 1985), replaced existing storefront with glass block (BP#6458, 1993), ramp addition to high dock 36' X 68'8" (BP#2972, 1993), sandblasted for stucco (BP#3501, 1995), additional shipping dock 4' X 90' with metal canopy and truck wheel concrete pad (BP#16579, 1997), razed various buildings, including pump building (BP#37872, 1987), and a 20' X 12' open canopy addition (BP#12297, 1997). The alterations made for HON Furniture are important to the development of the complex, but do not contribute to the historic district as their presence was outside of the identified period of significance, from 1928-1954.
The HON complex is separate from the main plant complex, bisected by a north-south driveway to the east, which serves as the point of entry into the historic district. Decorative, curved, stucco-finished gate posts initiate the sequence of entry at the driveway and are repeated at Building 2. Guard stations are incorporated in the gate post walls, carrying out the archiyectural theme with steel sash windows, decorative lamps and security bars (Photograph 1). The south (main) elevation of the main building features extensive plantings with mature trees and shrubbery. Paved parking areas dominate the north and south sides, with loading areas on east and west elevations. There are a series of chain link fences on the north, east and west elevations. Multiple outbuildings are located north of the main building. There is a contributing, one-story Quonset hut building, clad in metal siding (Photo 2, Tire Debeading Shed, Sanborn rev. 1950). It was on site before 1950 and likely was surplus, moved from a military facility after World War II, within the period of significance for the property. Situated north of the Quonset, there is a non-contributing, one-story front gabled, long rectangular shed building, clad in metal with a metal roof (Photo 3, post-1954). Northeast of the main building there is a pump station area with two sheds and a poured concrete platform, circumscribed by a chain link fence (Photo 3, dates unknown). Of those, only the Quonset hut is a contributing resource, the three other buildings do not contribute to the significance of the historic district. Despite described alterations, Building 5 retains modest integrity to its original appearance and is eligible for listing in the California Register under Criteria 1, as a contributing resource to the Firestone Tire and Rubber Company, South Gate Historic District.

Photograph 1. Contributing gate posts and guard house, south of Building 5. View northwest, August 16, 2008, Photograph # LAUSD 08 16 09-075.

Photograph 2. Contributing Quonset outbuilding (left), non-contributing outbuilding (right) located north of Building 5. View northwest, September 3, 2009, Photograph # 2323 Firestone Blvd_outbuildings_09032009.

Photograph 3. Non-contributing Pump Station area northeast of Building 5. View north, September 3, 2009, Photograph # 2323 Firestone Blvd_pump station area_09032009.

Photograph 4. Contributing pedestrian bridge connecting Buildings 2 and 3. View north, August 16, 2008, Photograph # LAUSD 08 16 09-067.

APPENDIX E:
California Historical Resource Status Codes,
Secretary of the Interior's Professional Qualification Standards
and
Secretary of the Interior's Standards for Rehabilitation

California Historical Resource Status Codes

1	**Properties listed in the National Register (NR) or the California Register (CR)**
1D	Contributor to a district or multiple resource property listed in NR by the Keeper. Listed in the CR.
1S	Individual property listed in NR by the Keeper. Listed in the CR.
1CD	Listed in the CR as a contributor to a district or multiple resource property by the SHRC
1CS	Listed in the CR as individual property by the SHRC.
1CL	Automatically listed in the California Register – Includes State Historical Landmarks 770 and above and Points of Historical Interest nominated after December 1997 and recommended for listing by the SHRC.
2	**Properties determined eligible for listing in the National Register (NR) or the California Register (CR)**
2B	Determined eligible for NR as an individual property and as a contributor to an eligible district in a federal regulatory process. Listed in the CR.
2D	Contributor to a district determined eligible for NR by the Keeper. Listed in the CR.
2D2	Contributor to a district determined eligible for NR by consensus through Section 106 process. Listed in the CR.
2D3	Contributor to a district determined eligible for NR by Part I Tax Certification. Listed in the CR.
2D4	Contributor to a district determined eligible for NR pursuant to Section 106 without review by SHPO. Listed in the CR.
2S	Individual property determined eligible for NR by the Keeper. Listed in the CR.
2S2	Individual property determined eligible for NR by a consensus through Section 106 process. Listed in the CR.
2S3	Individual property determined eligible for NR by Part I Tax Certification. Listed in the CR.
2S4	Individual property determined eligible for NR pursuant to Section 106 without review by SHPO. Listed in the CR.
2CB	Determined eligible for CR as an individual property and as a contributor to an eligible district by the SHRC.
2CD	Contributor to a district determined eligible for listing in the CR by the SHRC.
2CS	Individual property determined eligible for listing in the CR by the SHRC.
3	**Appears eligible for National Register (NR) or California Register (CR) through Survey Evaluation**
3B	Appears eligible for NR both individually and as a contributor to a NR eligible district through survey evaluation.
3D	Appears eligible for NR as a contributor to a NR eligible district through survey evaluation.
3S	Appears eligible for NR as an individual property through survey evaluation.
3CB	Appears eligible for CR both individually and as a contributor to a CR eligible district through a survey evaluation.
3CD	Appears eligible for CR as a contributor to a CR eligible district through a survey evaluation.
3CS	Appears eligible for CR as an individual property through survey evaluation.
4	**Appears eligible for National Register (NR) or California Register (CR) through other evaluation**
4CM	Master List - State Owned Properties – PRC §5024.
5	**Properties Recognized as Historically Significant by Local Government**
5D1	Contributor to a district that is listed or designated locally.
5D2	Contributor to a district that is eligible for local listing or designation.
5D3	Appears to be a contributor to a district that appears eligible for local listing or designation through survey evaluation.
5S1	Individual property that is listed or designated locally.
5S2	Individual property that is eligible for local listing or designation.
5S3	Appears to be individually eligible for local listing or designation through survey evaluation.
5B	Locally significant both individually (listed, eligible, or appears eligible) and as a contributor to a district that is locally listed, designated, determined eligible or appears eligible through survey evaluation.
6	**Not Eligible for Listing or Designation as specified**
6C	Determined ineligible for or removed from California Register by SHRC.
6J	Landmarks or Points of Interest found ineligible for designation by SHRC.
6L	Determined ineligible for local listing or designation through local government review process; may warrant special consideration in local planning.
6T	Determined ineligible for NR through Part I Tax Certification process.
6U	Determined ineligible for NR pursuant to Section 106 without review by SHPO.
6W	Removed from NR by the Keeper.
6X	Determined ineligible for the NR by SHRC or Keeper.
6Y	Determined ineligible for NR by consensus through Section 106 process – Not evaluated for CR or Local Listing.
6Z	Found ineligible for NR, CR or Local designation through survey evaluation.
7	**Not Evaluated for National Register (NR) or California Register (CR) or Needs Revaluation**
7J	Received by OHP for evaluation or action but not yet evaluated.
7K	Resubmitted to OHP for action but not reevaluated.
7L	State Historical Landmarks 1-769 and Points of Historical Interest designated prior to January 1998 – Needs to be reevaluated using current standards.
7M	Submitted to OHP but not evaluated - referred to NPS.
7N	Needs to be reevaluated (Formerly NR Status Code 4)
7N1	Needs to be reevaluated (Formerly NR SC4) – may become eligible for NR w/restoration or when meets other specific conditions.
7R	Identified in Reconnaissance Level Survey: Not evaluated.
7W	Submitted to OHP for action – withdrawn.

12/8/2003

Standards for Rehabilitation

Excerpt from ***The Secretary of the Interior's Standards for The Treatment of Historic Properties With Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings*** (Weeks and Grimmer, 1995). Codified in 36 CFR Part 68 as part of the Preservation Tax Incentives Program.

Rehabilitation as a Treatment
When repair and replacement of deteriorated features are necessary; when alterations or additions to the property are planned for a new or continued use; and when its depiction at a particular period of time is not appropriate, rehabilitation may be considered as a treatment.

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

CULTURAL RESOURCES TECHNICAL REPORT
EAST LOS ANGELES COLLEGE SATELLITE CAMPUS PROJECT

Professional Qualification Standards

The following requirements are used by the National Park Service, and have been previously published in the Code of Federal Regulations, 36 CFR Part 61. The qualifications define minimum education and experience required to perform identification, evaluation, registration, and treatment activities. In some cases, additional areas or levels of expertise may be needed, depending on the complexity of the task and the nature of the historic properties involved. In the following definitions, a year of full-time professional experience need not consist of a continuous year of full-time work but may be made up of discontinuous periods of full-time or part-time work adding up to the equivalent of a year of full-time experience

Architectural History
The minimum professional qualifications in architectural history are a graduate degree in architectural history, art history, historic preservation, or closely related field, with coursework in American architectural history, or a bachelor's degree in architectural history, art history, historic preservation or closely related field plus one of the following:

1. At least two years of full-time experience in research, writing, or teaching in American architectural history or restoration architecture with an academic institution, historical organization or agency, museum, or other professional institution; or
2. Substantial contribution through research and publication to the body of scholarly knowledge in the field of American architectural history.

Historic Architecture
The minimum professional qualifications in historic architecture are a professional degree in architecture or a State license to practice architecture, plus one of the following:

1. At least one year of graduate study in architectural preservation, American architectural history, preservation planning, or closely related field; or
2. At least one year of full-time professional experience on historic preservation projects.

Such graduate study or experience shall include detailed investigations of historic structures, preparation of historic structures research reports, and preparation of plans and specifications for preservation projects.

Paleontological Resource Assessment of the East Los Angles College Satellite Campus Project; City of South Gate, Los Angeles County, California.

SWCA ENVIRONMENTAL CONSULTANTS

Sound Science. Creative Solutions.

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625 Fair Oaks Avenue, Suite 190
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September 18, 2009

Kevin Ferrier
Terry A. Hayes Associates LLC
8522 National Blvd., Suite 102
Culver City, CA 90232

RE: PALEONTOLOGICAL RESOURCE ASSESSMENT OF THE EAST LOS ANGLES COLLEGE SATELLITE CAMPUS PROJECT; CITY OF SOUTH GATE, LOS ANGELES COUNTY, CALIFORNIA.

Dear Kevin:

This letter presents the findings of a preliminary assessment of the paleontological resource potential of the proposed East Los Angeles College Satellite Campus project area (Project), located at the northwestern corner of the intersection of Firestone Boulevard and Santa Fe Avenue on the north side of Firestone Boulevard in the City of South Gate, Los Angeles County, California (Figure 1). This initial evaluation was performed to identify the geologic unit(s) within the project area, assess their paleontological resource potential (sensitivity), and provide recommendations for future paleontological resources mitigation measures during project construction. This assessment was conducted in accordance with the professional guidelines established by the Society of Vertebrate Paleontology (SVP) (1995) and guidelines set forth in the County of Los Angeles General Plan.

Introduction and Definition of Paleontological Resources

Paleontology is a multidisciplinary science that combines elements of geology, biology, chemistry, and physics in an effort to understand the history of life on earth. Paleontological resources, or fossils, are the remains, imprints, or traces of once-living organisms preserved in rocks and sediments. These include mineralized, partially mineralized, or unmineralized bones and teeth; soft tissues; shells; wood; leaf impressions; footprints; burrows; and microscopic remains. The fossil record is the only evidence that life on earth has existed for more than 3.6 billion years. Fossils are considered nonrenewable resources because the organisms they represent no longer exist. Thus, once destroyed, a fossil can never be replaced. Fossils are important scientific and educational resources because they are used to:

- Study the phylogenetic relationships between extinct organisms, as well as their relationships to modern groups;
- Elucidate the taphonomic, behavioral, temporal, and diagenetic pathways responsible for fossil preservation, including biases in the fossil record;
- Reconstruct ancient environments, climate change, and paleoecological relationship;

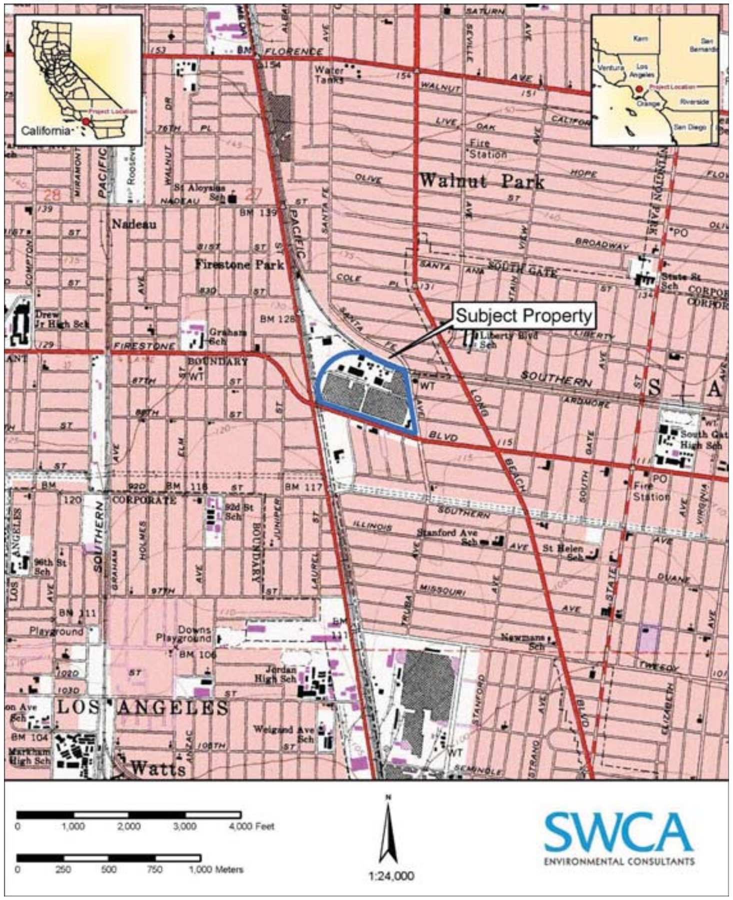

Figure 1. Project Location Map

PALEONTOLOGICAL RESOURCES ASSESSMENT
LOS ANGELES COLLEGE SATELLITE CAMPUS PROJECT-TAHA

- Provide a measure of relative geologic dating, which forms the basis for biochronology and biostratigraphy, and which is an independent and supporting line of evidence for isotopic dating;
- Study the geographic distribution of organisms and tectonic movements of landmasses and ocean basins through time;
- Study patterns and processes of evolution, extinction, and speciation; and
- Identify past and potential future human-caused effects to global environments and climates (Murphey and Daitch, 2007).

Regulatory Framework

Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value and are afforded protection under federal (National Environmental Policy Act [NEPA]), state (California Environmental Quality Act [CEQA]), and local (Los Angeles County) laws and regulations. This study satisfies project requirements in accordance with CEQA (13 Public Resources Code [PRC] 2100 et seq.) and Public Resource Code (PRC) Section 5097.5 (Stats 1965, c. 1136, p. 2792). This analysis also complies with guidelines and significance criteria specified by the SVP (1995) and the Los Angeles County General Plan.

Federal

Federal protection for scientifically significant paleontological resources applies to projects if any construction or other related project impacts occur on federally owned or managed lands, involve the crossing of state lines, or are federally funded. The following federal protections may apply to paleontological resources within the proposed Project area:

- American Antiquities Act of 1906 (6 USC 431 433). Establishes a penalty for disturbing or excavating any historic or prehistoric ruin or monument or object of antiquity on federal lands as a maximum fine of $500 or 90 days in jail.
- The National Environmental Policy Act of 1969, as amended (Pub. L. 91 190, 42 U.S.C. 4321 4347, January 1, 1970, as amended by Pub. L. 94 52, July 3, 1975, Pub. L. 94 83, August 9, 1975, and Pub. L. 97 258 §4(b), Sept. 13, 1982). Recognizes the continuing responsibility of the Federal Government to "preserve important historic, cultural, and natural aspects of our national heritage…." (Sec. 101 [42 USC § 4321]) (#382).
- National Historic Preservation Act of 1966 (Pub. L. 89 665; 80 Stat. 915, 16 U.S.C. 470 et seq.). Provides for the survey, recovery, and preservation of significant paleontological data when such data may be destroyed or lost due to a federal, federally licensed, or federally funded project.
- Federal Land Management and Policy Act of 1976 (43 U.S.C. 1712[c], 1732[b]); sec. 2, Federal Land Management and Policy Act of 1962 [30 U.S.C. 611]; Subpart 3631.0 et seq.), Federal Register Vol. 47, No. 159, 1982. Defines significant fossils as: unique, rare or particularly well-preserved; an unusual assemblage of common fossils; being of high scientific interest; or providing important new

data concerning [1] evolutionary trends, [2] development of biological communities, [3] interaction between or among organisms, [4] unusual or spectacular circumstances in the history of life, or [5] anatomical structure.

State

- California Environmental Quality Act (CEQA). Guidelines for the Implementation of CEQA, as amended March 29, 1999 (Title 14, Chapter 3, California Code of Regulations: 15000 et seq.) define procedures, types of activities, persons, and public agencies required to comply with CEQA, and include as one of the questions to be answered in the Environmental Checklist (§15023, Appendix G, Section XIV, Part a) the following: "Will the proposed project directly or indirectly destroy a significant paleontological resource or unique geologic feature?"
- Public Resources Code (Chapter 1.7), §5097.5 and §30244. These statutes prohibit the removal of any paleontological site or feature on public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts to paleontological resources from developments on public (state) lands.

Local

The County of Los Angeles is in the process of comprehensively updating the existing Los Angeles General Plan, adopted in 1980. In 2007, a Draft Preliminary General Plan was released in which paleontological resources are addressed under Conservation and Open Space, Section VII Historical, Cultural, and Paleontological Resources. Programs for Cultural and Historical Resources for CEQA indicate the following:

> CEQA provided guidelines for the identification and protection of archaeological sites, artifacts, and paleontological resources. If a project threatens an archaeological or paleontological resource, the project is required to provide mitigation measures to protect the site or enable study and documentation of the site. Assessment of these resources requires a survey prepared by a qualified archaeologist or paleontologist.

Methods

Due to the nature of the fossil record, paleontologists cannot know either the quality or the quantity of fossils present in a given geologic unit prior to natural erosion or human-caused exposure. Therefore, in the absence of surface fossils, it is necessary to assess the sensitivity of rock units based on their known potential to produce scientifically significant fossils elsewhere within the same geologic unit (both within and outside of the study area) or a unit representative of the same depositional environment.

For the purposes of assessing a project area's paleontological resource potential, a museum records search is performed in order to (1) determine whether there are any known fossil localities in or near the project area, (2) identify the geologic units present in the project area, and (3) determine the paleontological sensitivity ratings of those geologic units to assess potential impacts to nonrenewable paleontological resources. For this

project, a records search performed by the Vertebrate Paleontology division of the Natural History Museum of Los Angles County (LACM) for a proposed development project within the immediate vicinity of the current study area was reviewed (McLeod, 2008). In addition to the museum records review, published and unpublished literature and geologic maps were reviewed. Using this information, recommendations specific to this project were developed in accordance with the SVP (1995) and the County of Los Angeles General Plan (County of Los Angeles 2008).

Resource Assessment Guidelines

The loss of any identifiable fossil that could yield information important to prehistory, or that embodies the distinctive characteristics of a type of organism, environment, period of time, or geographic region, would be a significant environmental impact. Direct impacts on paleontological resources primarily concern the potential destruction of nonrenewable paleontological resources and the loss of information associated with these resources. This includes the unauthorized collection of fossil remains. If potentially fossiliferous bedrock or surficial sediments are disturbed, the disturbance could result in the destruction of paleontological resources and subsequent loss of information (significant impact). At the project-specific level, direct impacts can be mitigated to below a significant level through the implementation of paleontological mitigation.

The CEQA threshold of significance for a significant impact to paleontological resources is reached when a project is determined to "directly or indirectly destroy a significant paleontological resource or unique geologic feature." In general, for project areas that are underlain by paleontologically sensitive geologic units, the greater the amount of ground disturbance, the higher the potential for significant impacts to paleontological resources. For project areas that are directly underlain by geologic units with no paleontological sensitivity, there is no potential for impacts on paleontological resources unless sensitive geologic units which underlie the non-sensitive unit are also affected.

Paleontological Sensitivity

Paleontological sensitivity is defined as the potential for a geologic unit to produce scientifically significant fossils. This is determined by rock type, past history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey. In its "Standard Guidelines for the Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources," the Society of Vertebrate Paleontology (SVP) (1995:23) defines four categories of paleontological sensitivity (potential) for rock units: high, low, undetermined, and no potential:

- High Potential. Rock units from which vertebrate or significant invertebrate fossils or suites of plant fossils have been recovered and are considered to have a high potential for containing significant nonrenewable fossiliferous resources. These units include, but are not limited to, sedimentary formations and some volcanic formations that contain significant nonrenewable paleontologic resources anywhere within their geographical extent and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Sensitivity comprises both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, ecologic, or stratigraphic data. Areas that contain potentially datable organic remains older than Recent, including deposits associated with nests or middens and areas that may contain new vertebrate deposits, traces, or trackways, are also classified as significant.

- Low Potential. Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow determination that some areas or units have low potentials for yielding significant fossils. Such units will be poorly represented by specimens in institutional collections.
- Undetermined Potential. Specific areas underlain by sedimentary rock units for which little information is available are considered to have undetermined fossiliferous potential.
- No Potential. Highly metamorphosed rock and granitic rocks do not generally yield fossils and therefore have no potential to contain significant nonrenewable fossiliferous resources.

Geologic Setting

The project area is situated in the southwestern block of the Los Angeles basin. The Los Angeles basin is a structural depression that has been the site of discontinuous deposition since the Late Cretaceous and of continuous subsidence and primarily marine deposition since the middle Miocene. This and other sedimentary basins formed during Miocene and Pliocene as a result of an early San Andreas-type phase of transform motion along the western margin of North America. At least three cycles of shallow marine transgression and regression created embayments and flood plains along the ancient coastline. During much of the middle Miocene, a northwest-trending marine embayment covered the site of the Los Angeles basin. Rivers that drained the highlands to the north and east transported and deposited huge volumes of coarse-grained sandstone and sandy cobble-boulder conglomerate into the embayment (Yerkes et al., 1965). Deposition continued until the end of the Pliocene, at which time the Palos Verdes Hills were an island and large parts of the Santa Monica Mountains, the Puente Hills, the Santa Ana Mountains, and much of the southwest portions of the basin were exposed. Then, in the early Pleistocene, the Palos Verdes Hills and southwestern areas again subsided and marine deposition resumed (Yerkes et al., 1965).

According to geologic mapping by Jennings (1962) and Saucedo, et al. (2003), the project area is underlain by younger Quaternary alluvial deposits of Holocene age (10,000 years before present [BP] to Recent). Surficial deposits of younger Quaternary alluvium generally consist of unconsolidated gravel, sand, silt, and clay deposited in modern stream channels and fluvial slope wash. Specific to the study area, these fluvial deposits are in part derived from the nearby Los Angeles River. These young sediments overlie "older alluvium" of Pleistocene age (1.8 million years ago [Ma] to 10,000 years BP) at an unknown but potentially shallow depths. Older alluvial sediments may be slightly to moderately consolidated but are generally only distinguishable through relative dating and stratigraphic position.

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LOS ANGELES COLLEGE SATELLITE CAMPUS PROJECT-TAHA

Analysis and Results

Museum collections maintained by the LACM contain no recorded vertebrate fossil localities within the boundaries of the project area; however, at least eight scientifically significant fossil localities have been documented within Quaternary older alluvium deposits in the vicinity of the Project area (Table 1). These localities yielded significant vertebrate remains of medium to large terrestrial mammals including specimens of mammoth, mastodon, ground sloth, saber-tooth cat, deer, horse, antelope, bison, dire wolf, and camel; as well as pocket gopher, turkey, weasel, rabbit, squirrel, coot, puffin, and pond turtle. The depths at which these fossil specimens were discovered were for the most part unreported. However, LACM 1295, 1344, 3266, and 4206 were reportedly recovered from excavations as shallow as 15 feet below the ground surface.

Table 1. Previously Recorded Vertebrate Fossil Localities in the Vicinity of the Project Area

Locality Number and Approximate Location	Geologic Formation	Taxa
LACM 1295, 1344, 3365, 4206; southwest of the project area in the vicinity of Harbor Freeway (I-110) and the community of Athens	Older Quaternary deposits	*Clemmys* (pond turtle), *Mancalla* (puffin), Parapavo (turkey), *Paramylodon* (ground sloth), *Mammuthus* (mammoth) *Canis dirus* (dire wolf), *Sylvilagus* (rabbit), Sciuridae (squirrel), *Microtus* (deer mouse), *Thomomys* (pocket gopher), *Equus* (horse), *Cervus* (deer), *Capromeryx* (pronghorn antelope), *Bison* (bison)
LACM 3252; west of the project area near the intersection of Hyde Park Boulevard and Crenshaw Avenue	Older Quaternary deposits	*Bison* (bison) and *Camelops* (camel)
LACM 5888; west of the project area south of Florence Avenue and east of Crenshaw Boulevard	Older Quaternary deposits	*Mammut* (mastodon)
LACM 1170; west of the project area northwest of Florence Avenue and northeast of Centinela Avenue	Older Quaternary deposits	*Fulica americana* (coot), *Megalonyx jeffersoni* (ground sloth), *Mammut americana* (mastodon), Rodentia (rodent), *Mustela frenata* (weasel), *Smilodon californicus* (saber-tooth cat), *Equus* (horse), *Platygonus* (peccary) *Camelops hesternus* (camel), *Capromeryx minor* (pronghorn antelope), *Odocoileus hemionus* (deer), *Bison antiquus* (bison)
LACM 1159; west-northwest of the project area along Exposition Boulevard and west of Crenshaw Boulevard	Older Quaternary deposits	Fossil vertebrates and invertebrates found in association with human remains

Source: McLeod, 2008

Due to its proven potential to contain significant vertebrate fossils, Quaternary older alluvium is considered to have a high paleontological sensitivity. No fossil localities were discovered within the younger Quaternary alluvium either within or in the vicinity of the project area, and Holocene-age deposits generally contain only the remains of modern organisms. Thus, the surficial geologic sediments within the Project area are considered to have a low paleontological sensitivity. However, the sensitivity of younger alluvium increases with depth, as it overlies highly sensitive older alluvium.

Recommendations

Surficial and/or very shallow excavations related to the Project are unlikely to result in adverse impacts to significant paleontological resources; however, deeper excavations (10 feet deep or greater) may have an adverse impact to paleontological resources unless proper mitigation measures are implemented. The destruction of fossils as a result of human-caused ground disturbance has a significant cumulative impact, as it makes biological records of ancient life permanently unavailable for study by scientists. Implementation of proper mitigation measures can, however, reduce the impacts to the paleontological resources to below the level of significance.

The following mitigation measures have been developed in accordance with the SVP (1995) standards and meet the paleontological requirements of CEQA. These mitigation measures have been used throughout California and have been demonstrated to be successful in protecting paleontological resources while allowing timely completion of construction.

a. All project-related ground disturbances that could potentially impact paleontologically sensitive Quaternary older alluvium will be monitored by a qualified paleontological monitor on a full-time basis, as this geologic unit is considered to have a high paleontological sensitivity. Since Quaternary older alluvium is estimated to occur at depths of 10 feet and greater, all excavations deeper than 10 feet will be monitored full-time. Additionally, any excavations that occur in surficial younger (Holocene age) Quaternary alluvial and fluvial deposits and/or topsoil (estimated to occur at less than 10 feet in depth) will be spot-checked on a part-time basis at the discretion of the Qualified Paleontologist to ensure that underlying paleontologically sensitive sediments are not being impacted.
b. A Qualified Paleontologist will be retained to supervise monitoring of construction excavations and to implement a paleontological monitoring and mitigation plan for the proposed project.
c. Paleontological resource monitoring will include inspection of exposed rock units during active excavations within sensitive geologic sediments. The monitor will have authority to temporarily divert grading away from exposed fossils in order to professionally and efficiently recover the fossil specimens and collect associated data.
d. At each fossil locality, field data forms will be used to record pertinent geologic data, stratigraphic sections will be measured, and appropriate sediment samples will be collected and submitted for analysis.

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e. Recovered fossils will be prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and reposited in a designated paleontological curation facility. The most likely repository is the Natural History Museum of Los Angeles County (LACM).
f. The Qualified Paleontologist will prepare a final monitoring and mitigation report to be filed with the client, the lead agency, and the repository.

It has been a pleasure assisting you with this project. If you have any questions regarding this paleontological assessment, please don't hesitate to contact me at jdebusk@swca.com or (626) 240-0587 ext. 104.

Respectfully submitted,

Jessica DeBusk
Project Manager, Paleontology

Cara Corsetti
Program Director, Paleontology

Updated Built Environment Assessment

ENVIRONMENTAL CONSULTANTS

Sound Science. Creative Solutions.®

Updated Built Environment Assessment for the Firestone Education Center Master Plan, City of South Gate, Los Angeles County, California

Prepared for

Terry A. Hayes Associates Inc.

Prepared by

SWCA Environmental Consultants

July 2015

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UPDATED BUILT ENVIRONEMNT ASESSMENT FOR THE FIRESTONE EDUCATION CENTER MASTER PLAN, CITY OF SOUTH GATE, LOS ANGELES COUNTY, CALIFORNIA

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USGS 7.5-Minute Topographic Quadrangle
South Gate, California 1964, Photorevised 1981

SWCA Project No. 030030.00

SWCA Report No. 15-252

Final
July 2015

MANAGEMENT SUMMARY

Purpose and Scope: Terry A. Hayes and Associates (TAHA) retained SWCA Environmental Consultants (SWCA) to conduct an updated built environment assessment for the Firestone Education Center Master Plan (project) Environmental Impact Report (EIR). The project is located at 2525 Firestone Boulevard in the City of South Gate, Los Angeles County, California. This assessment was prepared pursuant to the California Environmental Quality Act (CEQA), Public Resources Code (PRC) Section 5024.1, Section 15064.5 of the Guidelines, and Sections 21083.2 and 21084.1 of the Statutes of CEQA.

Project Background: In September 2009, SWCA prepared a Cultural Resources Technical Report for the current project area, as well as an adjacent parcel located at 2323 Firestone Boulevard in support of the East Los Angeles College Firestone Education Center Final EIR (2009 EIR). The Cultural Resources Technical Report found that the properties at 2323 and 2525 Firestone Boulevard contained the Firestone Tire and Rubber Company, South Gate Historic District, which was found eligible for listing in the California Register of Historical Resources (California Register) under Criteria 1 and 3. The district contributors included five buildings, one ancillary building, and a pair of gateposts. The remaining three ancillary buildings and an associated feature were found not eligible for the California Register and are not considered district contributors. Four of the buildings and the gateposts, which were found to be historic district contributors, are located within the current project area. Since 2009, a revised master plan has been proposed for the parcel located at 2525 Firestone Boulevard, which requires the preparation of a subsequent EIR.

Recommendations: The new work proposed related to the built environment required further analysis to assess potential impacts to the site. According to the Master Plan, Building 2 will remain in place, with no proposed alterations or reuse plans; no impacts are anticipated to this building. Implementation of the Master Plan will also include the demolition of three buildings (Buildings 1, 3, and 4), construction of one new structure, landscaping improvements, and the relocation or demolition of the California Register-eligible gateposts and fence. These changes would cause significant impacts to the historic district, making it no longer eligible for listing in the California Register; resulting in a significant direct impact to cultural resources related to a substantial adverse change in the significance of a historical resource.

Disposition of Data: This report and any subsequent related reports will be filed with TAHA; Los Angeles Community College District; the South Central Coastal Information Center; and with SWCA's Pasadena, California office. All field notes, photographs, and records related to the current study are also on file at the SWCA Pasadena office.

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CONTENTS

FIGURES

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INTRODUCTION

SWCA Environmental Consultants (SWCA) was retained by Terry A. Hayes and Associates (TAHA) to conduct an updated built environment assessment in support of the proposed 2013 Firestone Education Center (FEC) Master Plan (project). The project area is located on an 18.5-acre parcel at 2525 Firestone Boulevard in the City of South Gate, Los Angeles County, California (Figure 1).

The study was completed to comply with the provisions of the California Environment Quality Act (CEQA), including the CEQA Statutes (Public Resources Code [PRC] Sections 21083.2 and 21084.1), the CEQA Guidelines (Title 14 California Code of Regulations [CCR], Section 15064.5), and PRC 5024.1 (Title 14 CCR, Section 4850 et seq.). These statutes and regulations, as amended, are summarized in an annually updated handbook (Association of Environmental Professionals 2010).

SWCA Cultural Resources Project Manager Steven Treffers, M.H.P., managed the project and prepared this report. GIS Specialist Emily Kochert, B.A., prepared the figures found in this report. This report was reviewed for quality assurance/quality control by Cultural Resources Principal Investigator Heather Gibson, Ph.D., Registered Professional Archaeologist.

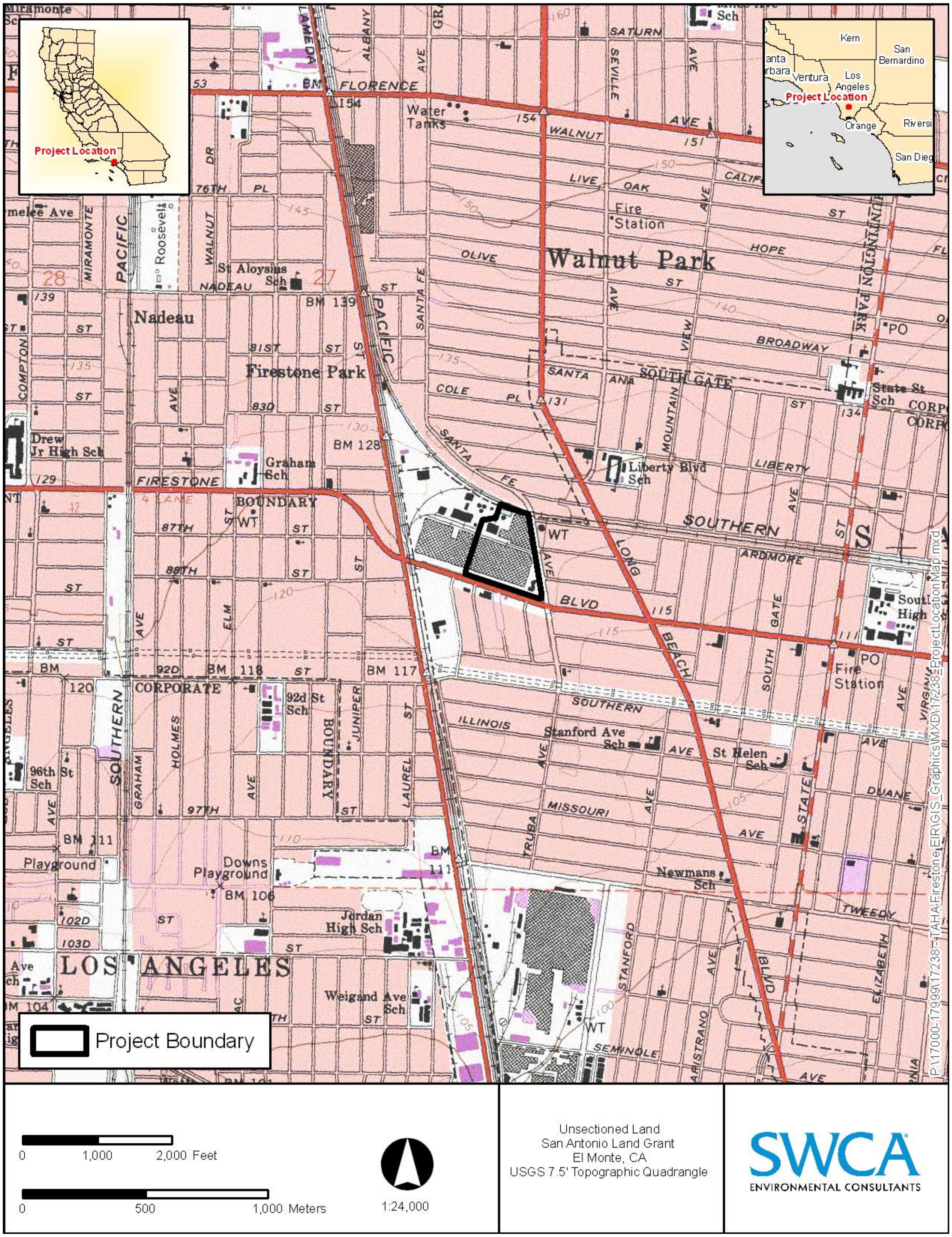

Figure 1. Project location map

Figure 2. Aerial Photograph of the Project Area

Project Background

In September 2009, SWCA prepared the *Cultural Resources Technical Report, East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California* (Smith et al. 2009) in support of the *East Los Angeles College Firestone Education Center Final EIR* (2009 EIR). The report covered the current project area, as well as an adjacent parcel located at 2323 Firestone Boulevard. The study included field surveys, research, and an assessment of the archaeological and built environment resources within the sites. The Cultural Resources Technical Report (Smith et al. 2009) found that the two parcels contained the Firestone Tire and Rubber Company, South Gate Historic District, which was found eligible for listing in the California Register of Historical Resources (California Register) under Criteria 1 and 3. The district contributors included five buildings, one ancillary building, and a pair of gateposts. The remaining three ancillary buildings and an associated feature were found not eligible for the California Register and are not considered district contributors. Of the identified district contributors, four of the buildings (Buildings 1-4) and the gateposts are located within the current project area. In December 2009, the Los Angeles Community College District (LACCD) certified the 2009 Final Environmental Impact Report (EIR), which allowed them to acquire the project site with the intent of relocating and expanding the South Gate Educational Center (SGEC).

Following the certification of the 2009 Final EIR, a Master Plan and corresponding EIR was prepared for the FEC in 2011, referred to as the 2011 FEC Master Plan. The 2011 FEC Master Plan was never approved nor was the 2011 FEC Master Plan EIR certified. The 2011 FEC Master Plan anticipated a two-phase project that would ultimately serve up to 12,000 students. However in 2013, LACCD analyzed capacity load ratios to ensure new projects were appropriate in concept, scale, and budget, and reduced the programming of the FEC to accommodate 9,000 students. The resulting 2013 FEC Master Plan reflected these changes, but was never approved nor was the 2013 FEC Master Plan EIR certified.

The 2013 FEC Master Plan has been subsequently revised to include the demolition of Building 1. Section 15162 of the CEQA Guidelines states that a Subsequent EIR shall be prepared if the Lead Agency determines that there is new information of substantial importance, which was not known and could not have been known at the time a previous EIR was certified as complete. Therefore, a Subsequent EIR is required to reevaluate potential environmental impacts based on new information contained in the 2015 FEC Master Plan.

Project Description

The East Los Angeles College (ELAC) established the SGEC as a satellite campus in 1997 to better serve a growing student population that resides in the southern part of the college's service district (i.e., the cities of Bell, Bell Gardens, Commerce, Cudahy, Huntington Park, Maywood, South Gate, and Vernon). The SGEC is located approximately 11 miles southeast of the main ELAC campus in Monterey Park at the southeast corner of the Firestone Boulevard/Alameda Street intersection. Establishment of the SGEC has resulted in an increase in students from high schools that are in close proximity to the SGEC. The existing SGEC occupies a 51,000-square-foot building that has 17 classrooms, a computer lab, a bookstore, a library, and student support services. Student enrollment at the SGEC has increased by about 32 percent between the fall semesters of 2007 and 2011, with approximately 4,912 students enrolled during the fall semester of 2011. Rapid student growth and the lack of adequate facilities and curriculum offerings at the existing SGEC have resulted in deficiencies in meeting the community’s current and future needs. Deficiencies include inadequate parking and the need for many students to commute to the ELAC campus to supplement their coursework. The passage of Bond Measure AA in 2003 provided funding for the purchase and development of a new satellite campus site to meet the demand for greater educational access and opportunities for the communities currently served by the SGEC. An Educational and Space Needs Analysis was conducted for the LACCD in August 2004 to assess the need for a new site. The analysis for a new site was developed with the intent of providing a full-service college curriculum including transfer and vocational curriculum, degree programs, certificate programs, and skill set certificates.

The LACCD proposes to construct a new college campus to meet the existing needs of the community. The project objectives include:

- Provide a full-service education center to replace the existing SGEC and create a true campus environment for ELAC's satellite campus;
- Provide greater capacity to adequately serve the existing and future demand for higher education facilities in the southeast Los Angeles County region;
- Develop and implement plans and procedures to enhance ELAC satellite campus' visibility and reputation for quality;
- Foster a culture of academic excellence by strengthening the educational programs and quality of teaching offered at the ELAC satellite campus that will lead directly to greater student success,
- Create community-oriented development that successfully serves students and the community alike; and
- Provide economic benefits to the City of South Gate and its residents.

The approximately 18.5-acre project site is currently occupied with four buildings, all of which were found eligible for the California Register (Figure 2):

Building 1 fronts Firestone Boulevard and is the largest building on the project site. It is a two-story 455,949 square foot industrial manufacturing-type building with high ceilings. Approximately 234,152 square feet of the Building 1 is actively in use. Loading docks are located on the south and east sides of the building. A truck ramp to the basement is located on the west side of the building.

Building 2 is located at the southeast corner of the project site at the Firestone Boulevard/Santa Fe Avenue intersection. Most recently occupied by Los Angeles Unified School District (LAUSD) South Gate Community Adult School, this two-story, 25,087-square-foot building is now vacant. Building 2 is connected to Building 1 by a bridge on the second floor.

Building 3 is a four-story, 296,358-square-foot building with loading dock areas located adjacent and to the north of Building 1. Approximately 81,514 square feet of Building 3 is actively in use a warehouse. Building 3 shares a common wall with Building 1; however, it is structurally independent and only a few openings connect both building internally. The third and fourth stories partially extend beyond the building's footprint over the roof of Building 1.

Building 4 is located on the northeast corner of the project site at the Santa Fe Avenue/Ardmore Avenue intersection. This 220,220-square-foot, two-story industrial-type building is partially used as warehouse. Constructed later than the other buildings on site, it has a different architectural style than the other three buildings. A passageway on the first floor, a bridge on the third floor, and extension of Building 4 connect to Building 3.

The project proposes to construct the FEC as a new LACCD satellite campus that would replace the existing SGEC, provide for expanded an improved educational facilities, and accommodate existing and projected student enrollment. This would be accomplished through the demolition of Buildings 1, 3, and 4 and the construction of a new 100,000-gross square-foot building. The project site would be improved with an surface parking lot, landscaping, an open space area, and other outdoor amenities Vehicular access and circulation improvements would also be implemented on- and off-site. Still under consideration, the final design would result from the collaboration of ELAC and a Design/Build Team selected to carry the proposed project forward. The final design plans would identify the footprint, orientation, and design of the proposed building and parking structure.

FEC Building: The new FEC building would be approximately 100,000 gross square feet and three stories or approximately 50 feet tall. The new FEC building will contain all necessary classrooms, labs, offices, and support facilities for students to complete their degree and transfer requirements in one location. The program for the building has been developed through intensive interaction with ELAC administration and user groups to accommodate a reasonable level of growth and focuses on spaces that serve multiple uses and reduce redundancy. The FEC building would provide needed science labs and would expand the space available for Career Technical Education and Liberal Arts and Sciences programs. The number of classrooms would increase from 17 at the existing SGEC to 32 at the FEC. The building's administrative and student services offices would be located on the ground floor near the main entry.

Landscaping and Open Space: In addition the new FEC building, open spaces and landscaping are proposed to enhance the character of the campus. On the eastern border of the project site, a new landscape buffer of "front yard" would be created between the new building and the Santa Fe Avenue sidewalk. A central landscaped open space area would be developed at the center of the campus as a place for students to gather. This area could include active and passive recreation space, amenities for performances and ceremonies, public art, and greenery and shade. The Design/Build Team would be encouraged to incorporate distinctive lighting, signage, street furniture, artworks and amenities such as sunshades and decorative paving to further enhance the campus environment. In addition, the east side of the Firestone Boulevard entry would be improved with a new sidewalk and landscaping.

Vehicle Circulation: Vehicular access to the project site would be provided via three driveways; two driveways on the west side of Santa Fe Avenue and a third driveway on the north side of Firestone Boulevard at the existing shared access driveway with a former furniture manufacturing facility, referred to as the HON site. The driveway at Santa Fe Avenue across from Ardmore Avenue would serve as the main vehicular access point to and from the parking structure. A traffic signal is proposed to facilitate vehicular access and a northbound left-turn lane would be provided on Santa Fe Avenue at this location. The driveway on Santa Fe Avenue opposite Orchard Place is not proposed to be signalized and would serve as a drop off/pick up location for students and visitors. This driveway would also be for service vehicles and provide fire access to the project site.

The existing Firestone Boulevard driveway on the north side of Firestone Boulevard, approximately 135 feet east of Calden Avenue, would be signalized and serve as a primary access point to the project site and the adjacent HON site if reoccupied with manufacturing/warehousing uses. As a condition of approval for the nearby Calden Court Apartments project, a traffic signal will be installed at the Calden Avenue/Firestone Boulevard intersection. The signal at the Firestone Boulevard driveway would operate in conjunction with the Calden Avenue/Firestone Boulevard traffic signal (i.e., in an offset configuration). All vehicular turning movements would continue to be allowed at the Firestone Boulevard driveway.

If the adjacent HON site is redeveloped as a shopping center, it is assumed that the Applicant of the HON site project would be required to tie into the Calden Avenue/Firestone Boulevard traffic signal and construct the fourth leg of the intersection (in the area directly across from Calden Avenue which is under HON ownership). Under this condition, the existing Firestone Boulevard driveway would likely be closed and the north leg of the signalized Calden Avenue/Firestone Boulevard intersection would facilitate vehicular access for both the redeveloped HON shopping center and the project site. However, these improvements are not required for the proposed project, and would only be implemented if and when the HON property is redeveloped.

One inbound travel lane and one outbound travel lane will remain at the Firestone Boulevard driveway to accommodate project traffic as well as traffic serving Buildings 1 and 3 and the adjacent HON site. A two lane internal campus roadway would connect entries, surface parking, and the parking structure. Turn-out lanes for passenger drop-offs would be located along this roadway. Fire truck access to within 150 feet of all building exterior walls would be provided via the internal roadway and designated fire lanes compliant with Los Angeles County Fire Department (LACFD) requirements. Security gates would also be installed at all vehicular entries to the main area of the campus to control after-hours access.

Parking: Parking requirements for the FEC's ultimate 9,000-student population has been established by LACCD at 1,600 stalls. This parking requirement would be met through a surface parking lot that would surround the new FEC building.

Pedestrian Circulation: Most students would drive to the FEC or take a shuttle from the ELAC campus. There would be few walk-ins from the surrounding neighborhood, and pedestrian traffic would come mostly from bus stops at the Firestone Boulevard/Santa Fe Avenue intersection. Most students would walk along Santa Fe Avenue to access the campus. Crosswalks at the newly signalized campus entry would make it easier for students to reach food and retail on the other side of Santa Fe Avenue.

REGULATORY SETTING

CEQA

The current study was completed to comply with the provisions of CEQA, including the CEQA Statutes (PRC Sections 21083.2 and 21084.1), the CEQA Guidelines (Title 14 CCR, Section 15064.5), and PRC 5024.1 (Title 14 CCR, Section 4850 et seq.). These statutes and regulations, as amended, are summarized in an annually updated handbook (Association of Environmental Professionals 2010).

Properties that can be expected to be directly or indirectly affected by a proposed project must be evaluated for California Register of Historical Resources (California Register) eligibility (PRC Section 5024.1). The purpose of the register is to maintain listings of the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from material impairment and substantial adverse change. The term "historical resources" includes a resource listed in, or determined to be eligible for listing in, the California Register, a resource included in a local register of historical resources, and any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant (CCR Section 15064.5(a)). The criteria for listing properties in the California Register were expressly developed in accordance with previously established criteria developed for listing in the National Register of Historic Places. The California Office of Historic Preservation (California OHP 1995:2) regards "any physical evidence of human activities over 45 years old" as meriting recordation and evaluation.

According to PRC Section 5024.1(c)(1–4), a resource may be considered *historically significant* if it retains integrity and meets at least one of the following criteria. A property may be listed in the California Register if the resource:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(2) Is associated with the lives of persons important in our past;

(3) Embodies the distinctive characteristics of a type, period, region or method of installation, or represents the work of an important creative individual, or possesses high artistic values; or

(4) Has yielded, or may be likely to yield, information important in prehistory or history.

Under CEQA, if an archeological site is not a historical resource but meets the definition of a "unique archeological resource" as defined in PRC Section 21083.2, then it should be treated in accordance with the provisions of that section. A *unique archaeological resource* is defined as follows:

An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Resources that neither meet any of these criteria for listing in the California Register nor qualify as a "unique archaeological resource" under CEQA PRC Section 21083.2 are viewed as not significant. Under CEQA, "A nonunique archaeological resource need be given no further consideration, other than the simple recording of its existence by the lead agency if it so elects" (PRC Section 21083.2[h]).

Impacts that adversely alter the significance of a resource listed in or eligible for listing in the California Register are considered a significant effect on the environment. Impacts to historical resources from the proposed project are thus considered significant if the project physically destroys or damages all or part of a resource, changes the character of the use of the resource or physical feature within the setting of the resource which contribute to its significance or introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource.

Substantial Adverse Change

CEQA Guidelines state that a project may have a significant effect on the environment if it can be expected to "cause a substantial adverse change in the significance of an historical resource" (CEQA Guidelines, Section 15064.5 (b)). Such changes include "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines, Section 15064.5 (b)(1)). Material impairment is defined as demolition or alteration "in an adverse manner those characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register…" (CEQA Guidelines, Section 15064.5(b)(2)(A)).

If a project is expected to result in an impact as described above, CEQA Guidelines require analysis of a range of reasonable alternatives to the project, or to the location of the project, that would feasibly attain basic objectives of the project and avoid or substantially lessen the significant effects of the project. The range of alternatives required in an EIR is governed by a rule of reason, which requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. Under CEQA, it is necessary to evaluate proposed projects for the potential to cause significant effects on historical resources. CEQA equates a "substantial adverse change" in the significance of n historical resource with a significant effect on the environment (PRC Section 21084.1). If a proposed project could be expected to cause substantial adverse change in an historical resource, environmental clearance for the project would require mitigation measures to reduce impacts. Thresholds of "substantial adverse change" are established in PRC Section 5020.1 as demolition, destruction, relocation, or alteration activities that would impair the significance of the historic resource [emphasis added].

Compliance with the Standards

According to CEQA, impacts to an historical resource are considered to be mitigated below a level of significance when the project conforms to the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings* (Standards) (Weeks and Grimmer 1995). The goal of the Standards is to preserve the historic materials and distinctive character of an historical resource. Character-defining features are the tangible, visual elements of a building—including its setting, shape, materials, construction, interior spaces, and details—that collectively create its historic identity and convey its historic significance.

The Standards and associated Guidelines make broad-brush recommendations for maintaining, repairing, and replacing historic materials, as well as designing new additions or making alterations. They cannot, in and of themselves, be used to make essential decisions about which features of a historic property should be saved and which might be changed. But once an appropriate treatment is selected, the Standards provide philosophical consistency to the work. There are Standards for four distinct, but interrelated, approaches to the treatment of historic properties: preservation, rehabilitation, restoration, and reconstruction.

City of South Gate

The *South Gate Municipal Code* asserts in Chapter 7.68 under "Preservation of Cultural Heritage" that "the recognition, preservation, protection, and use of cultural resources are necessary to the health, property, social and cultural enrichment and general welfare of the residents of the City of South Gate." To further this assertion, the municipal code establishes a landmark designation program. Under this program, a cultural resource may be declared a designated cultural resource if upon application to the city by any interested party; the city council is empowered to designate a culturally significant landmark if it meets one or more of the following criteria:

(a) It possesses a significant character, interest, or value attributable to the development, heritage, or cultural characteristics of the city, the southern California region, the state of California or the United States of America or if it is associated with a person whose life is historically significant; or

(b) It is the site of a historic event with a significant place in history; or

(c) It exemplifies the cultural, political, economical, social, or historical heritage of the community; or

(d) It portrays the environment in an era of history characterized by a distinctive architectural style; or

(e) It embodies those distinguishing characteristics of an architectural type or engineering specimen; or

(f) It is the work of a person or persons whose work has significantly influenced the development of the city or the Southern California region; or

(g) It contains elements of design, detail, materials, or craftsmanship which represent a significant innovation; or

(h) It is a part of or related to a distinctive area that is developed according to a specific historical, cultural, or architectural motif; or

(i) It represents an established and similar visual feature of a neighborhood or community due to its unique location or specific distinguishing characteristics; or

(j) It is, or has been, a valuable information source important to the prehistory or history of the City of South Gate, the Southern California region, the state of California, or the United States of America.

Three City of South Gate properties have been designated as landmarks since the ordinance was adopted: the tile mosaic at the west entrance of the Civic Center Community Building, 8680 California Avenue; the South Gate Community Center (former library), 8680 California Avenue; and the Glenn T. Seaborg Residence, at 9237 San Antonio Avenue. The tile mosaic and the South Gate Community Center are located approximately 1.3 miles east, and the Seaborg Residence is located approximately 1.6 miles east of the proposed project site (LexisNexis 2008).

SUMMARY OF PREVIOUS STUDY

In 2009, SWCA prepared the *Cultural Resources Technical Report, East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California* (Smith et al. 2009). The study found that the project area had not been previously surveyed for cultural resources. No archaeological resources were observed during the field survey. Evidence of native soil was not observed during the survey. The 2009 study resulted in the recordation and evaluation of the Firestone Tire and Rubber Company, South Gate Historic District, including five buildings and the historic gateposts and fences (Table 1). Of these, all were identified as contributors to the historic district, and four were also found individually eligible for listing in the California Register.

Table 1. Properties in the Project Area Evaluated for Historic Significance

APN	Name and Address	Building No.	Year Built	California Register Status
6204-034-003	Firestone Tire and Rubber Company 2525 Firestone Boulevard	1	1928/1929	3CB (eligible for California Register both individually and as a contributor to a California Register-eligible district through a survey evaluation)
6204-034-003	Firestone Tire and Rubber Company 2525 Firestone Boulevard	2	1928	3CB (eligible for California Register both individually and as a contributor to a California Register-eligible district through a survey evaluation)
6204-034-003	Firestone Tire and Rubber Company 2525 Firestone Boulevard	3	1928/1929	3CB (eligible for California Register both individually and as a contributor to a California Register-eligible district through a survey evaluation)

Table 1. Properties in the Project Area Evaluated for Historic Significance

APN	Name and Address	Building No.	Year Built	California Register Status
6204-034-003	Firestone Tire and Rubber Company 2525 Firestone Boulevard	4	1951	3D (eligible for California Register as a contributor to a California Register-eligible district through a survey evaluation)
6204-034-002	Firestone Tire and Rubber Company, HON Furniture 2323 Firestone Boulevard	5	1941	3D (eligible for California Register as a contributor to a California Register-eligible district through a survey evaluation)
6204-034-003	Gateposts and fences	n/a	1928-1951	3CB (eligible for California Register both individually and as a contributor to a California Register-eligible district through a survey evaluation)

With the exception of Building 5, all of the properties identified in Table 1 are located within the boundaries of the current project area. Because the built environment component of the project has substantially changed, a new assessment of impacts to historical resources is necessary to comply with CEQA.

BUILT ENVIRONMENT ANALYSIS

SWCA has identified four project elements described in the FEC Master Plan that have the potential to impact historical resources. Of these four components, none can be implemented in compliance with the Standards, thereby avoiding impacts. All four were found to result in impacts to a historical resource. Any additional alterations or improvements not discussed within this report that are proposed for the Master Plan should be evaluated as impacts under CEQA.

Table 2. Project Elements in Master Plan

Project Element	Proposed Alteration/Improvement	Project Impact
Demolition of Buildings 1, 3, and 4	Demolition of Buildings 1, 3, and 4 is necessary to meet the space and programming needs of the new educational campus.	Demolition of three California Register-eligible buildings would constitute a significant direct impact to cultural resources and a substantial adverse change in the significance of these historical resources.
Retention of Building 2	Building 2 would be retained; however, the bridge that connects it to Building 1 would be demolished and a new exterior stair system would be constructed.	Project impacts will be reduced to a less than significant level with the implementation of mitigation measures.

Table 2. Project Elements in Master Plan

Project Element	Proposed Alteration/Improvement	Project Impact
Relocation of historic gateposts and walls	An 8-foot swath of the project area's frontage along Firestone Boulevard, which contains walls, gateposts and a gatehouse, will be acquired by the City of Southgate to widen Firestone Boulevard.	Relocation or demolition of a contributing resource to the historic district would constitute a significant direct impact to cultural resources and a substantial adverse change in the significance of these historical resources.
Overall Master Plan	Overall project elements, including demolition of three historic district contributors, construction of new buildings, relocation of historic walls and gateposts, and additional landscaping.	Demolition of Buildings 1, 3, and 4 and relocation of historic gateposts and walls would negatively affect the integrity of the district's design, setting, materials, feeling, and association, and will result in a significant direct impact to cultural resources and a substantial adverse change in the significance of a the district, a historical resource per CEQA.

Demolition of Buildings 1, 3, and 4

An analysis of the space and programming needs for the new campus found that the layout and size of Buildings 1, 3, and 4 did not meet the needs of an educational facility. Further, the analysis found that rehabilitation and adaptive reuse of the buildings would reduce the number of driveways providing vehicle access to the project site and would result in a significant and unavoidable impact related to transportation and traffic. Therefore, the Master Plan found that the most feasible option was the demolition of Buildings 1, 3, and 4 and the relocation of historic gateposts and walls. One new building will be constructed: the FEC classroom building. Buildings 1, 3, and 4, the historic gateposts and walls, and the historic district have been determined eligible for the California Register and are historical resources for the purposes of CEQA. The proposed project would result in the loss of these historical resources and would constitute a substantial adverse change, which is a significant direct impact.

Retention of Building 2

Building 2 would not be used for college uses, and there are no plans to occupy Building 2 at this time. Following the demolition of the bridge connecting Buildings 1 and 2, the point of connection on Building 2 would be repaired with a new exterior stair system which would include handrails, guardrails, stairs, and landings as well as a new 2nd floor door into Building 2. Although these concepts are only discussed as proposed project elements, these alterations would require consultation with a qualified architectural historian to ensure that they comply with the Standards. According to the Master Plan, improvements and repairs to Building 2 shall avoid impacts through consultation with a qualified architectural historian and conformance with the Standards.

Removal of Gateposts and Fencing

The Master Plan proposes to demolish or relocate existing walls and gateposts situated along the southern boundary of the project area in order to accommodate the City of Southgate's plan to widen Firestone Boulevard. An 8-foot swath of the project area's frontage along Firestone Boulevard will be acquired by the City to accommodate this plan. As a consciously designed feature of the historic district, they contribute to the historical significance of the property and are historical resources under CEQA. Demolition of or relocation of these features would affect the integrity of their design, workmanship, location, and setting, and would constitute a significant direct impact to cultural resources related to a substantial adverse change in the significance of these historical resources. According to the Master Plan, if relocation is determined feasible, a qualified architectural historian shall be consulted to direct their removal and relocation.

Implementation of the FEC Master Plan

Implementation of the FEC Master Plan would result in the demolition of three buildings and the demolition or relocation of historic gateposts and walls, all of which are eligible for listing in the California Register both individually and as contributors to a historic district. The proposed project would result in the loss of four of the district's six contributing features, and will cause substantial changes to the integrity of the its design, setting, materials, feeling, and association; the district would no longer be eligible for listing in the California Register as a result. Implementation of the FEC Master Plan would therefore result in a significant direct impact to cultural resources and a substantial adverse change in the significance of historical resources.

PROJECT IMPACTS AND MITIGATION MEASURES

CEQA requires a lead agency to determine whether a project may have a significant effect on historical resources (Section 21084.1). The 2009 SWCA report found that the project area contains a portion of the Firestone Tire and Rubber Company, South Gate Historic District, a property that is eligible for the California Register and considered a historical resource under CEQA. As currently proposed, the project would result in potential impacts to three buildings (Buildings 1, 3, and 4) and one structure (gateposts and fences) identified as contributors to the historic district. Demolition of these resources would constitute a significant direct impact to cultural resources related to a substantial adverse change in the significance of these historical resources. Although not capable of reducing impacts to below the level of significance, mitigation measures have been identified that would reduce project impacts on historical resources to the maximum extent practicable.

The bridge connecting Buildings 1 and 2 will be demolished and a new stair system will be constructed to a new door into Building 2. Impacts to Building 2 from this element of the proposed project would be less than significant with the recommended mitigation measures.

Implementation of the Master Plan, which includes the demolition of three buildings, construction of two new structures, landscaping improvements, and the relocation or demolition of the gateposts and fence, would diminish the integrity of the historic district, making it no longer eligible for listing in the California Register. The remaining two contributors (Building 2 and Building 5, which is outside the project area) would continue to convey their individual historic significance; however there would no longer be a sufficient number of contributors to constitute a historic district. The historic district would no longer be eligible for listing in the California Register; resulting in a significant direct impact to cultural resources related to a substantial adverse change in the significance of a historical resource.

Built Environment Mitigation Measures

Potentially significant adverse impacts to historical resources have been identified in relation to three buildings, one structure, and one historic district as a result of the implementation of the FEC Master Plan. The following mitigation measures are proposed to address these impacts.

Implementation of the BE MM-1 and BE MM-2 would reduce significant project impacts to historical resources (Buildings 1, 3, and 4, gateposts, and the historic district) to the maximum extent feasible, but would not reduce impacts below the level of significance. The loss of these historical resources still would remain a significant adverse impact.

Implementation of BE MM-3 would avoid significant project impacts to Building 2. A significant impact to an identified historical resource would be considered to be mitigated to a less-than-significant level if the mitigation measure requires preservation, rehabilitation, restoring, or reconstructing historic buildings, subject to the Secretary of the Interior's Standards for the Treatment of Historic Properties (14 CCR Section 15126.4(b)(1)).

BE MM-1

Impacts resulting from the demolition of Buildings 1, 3, and 4 and a pair of historic gate posts shall be minimized through archival documentation of as-built and as-found condition. Prior to issuance of demolition permits, the lead agency shall ensure that documentation of the buildings and structures proposed for demolition is completed in the form of a Historic American Building Survey (HABS) Level I documentation that shall comply with the Secretary of the Interior's Standards for Architectural and Engineering Documentation (NPS 1990). The documentation shall include large-format photographic recordation, detailed historic narrative report, and compilation of historic research. The documentation shall be completed by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualification Standards for History and/or Architectural History (NPS 1983). The original archival-quality documentation shall be offered as donated material to the new campus library where it would be available for current and future generations. Archival copies of the documentation also would be submitted to the South Gate's Leland R. Weaver Public Library where it would be available to local researchers. Completion of this mitigation measure shall be monitored and enforced by the LACCD.

BE MM-2

Impacts related to the loss of Buildings 1, 3, and 4, historic gateposts, and the historic district shall be reduced through the development of a retrospective display detailing the history of the historic district, its significance, and its important details and features. This display can be in the form of a physical exhibit and/or kiosk, and can be incorporated into publically-accessible spaces within Building 2. It shall include images and details from the HABS documentation and any collected research pertaining to the historic district. The display content shall be prepared by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualification Standards for History and/or Architectural History (NPS 1983). The display shall be completed within two years of the date of completion of the proposed project. Completion of this mitigation measure shall be monitored and enforced by the LACCD.

BE MM-3

Avoidance of impacts to Building 2 shall be accomplished by ensuring that any alterations, including the construction of a new stair system and door on the building's second floor, is completed in conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines of Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (Weeks and Grimmer 1995). The work shall conform to the standards and guidelines for "rehabilitation." Completion of this mitigation measure shall be completed under the direction of a qualified architectural historian and shall be monitored and enforced by the LACCD.

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APPENDIX D

Noise Data

2015 Firestone Education Center Master Pan

UNMITIGATED CONSTRUCTION NOISE LEVELS AT PROPOSED PROJECT

Reference Noise Distance	**50**
Reference Noise Level	**89**

Sensitive Receptor	**Distance (feet)**	**Attenuation Factors**	**Maximum Construction Noise Level (dBA)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**Increase**
Single- and multi-family residences to the north of the project site	100	0	**83.0**	64.9	**83.0**	**18.1**
Single-family residences to the east of the project site	200	5	**72.0**	56.6	**72.1**	**15.5**
LAUSD South Gate Community Adult School	360	10	**61.9**	69.5	**70.2**	**0.7**
Redeemer Lutheran Church and School	770	20	**45.2**	57.6	**57.8**	**0.2**
Single-family residences to the south of the project site	795	20	**45.0**	57.3	**57.5**	**0.2**
Mirage Inn	802	20	**44.9**	69.5	**69.5**	**0.0**
Sunrise Inn	810	20	**44.8**	69.5	**69.5**	**0.0**
South Gate Educational Center	911	20	**43.8**	68.1	**68.1**	**0.0**
Plaza Motel	1,010	20	**42.9**	69.5	**69.5**	**0.0**
Liberty Boulevard Elementary School	1165	20	**41.7**	57.6	**57.7**	**0.1**

CONSTRUCTION NOISE LEVELS AT SOUTH GATE SHOPPING CENTER

Reference Noise Distance	**50**
Reference Noise Level	**89**

Sensitive Receptor	**Distance (feet)**	**Attenuation Factors**	**Maximum Construction Noise Level (dBA)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**Increase**
Single- and multi-family residences to the north of the project site	955	5	**58.4**	64.9	**65.8**	**0.9**
Single-family residences to the east of the project site	1,460	10	**49.7**	56.6	**57.4**	**0.8**
LAUSD South Gate Community Adult School	1,335	10	**50.5**	69.5	**69.6**	**0.1**
Redeemer Lutheran Church and School	2,150	20	**36.3**	57.6	**57.6**	**0.0**
Single-family residences to the south of the project site	660	0	**66.6**	57.3	**67.1**	**9.8**
Mirage Inn	1,965	20	**37.1**	69.5	**69.5**	**0.0**
Sunrise Inn	2,000	20	**37.0**	69.5	**69.5**	**0.0**
South Gate Educational Center	625	0	**67.1**	68.1	**70.6**	**2.5**
Plaza Motel	2,230	20	**36.0**	69.5	**69.5**	**0.0**
Liberty Boulevard Elementary School	2,415	20	**35.3**	57.6	**57.6**	**0.0**

SUMMARY

Construction Noise Levels	**Proposed Project**	**South Gate Shopping Center**	**Combined Noise Level (dBA)**
Single- and multi-family residences to the north of the project site	83.0	65.8	83.1
Single-family residences to the east of the project site	72.1	57.4	72.2
LAUSD South Gate Community Adult School	70.2	69.6	72.9
Redeemer Lutheran Church and School	57.8	57.6	60.8
Single-family residences to the south of the project site	57.5	67.1	67.5
Mirage Inn	69.5	69.5	72.5
Sunrise Inn	69.5	69.5	72.5
South Gate Educational Center	68.1	70.6	72.6
Plaza Motel	69.5	69.5	72.5
Liberty Boulevard Elementary School	57.7	57.6	60.7

Construction Noise Levels	**Combined Construction Noise Level (dBA)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**Increase**
Single- and multi-family residences to the north of the project site	83.1	64.9	83.2	**18.3**
Single-family residences to the east of the project site	72.2	56.6	72.3	**15.7**
LAUSD South Gate Community Adult School	72.9	69.5	74.5	**5.0**
Redeemer Lutheran Church and School	60.8	57.6	62.5	**4.9**
Single-family residences to the south of the project site	67.5	57.3	67.9	**10.6**
Mirage Inn	72.5	69.5	74.3	**4.8**
Sunrise Inn	72.5	69.5	74.3	**4.8**
South Gate Educational Center	72.6	68.1	73.9	**5.8**
Plaza Motel	72.5	69.5	74.3	**4.8**
Liberty Boulevard Elementary School	60.7	57.6	62.4	**4.8**

2013 Firestone Revised Master Plan

MITIGATED CONSTRUCTION NOISE LEVELS AT PROPOSED PROJECT

Reference Noise Distance	**50**
Reference Noise Level	**89**

Sensitive Receptor	**Distance (feet)**	**Attenuation Factors**	**Maximum Construction Noise Level (dBA)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**Increase**
Single- and multi-family residences to the north of the project site	100	3	**80.0**	64.9	**80.1**	**15.2**
Single-family residences to the east of the project site	200	8	**69.0**	56.6	**69.2**	**12.6**
LAUSD South Gate Community Adult School	360	13	**58.9**	69.5	**69.9**	**0.4**
Redeemer Lutheran Church and School	770	23	**42.2**	57.6	**57.7**	**0.1**
Single-family residences to the south of the project site	795	23	**42.0**	57.3	**57.4**	**0.1**
Mirage Inn	802	23	**41.9**	69.5	**69.5**	**0.0**
Sunrise Inn	810	23	**41.8**	69.5	**69.5**	**0.0**
South Gate Educational Center	911	23	**40.8**	68.1	**68.1**	**0.0**
Plaza Motel	1,010	23	**39.9**	69.5	**69.5**	**0.0**
Liberty Boulevard Elementary School	1165	23	**38.7**	57.6	**57.7**	**0.1**

CONSTRUCTION NOISE LEVELS AT SOUTH GATE SHOPPING CENTER

Reference Noise Distance	**50**
Reference Noise Level	**89**

Sensitive Receptor	**Distance (feet)**	**Attenuation Factors**	**Maximum Construction Noise Level (dBA)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**Increase**
Single- and multi-family residences to the north of the project site	955	8	**55.4**	64.9	**65.4**	**0.5**
Single-family residences to the east of the project site	1,460	13	**46.7**	56.6	**57.0**	**0.4**
LAUSD South Gate Community Adult School	1,335	13	**47.5**	69.5	**69.5**	**0.0**
Redeemer Lutheran Church and School	2,150	23	**33.3**	57.6	**57.6**	**0.0**
Single-family residences to the south of the project site	660	3	**63.6**	57.3	**64.5**	**7.2**
Mirage Inn	1,965	23	**34.1**	69.5	**69.5**	**0.0**
Sunrise Inn	2,000	23	**34.0**	69.5	**69.5**	**0.0**
South Gate Educational Center	625	3	**64.1**	68.1	**69.5**	**1.4**
Plaza Motel	2,230	23	**33.0**	69.5	**69.5**	**0.0**
Liberty Boulevard Elementary School	2,415	23	**32.3**	57.6	**57.6**	**0.0**

SUMMARY

Construction Noise Levels	**Proposed Project**	**South Gate Shopping Center**	**Combined Noise Level (dBA)**
Single- and multi-family residences to the north of the project site	80.1	65.4	80.3
Single-family residences to the east of the project site	69.2	57.0	69.5
LAUSD South Gate Community Adult School	69.9	69.5	72.7
Redeemer Lutheran Church and School	57.7	57.6	60.7
Single-family residences to the south of the project site	57.4	64.5	65.3
Mirage Inn	69.5	69.5	72.5
Sunrise Inn	69.5	69.5	72.5
South Gate Educational Center	68.1	69.5	71.9
Plaza Motel	69.5	69.5	72.5
Liberty Boulevard Elementary School	57.7	57.6	60.6

Construction Noise Levels	**Combined Construction Noise Level (dBA)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**Increase**
Single- and multi-family residences to the north of the project site	80.3	64.9	80.4	**15.5**
Single-family residences to the east of the project site	69.5	56.6	69.7	**13.1**
LAUSD South Gate Community Adult School	72.7	69.5	74.4	**4.9**
Redeemer Lutheran Church and School	60.7	57.6	62.4	**4.8**
Single-family residences to the south of the project site	65.3	57.3	65.9	**8.6**
Mirage Inn	72.5	69.5	74.3	**4.8**
Sunrise Inn	72.5	69.5	74.3	**4.8**
South Gate Educational Center	71.9	68.1	73.4	**5.3**
Plaza Motel	72.5	69.5	74.3	**4.8**
Liberty Boulevard Elementary School	60.6	57.6	62.4	**4.8**

Firestone Education Center Master Plan - Mobile Noise Analysis

Existing AM

ROAD SEGMENT	from:	to:	TOT. # VEH.	D1	D2	Eq. Dis.	Auto %	Auto	MT %	MT	HT %	HT	Auto	k/h	MT	k/h	HT	k/h	Auto	MT	HT	50 ft ROW CNEL (dBA)
				EQUIVALENT LANE DISTANCE			VEHICLE TYPE %						VEHICLE SPEED						NOISE LEVEL (dBA)			
Santa Fe Ave	Ardmore Ave	Orchard Pl	1318	7	22	12	91	1199	6	79.1	3	39.5	35	56	35	56	35	56	65.1	63.0	65.2	68.4
Santa Fe Ave	Orchard Pl	Firestone Blvd	1391	18	32	24	91	1266	6	83.5	3	41.7	35	56	35	56	35	56	65.3	63.2	65.4	67.8
Firestone Blvd	Calden Ave	Truba Ave	2432	45	62	53	91	2213	6	146	3	72.9	35	56	35	56	35	56	67.8	65.7	67.9	68.8
Firestone Blvd	Truba Ave	Long Beach Blvd	2462	7	20	12	91	2240	6	148	3	73.9	35	56	35	56	35	56	67.8	65.7	67.9	71.1

Existing With Project AM

ROAD SEGMENT	from:	to:	TOT. # VEH.	D1	D2	Eq. Dis.	Auto %	Auto	MT %	MT	HT %	HT	Auto	k/h	MT	k/h	HT	k/h	Auto	MT	HT	50 ft ROW CNEL (dBA)
				EQUIVALENT LANE DISTANCE			VEHICLE TYPE %						VEHICLE SPEED						NOISE LEVEL (dBA)			
Santa Fe Ave	Ardmore Ave	Orchard Pl	1371	7	22	12	91	1247	6	82.2	3	41.1	35	56	35	56	35	56	65.3	63.2	65.4	68.5
Santa Fe Ave	Orchard Pl	Firestone Blvd	1498	18	32	24	91	1363	6	89.9	3	44.9	35	56	35	56	35	56	65.7	63.6	65.8	68.2
Firestone Blvd	Calden Ave	Truba Ave	2286	45	62	53	91	2080	6	137	3	68.6	35	56	35	56	35	56	67.5	65.4	67.6	68.6
Firestone Blvd	Truba Ave	Long Beach Blvd	2481	7	20	12	91	2258	6	149	3	74.4	35	56	35	56	35	56	67.8	65.8	68.0	71.1

Future Without Project AM

ROAD SEGMENT	from:	to:	TOT. # VEH.	D1	D2	Eq. Dis.	Auto %	Auto	MT %	MT	HT %	HT	Auto	k/h	MT	k/h	HT	k/h	Auto	MT	HT	50 ft ROW CNEL (dBA)
				EQUIVALENT LANE DISTANCE			VEHICLE TYPE %						VEHICLE SPEED						NOISE LEVEL (dBA)			
Santa Fe Ave	Ardmore Ave	Orchard Pl	1579	7	22	12	91	1437	6	94.7	3	47.4	35	56	35	56	35	56	65.9	63.8	66.0	69.1
Santa Fe Ave	Orchard Pl	Firestone Blvd	1369	18	32	24	91	1246	6	82.1	3	41.1	35	56	35	56	35	56	65.3	63.2	65.4	67.8
Firestone Blvd	Calden Ave	Truba Ave	3203	45	62	53	91	2915	6	192	3	96.1	35	56	35	56	35	56	69.0	66.9	69.1	70.0
Firestone Blvd	Truba Ave	Long Beach Blvd	3275	7	20	12	91	2980	6	197	3	98.3	35	56	35	56	35	56	69.1	67.0	69.2	72.3

Future With Project AM

ROAD SEGMENT	from:	to:	TOT. # VEH.	D1	D2	Eq. Dis.	Auto %	Auto	MT %	MT	HT %	HT	Auto	k/h	MT	k/h	HT	k/h	Auto	MT	HT	50 ft ROW CNEL (dBA)
				EQUIVALENT LANE DISTANCE			VEHICLE TYPE %						VEHICLE SPEED						NOISE LEVEL (dBA)			
Santa Fe Ave	Ardmore Ave	Orchard Pl	1624	7	22	12	91	1478	6	97.4	3	48.7	35	56	35	56	35	56	66.0	63.9	66.1	69.3
Santa Fe Ave	Orchard Pl	Firestone Blvd	1762	18	32	24	91	1603	6	106	3	52.9	35	56	35	56	35	56	66.4	64.3	66.5	68.9
Firestone Blvd	Calden Ave	Truba Ave	2997	45	62	53	91	2727	6	180	3	89.9	35	56	35	56	35	56	68.7	66.6	68.8	69.8
Firestone Blvd	Truba Ave	Long Beach Blvd	3210	7	20	12	91	2921	6	193	3	96.3	35	56	35	56	35	56	69.0	66.9	69.1	72.3

APPENDIX E

Transportation

Supplemental Traffic Assessment

MEMORANDUM

To:	Kevin Ferrier Terry A. Hayes Associates, Inc.	Date:	May 6, 2016
From:	Clare Look-Jaeger, P.E. CL-Jaeger Alfred Ying, P.E., PTP ACY. LLG, Engineers	LLG Ref:	1-15-4116-1
Subject:	2015 South Gate Educational Center Master Plan – Revised Supplemental Traffic Assessment		

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Linscott, Law & Greenspan, Engineers (LLG) has prepared this revised memorandum to summarize the findings of a supplemental traffic assessment prepared for the proposed 2015 South Gate Educational Center (SGEC) Master Plan project located in the City of South Gate, California. This revised traffic assessment addresses City of South Gate comments and will be included as part of the Supplemental Draft Environmental Impact Report (EIR) for the project. The Los Angeles Community College District (LACCD) is the Lead Agency responsible for the review and approval of the project.

This revised supplemental traffic assessment includes a description of project background, a summary of the proposed project description, a review of site access/circulation, a summary of the project trip generation and distribution, an assessment of traffic impacts associated with the proposed project, and a review of recommended project mitigation measures.

PROJECT BACKGROUND

The project is located at 2525 Firestone Boulevard in the City of South Gate. The project site is situated at the northwest corner of the Santa Fe Avenue/Firestone Boulevard intersection. The project site is bounded by the Union Pacific Railroad (UPRR) right-of-way on the north, Firestone Boulevard on the south, Santa Fe Avenue on the east, and a former furniture manufacturing facility on the west which is under new ownership and has been partially renovated to accommodate manufacturing and warehousing land uses.

By way of background, a comprehensive traffic impact study was previously prepared by LLG and was included as a technical appendix of the 2013 Firestone Education Center (FEC) Master Plan Subsequent EIR. The study evaluated traffic impacts at 31 study intersections in association with a FEC enrollment increase to a maximum of 9,000 students. The project resulted in significant traffic impacts to the surrounding street system and traffic mitigation measures were recommended so as to reduce the impacts to less than significant levels. The 2013 FEC Master Plan was approved, and the Subsequent Final EIR was certified on May 7, 2014.

LACCD now proposes to update the 2013 FEC Master Plan. The purpose of this supplemental traffic assessment is to determine whether any additional traffic impacts and corresponding mitigation measures may result due to the proposed updates as compared to the 2013 FEC Master Plan traffic study. Where applicable, updates to

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the prior mitigation measures are included. It should be noted that since the proposed updates continue to anticipate an enrollment increase to a maximum of 9,000 students, the corresponding analysis findings and conclusions from the 2013 FEC Master Plan traffic study will remain valid, except as evaluated and updated herein. For ease of referencing, the updated tables and figures included in this assessment correspond to the same numbering scheme as the approved traffic study.

PROJECT DESCRIPTION

Existing Project Site

The approximately 18.5-acre project site is currently occupied with four two- to four-story buildings (referred to as Buildings 1, 2, 3 and 4). The following is a summary of the gross floor area square footage (GSF) associated with each existing on-site building:

- Building 1: 455,949 GSF
- Building 2: 25,087 GSF
- Building 3: 366,371 GSF
- Building 4: 220,550 GSF

A total of 504,878 GSF in Buildings 1, 3, and 4 have been occupied at the time when the 2013 FEC Master Plan effort was undertaken. It should be noted that Building 2 was previously occupied by the Los Angeles Unified School District (LAUSD) as an adult education facility.

Existing South Gate Education Center Site

The East Los Angeles College (ELAC) established the South Gate Education Center (SGEC) as a satellite campus in 1997 to better serve a growing student population that resides in the southern part of the college's service district. The existing SGEC is located across from (south) and just west of the project site at 2340 Firestone Boulevard. The approximately 4.2-acre SGEC site is occupied with a 51,000 square-foot building and has an enrollment of 4,912 students. However, rapid student growth and the lack of adequate facilities and curriculum offered at the existing SGEC have resulted in deficiencies in meeting the community's current and future needs.

It should be noted that the existing South Gate Education Center (SGEC) building is leased by LACCD. The proposed project when completed would allow LACCD to vacate the existing SGEC building. While the existing SGEC building would not be utilized in the future by LACCD, the approved EIR Traffic Impact Study assumed that this building could be re-occupied. Therefore, it was integrated into the analysis

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as a light industrial project (i.e., related project) in the future pre-project conditions. As such, traffic volumes associated with the re-occupancy have been included in the EIR traffic analysis.

Proposed 2015 SGEC Master Plan Project Updates

Consistent with the previously approved 2013 FEC Master Plan and the certified Subsequent Final EIR, the proposed 2015 SGEC Master Plan consists of the construction and operation of a new LACCD satellite campus to replace the existing SGEC facility. The proposed project will provide expanded and improved educational facilities and is planned to accommodate a maximum student enrollment of 9,000 students. The primary difference between the proposed 2015 SGEC Master Plan and the approved 2013 FEC Master Plan is that Buildings 1 and 3 are now being proposed for demolition, and a parking structure will no longer be constructed on-site. Instead of the parking structure, additional surface parking would be provided on-site. New vehicular access and other on-site and off-site circulation improvements are also being proposed. Consistent with the 2013 FEC Master Plan, Building 2 would remain on-site while Building 4 would be demolished and replaced with an approximately 100,000 gross square-foot, three-story building. The conceptual site plan for the proposed South Gate Educational Center is illustrated in ***Figure 2-1***.

The existing SGEC facility located across from (south) and just west of the project site would continue to operate while the new SGEC campus is being constructed. Construction of the proposed project is planned to commence in year 2016 and is anticipated to be completed by year 2018. Upon completion, the new SGEC facility is envisioned to initially have approximately 5,000 students in year 2019 (by comparison, the existing SGEC has an enrollment of 4,912 students). The new SGEC campus would allow LACCD to vacate the existing SGEC building. It should be noted that the date when maximum student enrollment could occur is dependent upon a number of factors, including the economy, State funding and growth restrictions, as well as the availability of similar educational facilities elsewhere. Based on information provided by LACCD and for analysis purposes, it is assumed that the maximum student enrollment of 9,000 students would be achieved in year 2031.

SITE ACCESS AND CIRCULATION

The proposed site access scheme for the South Gate Educational Center project is displayed in *Figure 2-1*. Descriptions of the existing site access and proposed project site access and circulation schemes are provided in the following subsections.

Existing Project Vehicular Site Access

Primary vehicular access to Buildings 1, 3, and 4 is presently provided via one driveway on the north side of Firestone Boulevard, east of Calden Avenue. This driveway provides shared vehicular access with the adjacent property to the west (i.e., a former furniture manufacturing facility which is under new ownership and is

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SOURCE: HPI

FIGURE 2-1
PROJECT SITE PLAN

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2015 SOUTH GATE EDUCATIONAL CENTER MASTER PLAN

currently occupied with manufacturing and warehousing uses). The property line between these two sites bisects the midpoint of the driveway and runs generally in a north-south direction. An agreement was previously executed between the owners of both sites (which runs with the land) which provides for shared use as well as the share in the maintenance costs of this driveway/drive aisle. The existing project site access driveway on Firestone Boulevard is unsignalized and accommodates full access turning movements (i.e., left-turn and right-turn ingress and egress turning movements). In addition to the primary access driveway on Firestone Boulevard, secondary driveways are provided along the west side of Santa Fe Avenue, just south of Orchard Place and opposite Laurel Place.

Vehicular access to Building 2 is separately provided via one driveway along the north side of Firestone Boulevard and one driveway along the west side of Santa Fe Avenue. Building 2 is not planned to be a part of the 2015 South Gate Educational Center Master Plan project. As such, the surface parking area located south of Building 2 and along Firestone Boulevard will remain and continue to serve Building 2.

Proposed Project Vehicular Site Access

The proposed site access scheme for the South Gate Educational Center project is displayed in *Figure 2-1*. Primary vehicular access to the project will be provided via two proposed signalized access points: one along the west side of Santa Fe Avenue opposite Orchard Place and one along the north side of Firestone Boulevard at the existing shared access driveway. A brief description of the primary site access scheme is provided in the following paragraphs.

- *Santa Fe Avenue Proposed Signalized Driveway (Opposite Orchard Place)*

  This access point is located along the west side of Santa Fe Avenue, opposite Orchard Place. This driveway is proposed to be signalized and will serve as the main vehicular access point to/from Santa Fe Avenue. Consistent with current practice and parking designs at other LACCD parking facilities, the proposed access points will not be gate-controlled (i.e., free flow inbound and outbound movements are anticipated). Thus, vehicular queuing back out onto Santa Fe Avenue towards the UPRR right-of-way (i.e., the railroad tracks are located approximately 500 feet north of the Orchard Place centerline) is not anticipated. Furthermore, it is anticipated that the majority of project traffic utilizing the proposed driveway on Santa Fe Avenue will originate from and be destined to the south, based on a detailed review of the existing South Gate Education Center student population zip code data and the locations of surrounding major traffic corridors (refer to Section 5.2 of the Traffic Impact Study for further discussion). The proposed project site driveway along Santa Fe Avenue will be constructed to City of South Gate design standards. It should be noted based on coordination with the City of South Gate, this

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signalized driveway will accommodate left-turn and right-turn ingress and egress turning movements only (i.e., no eastbound and westbound through movements will be permitted). Measures to preclude these through traffic movements could include appropriate signage, pavement markings, median island, and/or other physical barriers.

- *Firestone Boulevard Proposed Signalized Driveway (east of Calden Avenue)*

  This access point is located along the north side of Firestone Boulevard, approximately 135 feet east of Calden Avenue (as measured from the centerline of the driveway to the centerline of Calden Avenue). Based on information provided by the City of South Gate pursuant to the Conditions of Approval of the nearby Calden Court Apartments project, a traffic signal has been approved for installation at the intersection of Calden Avenue and Firestone Boulevard. In addition, if and when redevelopment of the adjacent property occurs (i.e., to be potentially redeveloped in the long-term [i.e., Year 2031] conditions as a shopping center as discussed in more detail within Section 6.2 of the Traffic Impact Study), it is assumed that the Applicant of the adjacent property would be required to tie into the Calden Avenue/Firestone Boulevard traffic signal and construct the fourth leg of the intersection (i.e., in the area directly across from Calden Avenue which is under the adjacent property's ownership). Under this analysis condition, the existing shared access point on Firestone Boulevard would likely be closed and the north leg of the signalized Calden Avenue/Firestone Boulevard intersection would facilitate vehicular access for both the potential shopping center and the proposed project.

  Due to the offset between the existing shared access driveway and Calden Avenue, the lack of LACCD ownership to the west of the site's westerly property line (i.e., the area across from Calden Avenue), and the approved Calden Avenue/Firestone Boulevard traffic signal installation, this supplemental traffic assessment includes an analysis of an interim condition in which the existing shared access point along the north side of Firestone Boulevard will remain and be signalized and operated in conjunction with the Calden Avenue/Firestone Boulevard traffic signal (i.e., in an offset configuration). Based on coordination with the City, under the interim condition, all vehicular turning movements will continue to be allowed at the joint traffic signal and the existing shared access driveway will accommodate both LACCD-related traffic as well as traffic associated with the further reuse of the adjacent property in the future (i.e., as manufacturing/warehousing uses under near-term conditions). A discussion of the Project Driveway-Calden Avenue/Firestone Boulevard interim analysis condition is provided in a later section of this assessment.

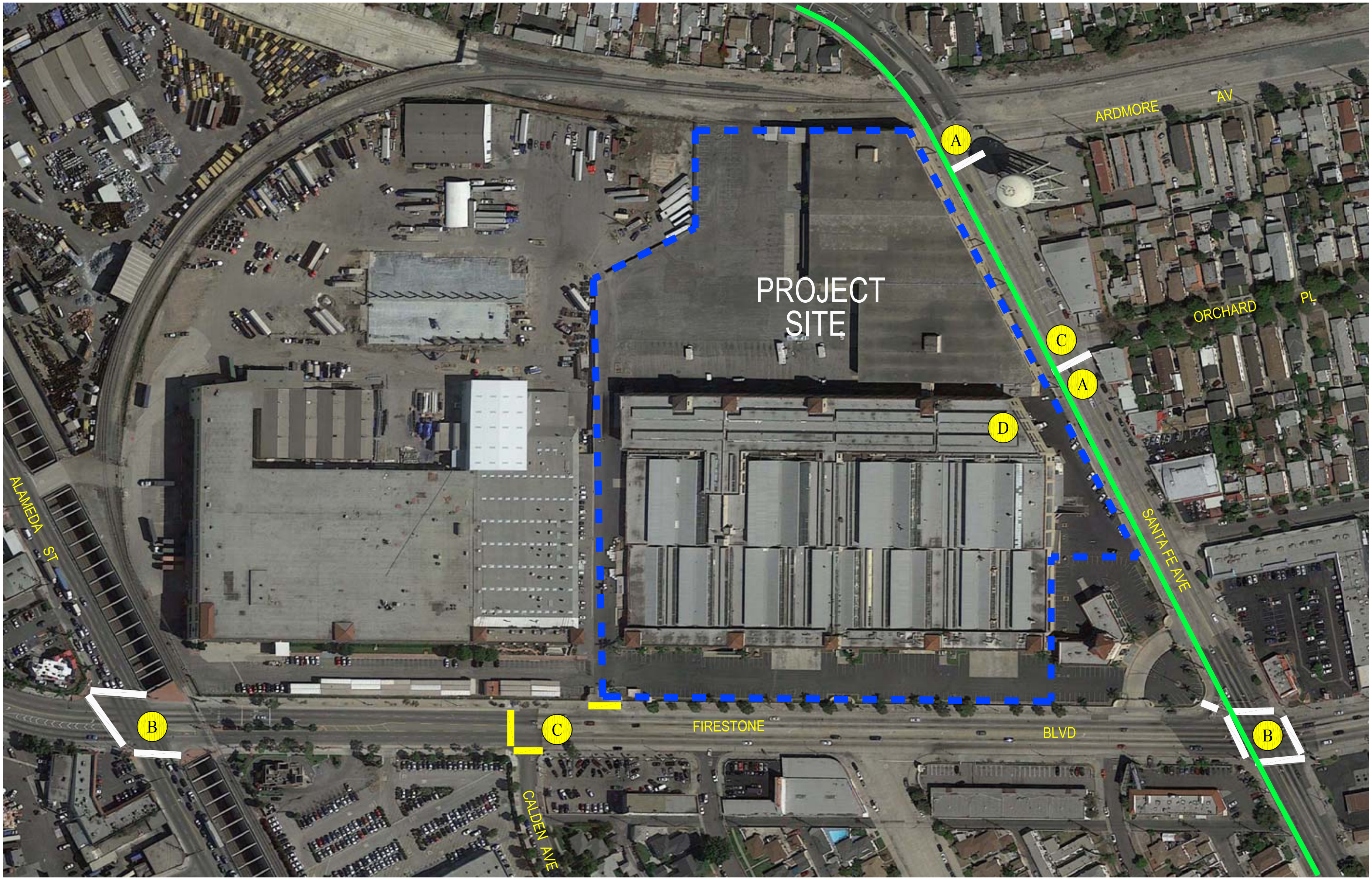
In addition to the primary access points described above, two additional project driveways are proposed on Santa Fe Avenue while one additional project driveway is proposed along Firestone Boulevard for secondary access. The northerly project driveway on Santa Fe Avenue will be located north of Orchard Place and this driveway will be limited to right-turn ingress and right-turn egress movements only. The southerly project driveway on Santa Fe Avenue will be located south of Orchard Place and this driveway will be limited to right-turn egress movements only. The secondary project driveway proposed on Firestone Boulevard will be located opposite Firestone Place and this driveway will be limited to right-turn ingress and right-turn egress movements only. The secondary access points are not proposed to be signalized. Additionally, based on a review of the forecast driveway traffic volumes at project buildout, a separate westbound deceleration lane on Firestone Boulevard is not necessary or required.

Pedestrian and Bicycle Access

As shown in ***Figure A***, pedestrian crosswalks in the project vicinity are provided at the signalized Santa Fe Avenue/Firestone Boulevard intersection and Alameda Street/Firestone Boulevard intersection. Additionally, formal marked crosswalks are also provided on Santa Fe Avenue at Ardmore Avenue and at Orchard Place. As part of the Project Driveway-Calden Avenue/Firestone Boulevard traffic signal installation, formal crosswalks are proposed on the north side, south side, and west side of the intersection, as shown in *Figure A*. Therefore, adequate crossings will be provided to accommodate the proposed project.

No bicycle facilities (i.e., Class I, II or III facilities) are currently provided in the immediate vicinity of the project site. However, as noted in the City's General Plan 2035 Mobility Element, Santa Fe Avenue is designated for implementation of a Class II – Bike Lane between Independence/Ardmore Avenues and Southern Avenue. Additionally, the project site is also designated as a future bicycle hub in the Mobility Element. Given the educational nature of the proposed project, the focus on the encouragement of students to utilize public transportation and alternative modes of transportation (e.g., bicycling), and the design team's effort to make the project consistent with and in support of the principles of the City's General Plan, bicycle integration has been carefully considered in the project's design.

Sidewalks are provided along all key roadways in the project vicinity. The existing sidewalk width along the Firestone Boulevard project frontage is 13 feet. The General Plan sidewalk standard for Firestone Boulevard ranges between 12 and 15 feet. With the recommended project dedication/widening along the Firestone Boulevard Building 1 project frontage and an irrevocable offer for the future dedication/widening along the Building 2 frontage (i.e., since the parcel occupied by Building 2 is not a part of the project site as discussed in a later section of this assessment), a sidewalk width of up to 15 feet may be accommodated on Firestone



NOT TO SCALE

MAP SOURCE: GOOGLE EARTH

(A) EXISTING CROSSWALK

(B) EXISTING TRAFFIC SIGNAL AND CROSSWALK

(C) PROPOSED TRAFFIC SIGNAL AND CROSSWALK

(D) FUTURE GENERAL PLAN 2035 DESIGNATED BICYCLE HUB

FUTURE GENERAL PLAN 2035 CLASS II BICYCLE LANE

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FIGURE A
EXISTING AND PROPOSED PEDESTRIAN/BICYCLE ACCESS

2015 SOUTH GATE EDUCATIONAL CENTER MASTER PLAN

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Boulevard pursuant to the buildout of the General Plan. Therefore, it is determined that adequate sidewalk width will be provided on Firestone Boulevard to accommodate pedestrians, including near the various bus stop locations (refer to the following section for a detailed bus stop review). Additionally, it should be noted that the existing sidewalk width along the Santa Fe Avenue project frontage is 13 feet which already exceeds the General Plan standard of 12 feet along Santa Fe Avenue. Therefore, it is determined that adequate sidewalk width to accommodate the proposed project is also provided on Santa Fe Avenue.

Bus Stop Review

As discussed in the approved 2013 FEC Master Plan project traffic study, public transit service within the vicinity of the project study area is currently provided by the Los Angeles County Metropolitan Transportation Authority (Metro). Specifically, Metro Bus 115 provides an eastbound bus stop located on the south side of Firestone Boulevard just west of Calden Avenue (adjacent to the existing SGEC) and a westbound bus stop located on the north side of Firestone Boulevard just east of Alameda Street. Detailed observations were conducted of each arriving/departing bus at these two bus stops in order to document the number of passenger boardings/alightings and bus stoppage durations. The observations were conducted on a typical Wednesday from 4:00 PM to 7:00 PM to coincide with not only the general afternoon peak commuter period but also the time period with the highest student attendance at SGEC (typically occurs on Wednesdays between 4:00 PM and 7:00 PM).

It should be noted that the observed bus stoppage times also reflect and include the times associated with the loading and unloading of bicycles. The resulting bus stop observations are summarized in ***Table A***. As shown in *Table A*, a total of 16 eastbound buses and 12 westbound buses were observed to stop at the respective bus stops during the 4:00 PM to 7:00 PM time period. An overall average of two transit boardings and two transit alightings per bus were determined. Furthermore, the average bus stop duration was determined to be approximately 16 to 17 seconds per bus (i.e., without incidents such as additional wait time due to the red signal indication at the Alameda Street/Firestone Boulevard intersection). Also, during the observation time period, none of the buses were full indicating that additional transit riders can be accommodated by the existing bus system.

Although not all existing transit boardings and alightings at these bus stops are attributable to the SGEC facility, for a conservative assessment, it was anticipated that the average transit boardings/alightings and the corresponding average bus stoppage times could at worst double as a result of the proposed project enrollment increase. Therefore, the future transit ridership due to the project could be anticipated to at most increase to approximately four transit boardings and four transit alightings per bus during the peak period. Based on the abundance of headways associated with

Table A
EXISTING BUS STOP OBSERVATIONS [1]

METRO BUS 115 EASTBOUND				METRO BUS 115 WESTBOUND			
TIME	**NO. OF PASSENGER BOARDINGS**	**NO. OF PASSENGER ALIGHTINGS**	**BUS STOP DURATION (SEC)**	**TIME**	**NO. OF PASSENGER BOARDINGS**	**NO. OF PASSENGER ALIGHTINGS**	**BUS STOP DURATION (SEC)**
4:06	3	2	12	4:08	2	2	12
4:16	2	3	11	4:17	3	2	11
4:26	4	1	11	4:29	2	0	13
4:32	0	2	11	4:41	5	0	31
4:39	0	1	10	4:59	0	2	13
4:52	0	4	13	5:10	1	2	11
5:03	3	3	40	5:12	0	1	40 [2]
5:06	0	1	10	5:27	0	1	12
5:17	0	1	10	5:32	0	1	53 [2]
5:58	0	3	29	5:48	2	2	31
5:59	8	1	22	6:05	1	2	9
6:00	0	1	15	6:24	3	3	58 [2]
6:21	8	1	25				
6:22	0	3	14				
6:32	2	2	10				
6:58	3	0	27				
Overall Average	**2**	**2**	**17**	**Overall Average**	**2**	**2**	**25**
				Average Bus Stop Duration w/o Incidents [3]			**16**

[1] Observations conducted by LLG Engineers on Wednesday, September 30, 2015, from 4:00 PM to 7:00 PM.
The eastbound bus stop is located on the south side of Firestone Boulevard, west of Calden Avenue adjacent to the South Gate Education Center facility. The westbound bus stop is located on the north side of Firestone Boulevard, east of Alameda Street.
[2] Included stoppage time due to the red light at the Alameda Street/Firestone Boulevard intersection.
[3] Average bus stoppage time excluding the incidents as noted in Footnote [2].

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this bus line (i.e., headways of seven eastbound buses and five westbound buses during the PM peak hour) as well as current ridership, additional service should not be required. Furthermore, based on a review of the anticipated future bus stoppage durations to accommodate the small increase in potential transit boardings/alightings at project buildout, impacts to Firestone Boulevard traffic flow and adjacent intersection operations is not expected. Bus turnouts along Firestone Boulevard are also not necessary. In addition, based on feedback from Metro, bus drivers much prefer no turnouts as it can often times make it more difficult to enter back into the through traffic flow and impact stop schedules. Nonetheless, appropriate coordination with Metro will transpire during the public review process regarding transit services.

SUPPLEMENTAL TRAFFIC ANALYSIS STUDY AREA

As discussed above, the primary difference between the proposed 2015 SGEC Master Plan and the approved 2013 FEC Master Plan is that Buildings 1 and 3 are now being proposed for demolition, and surface parking would be provided throughout the project site instead of via a parking structure. As these site access and circulation updates will only result in a slightly different assignment of project trips at the driveways, the following four study intersections located immediately adjacent to the project site have been identified for evaluation in this supplemental traffic assessment:

7. Project Driveway-Calden Avenue/Firestone Boulevard
8. Santa Fe Avenue/Ardmore Avenue
9. Santa Fe Avenue-Project Driveway/Orchard Place
10. Santa Fe Avenue/Firestone Boulevard

Since the maximum student enrollment would remain at 9,000 students as previously analyzed, the corresponding methodologies, analyses, findings and conclusions from the 2013 FEC Master Plan traffic study remain valid, except as evaluated and updated herein. Thus, the remaining sections of this assessment focus primarily on the project updates and the updated evaluation of traffic impacts and corresponding mitigation measures for these four study intersections.

PROJECT TRAFFIC GENERATION AND DISTRIBUTION

Project Traffic Generation

The project traffic generation forecasts, including the methodologies and assumptions, previously were fully evaluated in the approved 2013 FEC Master Plan project traffic study. As part of the proposed 2015 SGEC Master Plan project,

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Buildings 1 and 3 are also proposed for demolition (in addition to Building 4). As traffic associated with Buildings 1 and 3 will no longer be generated to/from the project site under the "With Project" conditions, the following section from the traffic study regarding project trip generation forecasts has been appropriately revised to reflect this update:

- *Existing Uses To Be Removed/Vacated*

  The project trip generation forecasts also include trip generation credits for both the existing SGEC (to be vacated) and the existing warehouse Buildings 1, 3, and 4 which will be demolished in order to accommodate the proposed project. As stated in the traffic study, traffic volume forecasts for the existing SGEC were based on driveway traffic counts and on-street observations conducted at the SGEC facility. Traffic volume forecasts for the warehouse use trip generation credit were developed based on the AM and PM peak period traffic counts conducted at the existing project driveway located along the north side of Firestone Boulevard (just east of Calden Avenue) and the two existing project driveways located along the west side of Santa Fe Avenue (between Orchard Place and Laurel Place). Trip rates per thousand square feet of floor area derived from the occupied floor area in Buildings 1, 3, and 4 were then subsequently applied to determine the existing use trip generation credit. It should be noted that the existing use trip generation credit for Buildings 1 and 3 reflects only the leased and occupied floor area of these buildings at the time when the off-site intersection traffic counts were conducted.

  By comparing the trip rates provided in the ITE *Trip Generation Manual*[1] publication (ITE Land Use Code 150, Warehousing) with the observed (derived) warehouse trip rates, it can be concluded that the observed trip rates are 49%, 36%, and 43% lower than the applicable ITE trip rates for the AM peak hour, PM peak hour, and daily conditions, respectively. The difference in the observed rates versus the ITE rates is likely attributable to the current economy and the urban context of the site. As a result, use of the observed trip rates in general will result in a more conservative (lower) trip generation credit for the warehouse use.

The traffic generation forecast for the 2015 South Gate Educational Center project is summarized in the attached ***Table 5–1***. As presented in *Table 5–1*, the proposed project is expected to generate 240 net new vehicle trips (193 inbound trips and 47 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 159 net new vehicle trips (128 inbound trips and 31 outbound trips). Over a 24-hour period, the proposed project is

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[1] Institute of Transportation Engineers *Trip Generation Manual*, 9th Edition, 2012.

Table 5-1
PROJECT TRIP GENERATION

LAND USE	SIZE	DAILY TRIP ENDS [1] VOLUMES	AM PEAK HOUR VOLUMES [1] IN	OUT	TOTAL	PM PEAK HOUR VOLUMES [1] IN	OUT	TOTAL
Proposed Project								
Firestone Educational Center [2]	9,000 Students	7,110	540	171	711	333	261	594
Existing Uses to be Removed/Vacated								
Existing South Gate Education Center [3]	(4,912) Students	(3,880)	(293)	(95)	(388)	(183)	(142)	(325)
Warehouse (Buildings 1/3) [4, 5]	(320,397) GSF	(654)	(32)	(17)	(49)	(13)	(52)	(65)
Warehouse (Building 4) [4]	(220,550) GSF	(450)	(22)	(12)	(34)	(9)	(36)	(45)
Subtotal		(4,984)	(347)	(124)	(471)	(205)	(230)	(435)
NET INCREASE		**2,126**	**193**	**47**	**240**	**128**	**31**	**159**

Notes:

[1] Trips are one-way traffic movements, entering or leaving.

[2] Traffic volume forecasts for the proposed project were developed based on the AM and PM peak period traffic counts conducted at the existing South Gate Education Center located across from the project site at 2340 Firestone Boulevard (with 4,912 students). The traffic counts were conducted on Tuesday, November 13, 2012 and Thursday, November 15, 2012 from 7:00 to 9:00 am and from 4:00 to 6:00 pm and also included observations of nearby on-street usage as well as the driveways at the two remote parking lots near Southern Avenue. The traffic counts were then adjusted upward to reflect a typical peak attendance day (i.e., occurs on Wednesdays). Daily trips are calculated based on the assumption that the number of peak hour (AM) trips represents 10% of the daily traffic volumes. Refer to Appendix C of the traffic impact study for the detail traffic count data collection. Thus, the following trip generation rates are determined for the Firestone Education Center:
- Daily Trip Rate: 0.790 trips/student; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.079 trips/student; 76% inbound/24% outbound
- PM Peak Hour Trip Rate: 0.066 trips/student; 56% inbound/44% outbound

[3] Based on driveway and on-street traffic counts conducted at the existing South Gate Education Center (see also footnote [2]).

[4] Buildings 1, 3, and 4 are proposed to be demolished as part of the proposed project. Traffic volume forecasts were developed based on the AM and PM peak period traffic counts conducted at the existing site driveways serving the tenants in Buildings 1, 3, and 4 (i.e., located on the north side of Firestone Boulevard and the west side of Santa Fe Avenue). The traffic counts were conducted on a typical weekday from 7:00 to 9:00 am and from 4:00 to 6:00 pm. Based on tenant information provided by the project applicant, a total of 504,878 square feet of floor area was leased and occupied at the time of the driveway traffic counts. Daily trips are calculated based on the assumption that the number of peak hour (PM) trips represents 10% of the daily traffic volumes. Refer to Appendix C of the traffic impact study for the detail traffic count data collection. Thus, based on the current building occupancy, the following trip generation rates are determined for warehousing use:
- Daily Trip Rate: 2.040 trips/1,000 square feet; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.153 trips/1,000 square feet; 66% inbound/34% outbound
- PM Peak Hour Trip Rate: 0.204 trips/1,000 square feet; 20% inbound/80% outbound

[5] At the time when the off-site intersection traffic counts were conducted, a total of 320,397 square feet of floor area associated with Buildings 1 and 3 was leased and occupied.

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forecast to generate 2,126 net new daily trip ends during a typical weekday (1,063 inbound trips and 1,063 outbound trips).

It should be noted that by comparison to the approved 2013 FEC Master Plan project traffic study, the overall project site traffic generation is reduced. This is due to the proposed demolition of Buildings 1 and 3 and accounting for their corresponding traffic (which will no longer be generated to/from the project site in the future with the proposed 2015 SGEC Master Plan project conditions).

Project Traffic Distribution and Assignment

Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic corridors (i.e., Firestone Boulevard, Santa Fe Avenue);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Ingress/egress availability at the project site (existing and future); and
- Existing South Gate Education Center student population zip code data.

The forecast project traffic distribution percentages at the four study intersections are displayed in the attached ***Figures 5-1*** and ***5-2***, respectively, for the proposed South Gate Educational Center and the existing South Gate Education Center which will be vacated. The forecast project traffic distribution percentages at the four study intersections are displayed in the attached ***Figure 5-3*** for the existing warehouse component which will be demolished. As shown in *Figure 5-1*, two percent of the proposed SGEC project traffic is forecast to enter and exit through the Project Driveway-Calden Avenue/Firestone Boulevard intersection to/from the south via Calden Avenue. Under the interim Firestone Boulevard access scheme in which the existing shared access point along the north side of Firestone Boulevard will remain, project-related trips are anticipated to access the site via a northbound right-turn from Calden Avenue followed by an immediate eastbound left-turn. Upon exit, these trips will traverse through the intersection via a southbound right-turn followed by an immediate westbound left-turn onto Calden Avenue. These turning movements are appropriately considered and analyzed in the level of service calculations under the Interim Firestone Boulevard Access Scheme section, as discussed in a later section.

The forecast net new weekday AM and PM peak hour project traffic volumes at the study intersections are presented in the attached ***Figures 5-4*** and ***5-5***, respectively. The net new project traffic volume assignments presented in *Figures 5-4* and *5-5*

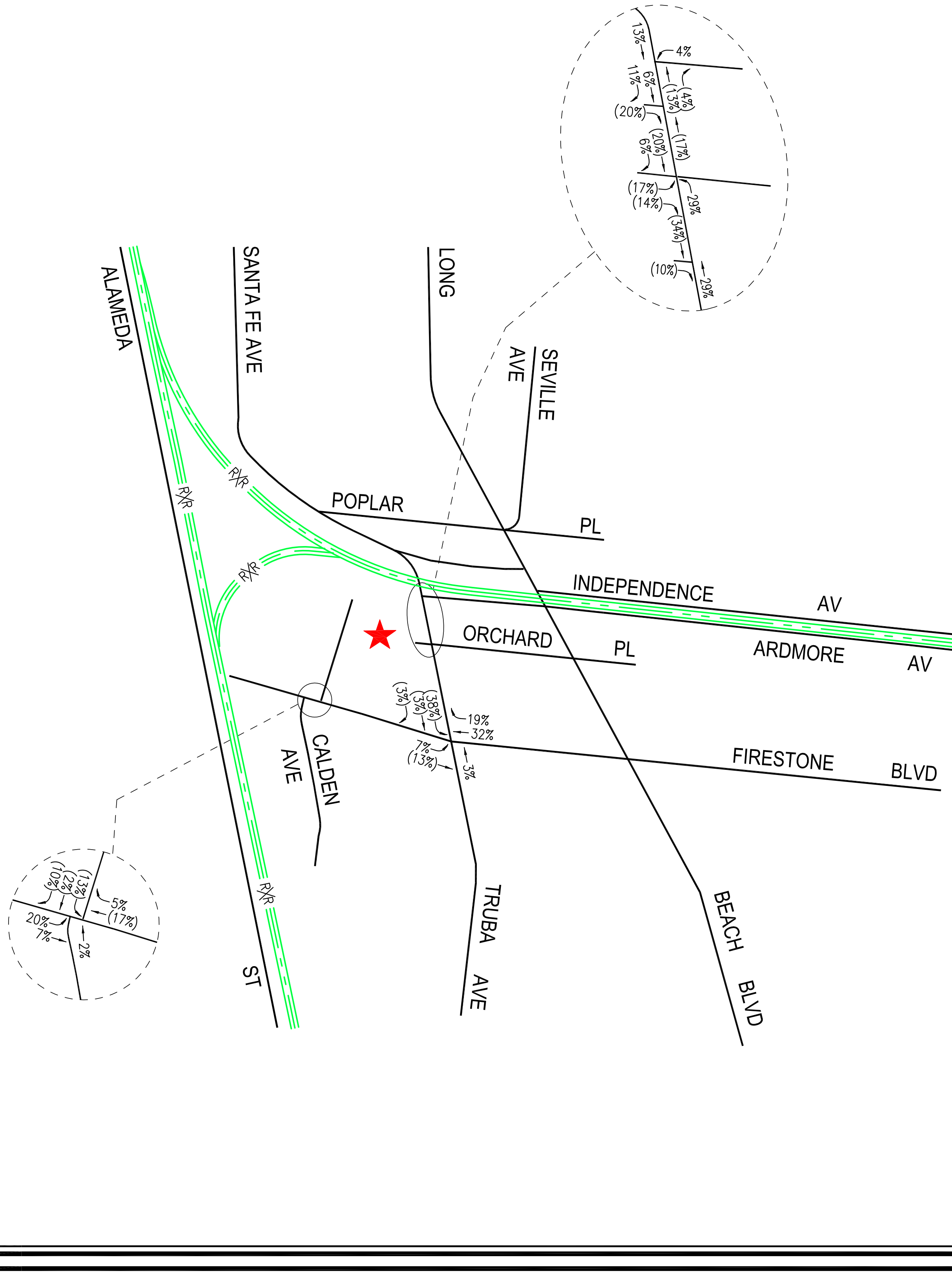

FIGURE 5-1
PROJECT TRIP DISTRIBUTION
PROPOSED SOUTH GATE EDUCATIONAL CENTER
2015 SOUTH GATE EDUCATIONAL CENTER MASTER PLAN

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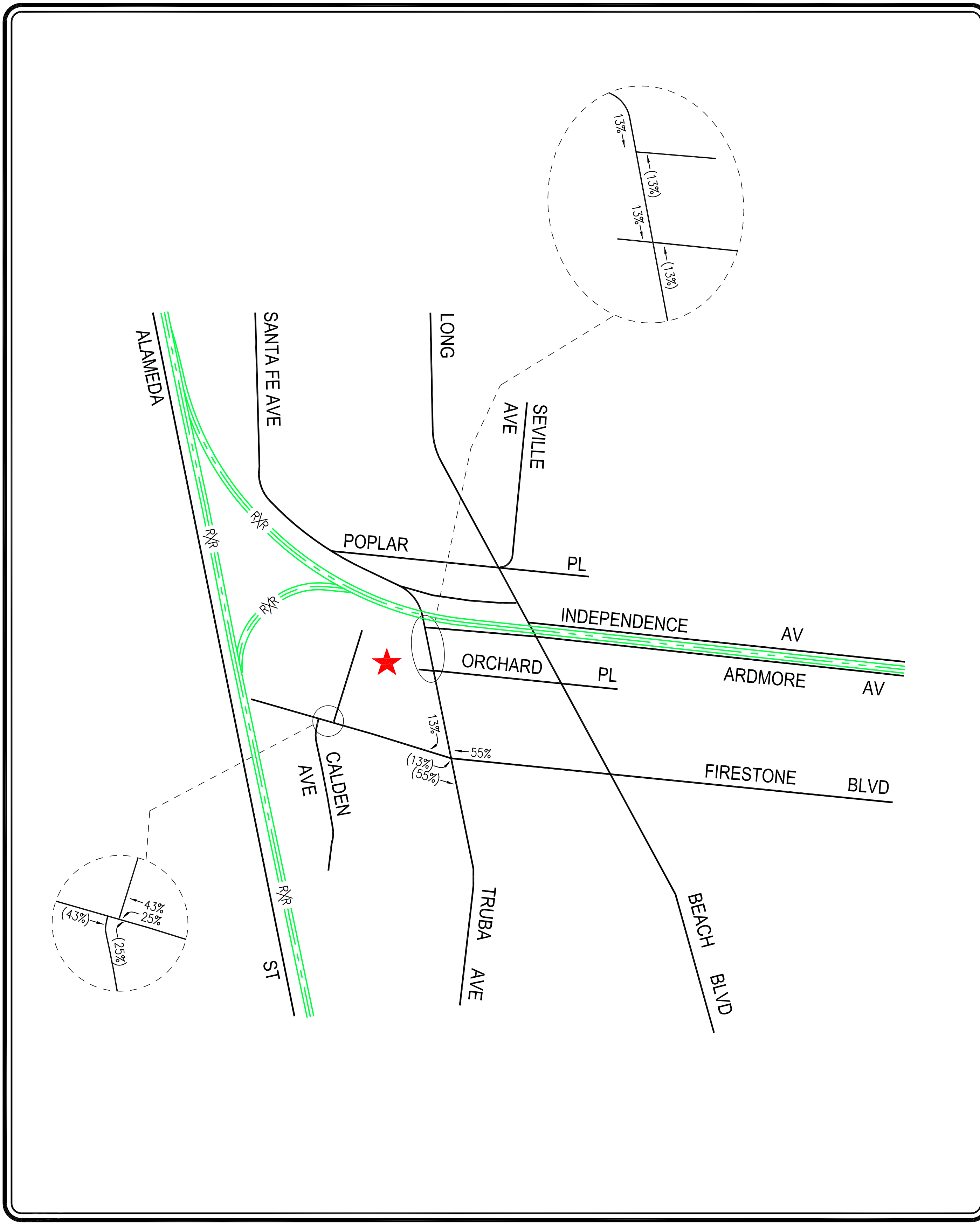

FIGURE 5-2

PROJECT TRIP DISTRIBUTION

EXISTING SOUTH GATE EDUCATION CENTER

2015 SOUTH GATE EDUCATIONAL CENTER MASTER PLAN

LINSCOTT, LAW & GREENSPAN, engineers

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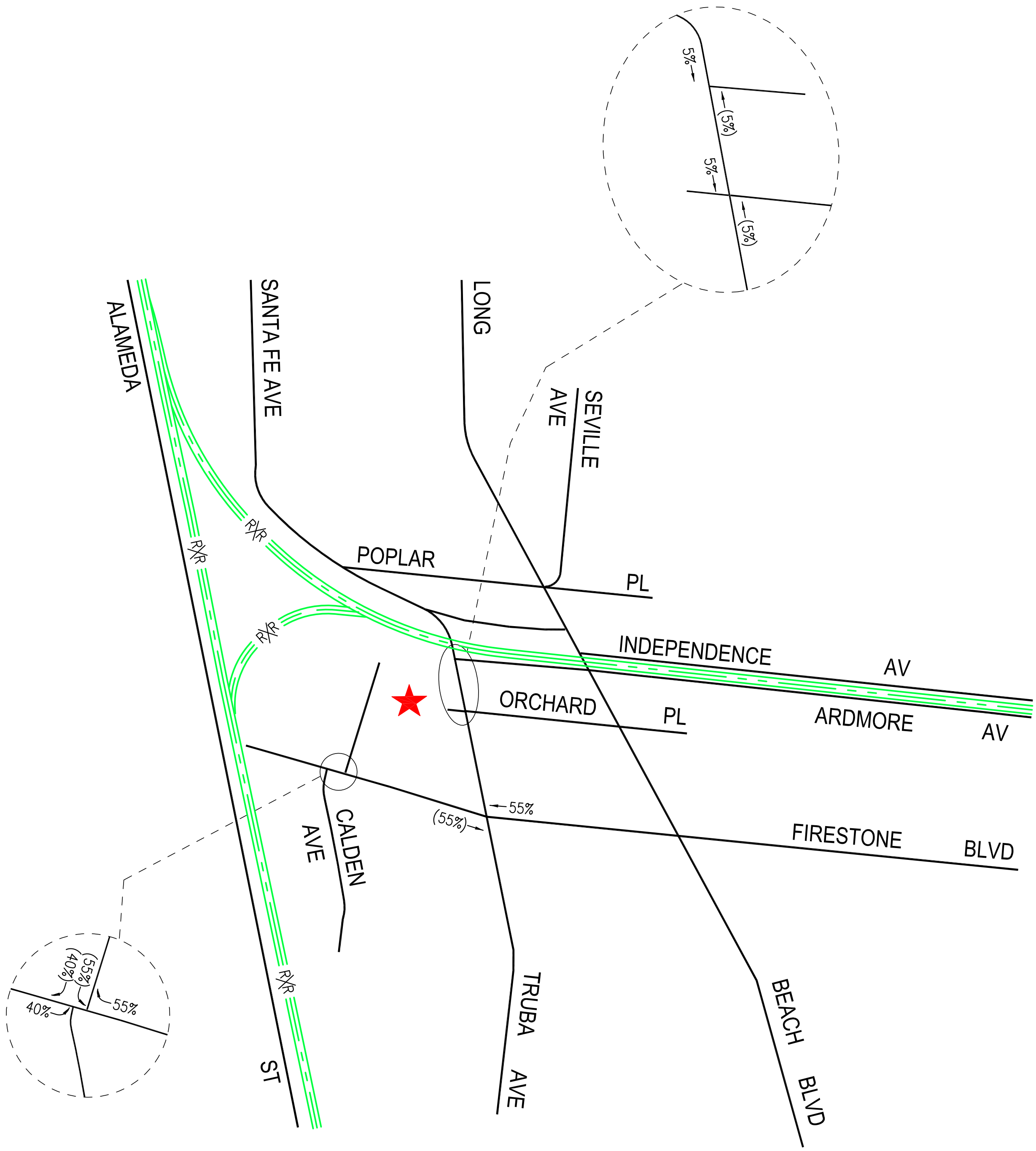

PROJECT SITE

NOT TO SCALE

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FIGURE 5-3
PROJECT TRIP DISTRIBUTION
EXISTING WAREHOUSE USE
2015 SOUTH GATE EDUCATIONAL CENTER MASTER PLAN

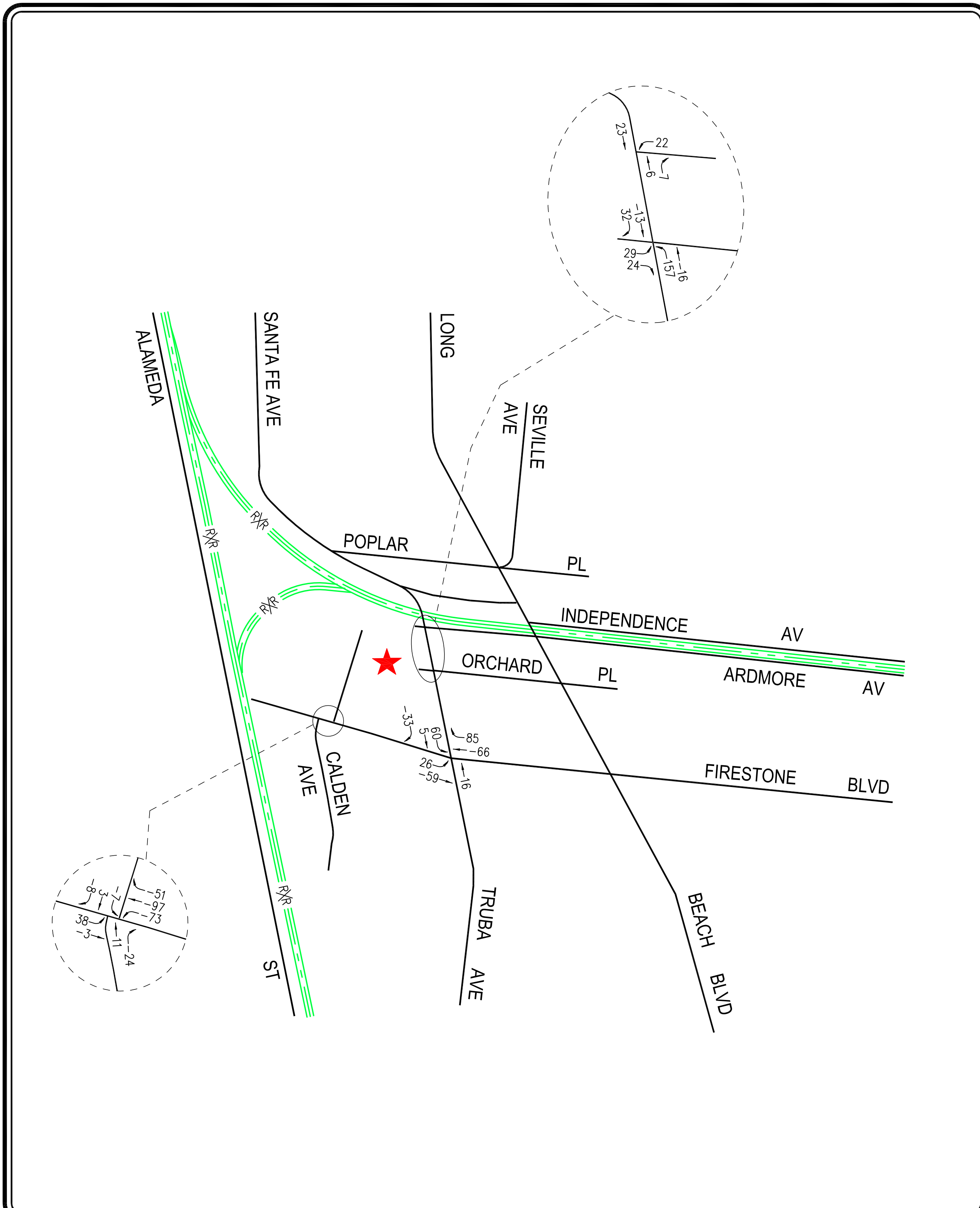

FIGURE 5-4

NET NEW PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

2015 SOUTH GATE EDUCATIONAL CENTER MASTER PLAN

LINSCOTT, LAW & GREENSPAN, engineers

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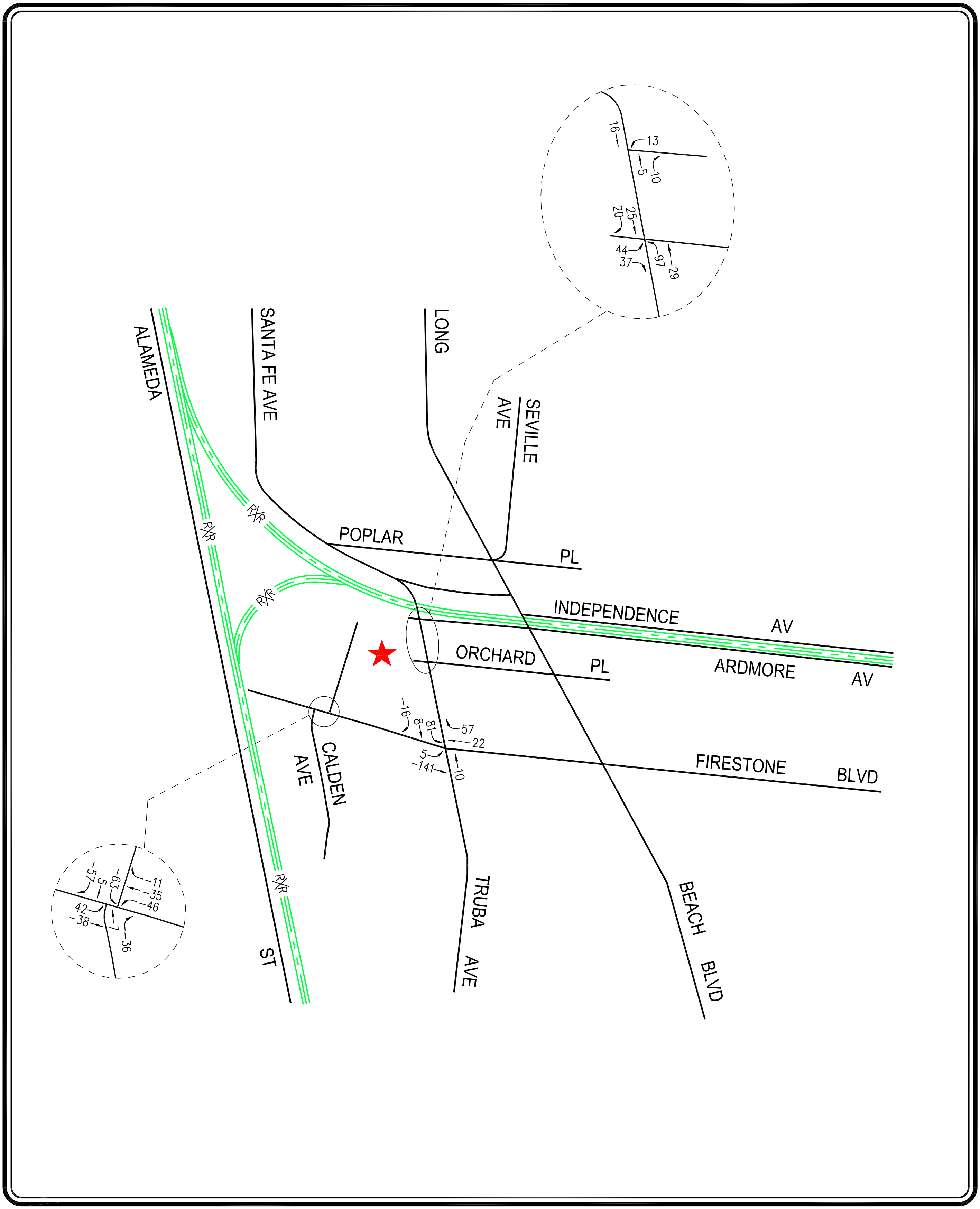

FIGURE 5-5

NET NEW PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

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2015 SOUTH GATE EDUCATIONAL CENTER MASTER PLAN

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reflect the traffic distribution characteristics shown in *Figures 5-1* to *5-3*, the project traffic generation forecasts presented in *Table 5-1*, and the existing and proposed site generation and access characteristics. As shown in *Figures 5-4* and *5-5*, some of the proposed project traffic is forecast to utilize Ardmore Avenue (which also included use of Independence Avenue, east of Long Beach Boulevard) to access Santa Fe Avenue. Based on a review of the surrounding roadway network and lane configurations in the immediate project vicinity, project-related traffic will likely not utilize the segment of Independence Avenue between Santa Fe Avenue and Long Beach Boulevard as traffic would have to back-track in order to continue on Independence Avenue east of Long Beach Boulevard.

Additionally, it should be noted that some of the net new project traffic volumes in *Figures 5-4* and *5-5* are shown as negative volumes. This is due to the fact that the existing SGEC building, with driveways located on Firestone Boulevard (west of Calden Avenue) and on Calden Avenue (south of Firestone Boulevard), will not be utilized by LACCD when the proposed project is completed. Consequently, the turning movements associated with the existing SGEC building were appropriately redistributed along the street system to/from the proposed project driveways on Firestone Boulevard (east of Calden Avenue) and on Santa Fe Avenue (north of Firestone Boulevard). Similarly, with the proposed demolition of Buildings 1 and 3, their corresponding traffic would no longer be generated to/from the project site in the future under the proposed 2015 SGEC Master Plan project conditions. Therefore, those trips were also appropriately subtracted from the street system.

The weekday AM and PM peak hour project traffic volumes at each of the proposed vehicular access points are presented in ***Attachment A***. The driveway traffic volumes shown in *Attachment A* reflect full buildout of the 2015 South Gate Educational Center Master Plan project. Additionally, the existing Firestone Boulevard shared access driveway (between LACCD and the adjacent property) as shown in *Attachment A* includes traffic reflecting full occupancy of the adjacent property as half manufacturing use and half warehousing use. Refer to the approved traffic study for a detailed discussion regarding the adjacent property/former HON site assumptions. It should be noted that traffic associated with the recent building expansion at the adjacent property is also included.

CITY OF SOUTH GATE TRAFFIC ANALYSIS

The results of the traffic impact analysis prepared using the ICU methodology (for signalized intersections) and the HCM methodology (for unsignalized intersections) and application of the City of South Gate significant traffic impact criteria is summarized in the attached ***Table 8-1***. The ICU/HCM data worksheets for the analyzed intersections are contained in ***Attachment B***.

Table 8-1
CITY OF SOUTH GATE SUMMARY OF VOLUME TO CAPACITY RATIOS DELAY AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
PROJECT BUILDOUT CONDITIONS

NO.	INTERSECTION	PEAK HOUR	[1] EXISTING V/C or Delay	[1] EXISTING LOS	[2] EXISTING W/ PROJECT BUILDOUT V/C or Delay	[2] EXISTING W/ PROJECT BUILDOUT LOS	[2] CHANGE V/C [(2)-(1)]	[2] SIGNIF. IMPACT	[3] YEAR 2031 FUTURE PRE-PROJECT W/ AG & REL. PROJECTS V/C or Delay	[3] LOS	[4] YEAR 2031 FUTURE WITH PROJECT BUILDOUT V/C or Delay	[4] LOS	[4] CHANGE V/C [(4)-(3)]	[4] SIGNIF. IMPACT	[5] YEAR 2031 FUTURE WITH PROJECT MITIGATION V/C or Delay	[5] LOS	[5] CHANGE V/C [(5)-(3)]	[5] MITIGATED
7	Project Driveway-Calden Avenue/ Firestone Boulevard [a]	AM	> 50.0	F	> 50.0	F	0.018	NO	0.892	D	0.860	D	-0.032	NO	0.860	D	-0.032	---
		PM	> 50.0	F	> 50.0	F	-0.068	NO	0.969	E	0.892	D	-0.077	NO	0.892	D	-0.077	---
		AM	0.623		0.641													
		PM	0.679		0.611													
8	Santa Fe Avenue/ Ardmore Avenue [a]	AM	> 50.0	F	> 50.0	F	0.018	NO	> 50.0	F	> 50.0	F	0.017	NO	> 50.0	F	0.017	---
		PM	37.7	E	47.8	E	0.015	NO	> 50.0	F	> 50.0	F	0.013	NO	> 50.0	F	0.013	---
		AM	0.522		0.540				0.596		0.613				0.613			
		PM	0.454		0.469				0.527		0.540				0.540			
9	Santa Fe Avenue/ Project Driveway-Orchard Place [a]	AM	14.2	B	31.7	D	0.063	NO	17.0	C	46.5	E	0.062	YES	0.472	A	0.048	YES
		PM	16.4	C	> 50.0	F	0.111	YES	21.3	C	> 50.0	F	0.108	YES	0.544	A	0.101	YES
		AM	0.374		0.437				0.424		0.486							
		PM	0.385		0.496				0.443		0.551							
10	Santa Fe Avenue/ Firestone Boulevard	AM	0.882	D	0.971	E	0.089	YES	1.099	F	1.164	F	0.065	YES	1.052	F	-0.047	YES
		PM	0.839	D	0.899	D	0.060	NO	1.108	F	1.137	F	0.029	YES	1.118	F	0.010	YES

[a] Two-Way Stop-Controlled Intersection. Reported values represent the delays associated with the most constrained approach of the intersection.

Existing Conditions

As indicated in column [1] of *Table 8-1*, two of the four study intersections analyzed in this supplemental traffic assessment are operating at LOS D or better during the weekday AM and PM peak hours under existing conditions. The remaining two study intersections are operating at LOS E or F during the peak hours shown in *Table 8-1*. The existing roadway configurations and intersection controls at the four study intersections are displayed in the attached ***Figure 4-1***. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in the attached ***Figures 4-3*** and ***4-4***, respectively.

Existing With Project Conditions

As shown in column [2] of *Table 8-1*, application of the City of South Gate's significant impact threshold criteria in the existing with project scenario indicates that the proposed project is expected to result in significant impacts at two of the four study intersections analyzed in this supplemental traffic assessment during weekday conditions. Incremental but not significant impacts are noted at the remaining two study intersections as presented in *Table 8-1*. The following two study intersections analyzed in this supplemental traffic assessment are expected to be significantly impacted during the AM and/or PM peak hours in the existing with project conditions:

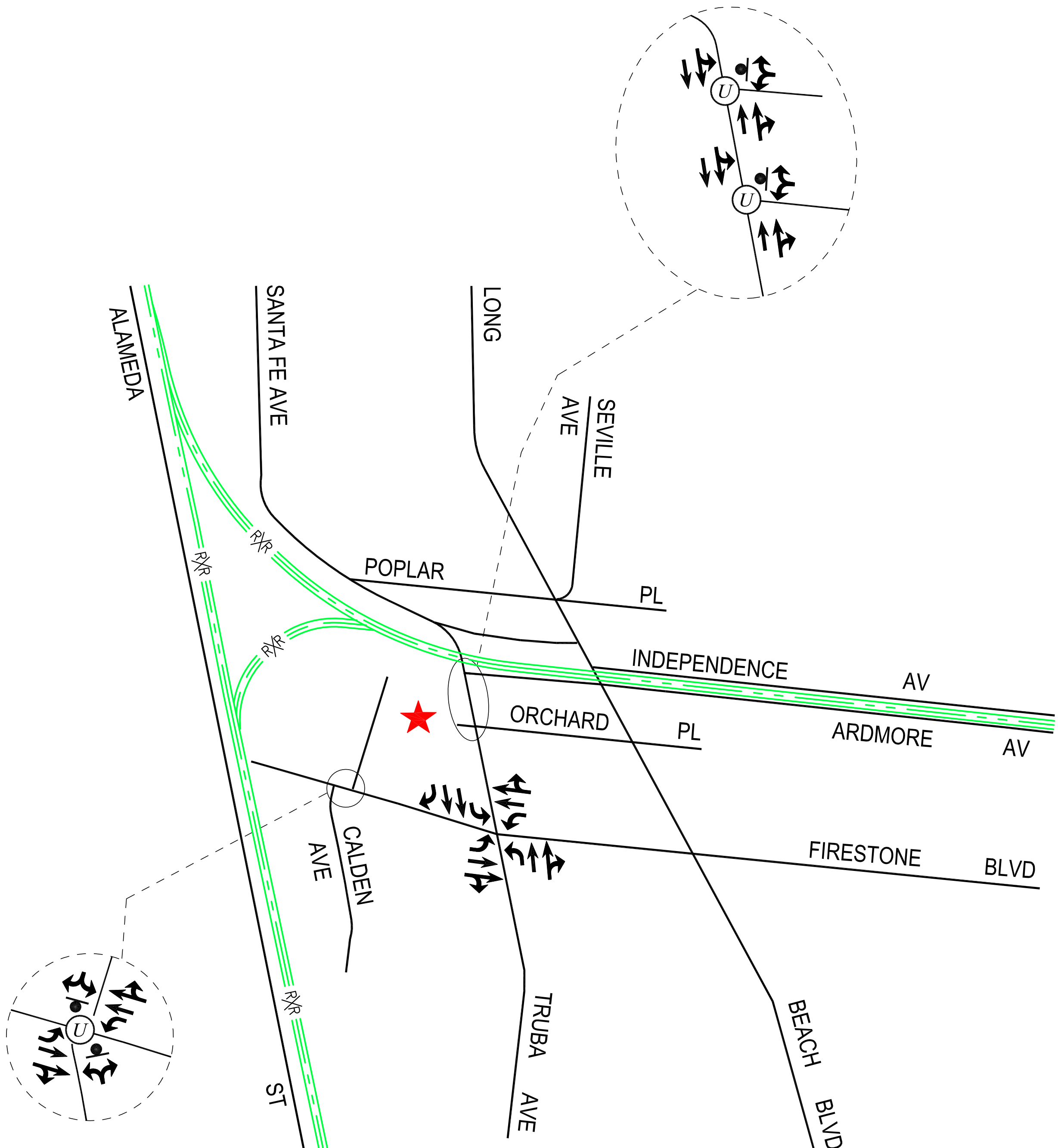
- Int. No. 9: Santa Fe Avenue/Project Driveway-Orchard Place (PM peak hour)
- Int. No. 10: Santa Fe Avenue/Firestone Boulevard (AM peak hour)

The existing with project conditions ICU and HCM data worksheets for the study intersections during the weekday AM and PM peak hours are contained in *Attachment B*. The ICU data worksheets for the unsignalized study intersections (analyzed for purposes of determining the incremental *v/c* increases) are also contained in *Attachment B*. The existing with project traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in the attached ***Figures 8-1*** and ***8-2***, respectively. As shown, no eastbound and westbound through movements will be permitted at the Santa Fe Avenue/Project Driveway-Orchard Place intersection.

Year 2031 Without Project Conditions

The *v/c* ratios and delay values at the study intersections are incrementally increased with the addition of ambient growth plus traffic generated by the related projects as shown in the traffic study. The assignment of the related projects traffic volumes to the four study intersections during the weekday AM and PM peak hours are displayed in the attached ***Figures 6-2*** and ***6-3***, respectively.

As presented in column [3] of *Table 8-1*, one of the four study intersections analyzed in this supplemental traffic assessment is expected to continue operating at LOS D or better during the year 2031 weekday AM and PM peak hours with the addition of



PROJECT SITE

UNSIGNALIZED INTERSECTION

STOP SIGN

N

NOT TO SCALE

FIGURE 4-1
EXISTING ROADWAY CONFIGURATIONS AND INTERSECTION CONTROLS

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2015 SOUTH GATE EDUCATIONAL CENTER MASTER PLAN

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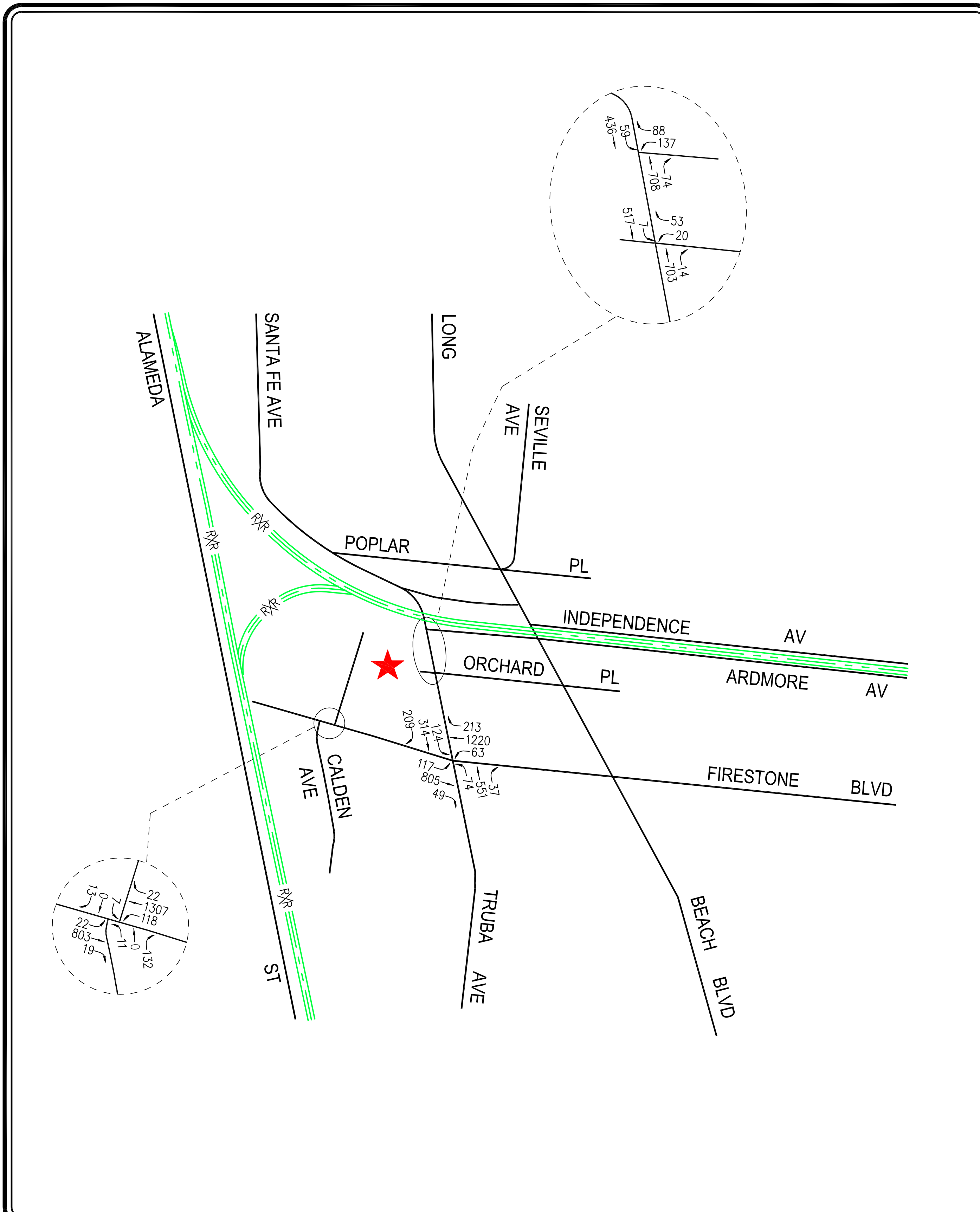

FIGURE 4-3
EXISTING TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

2015 SOUTH GATE EDUCATIONAL CENTER MASTER PLAN

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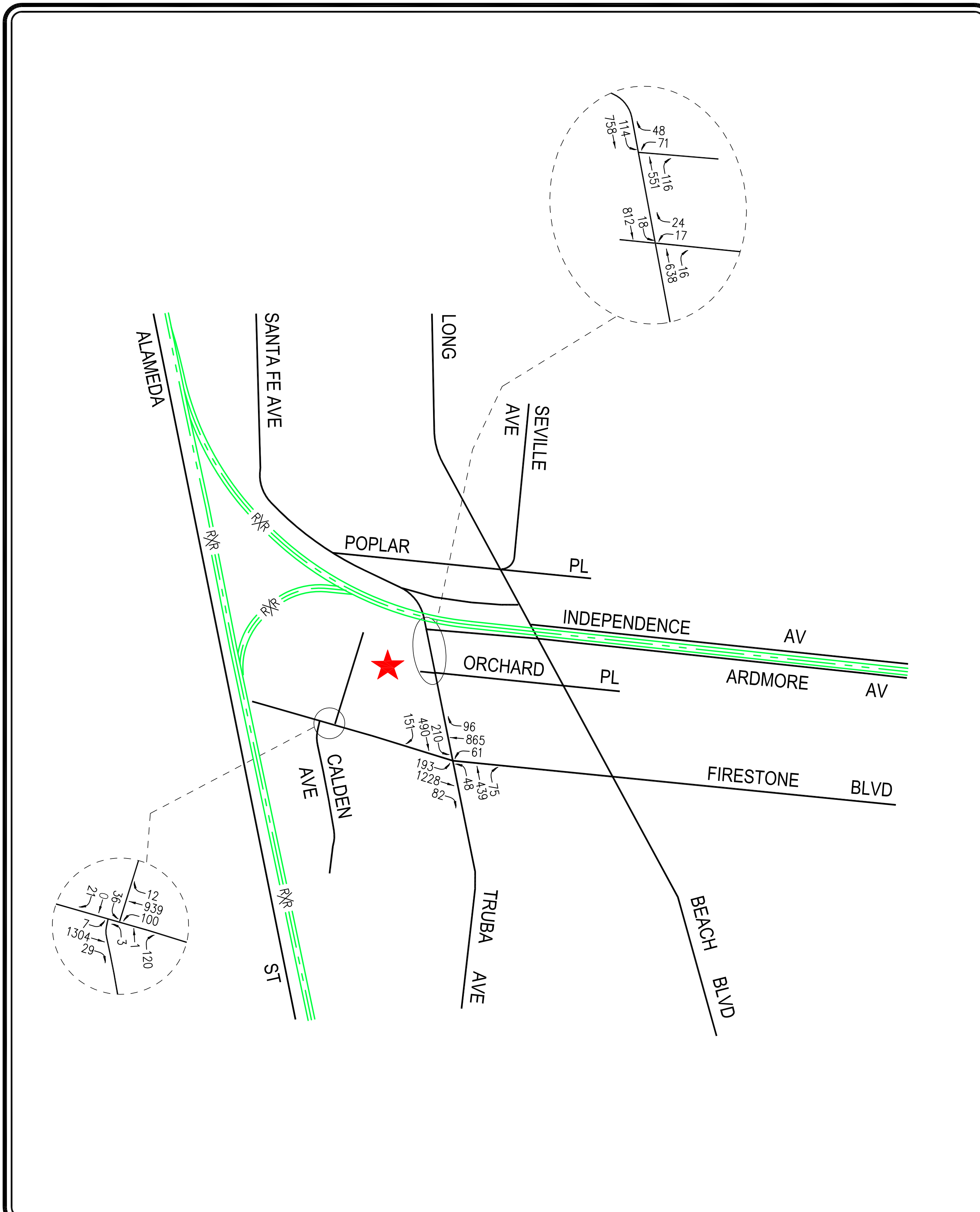


PROJECT SITE

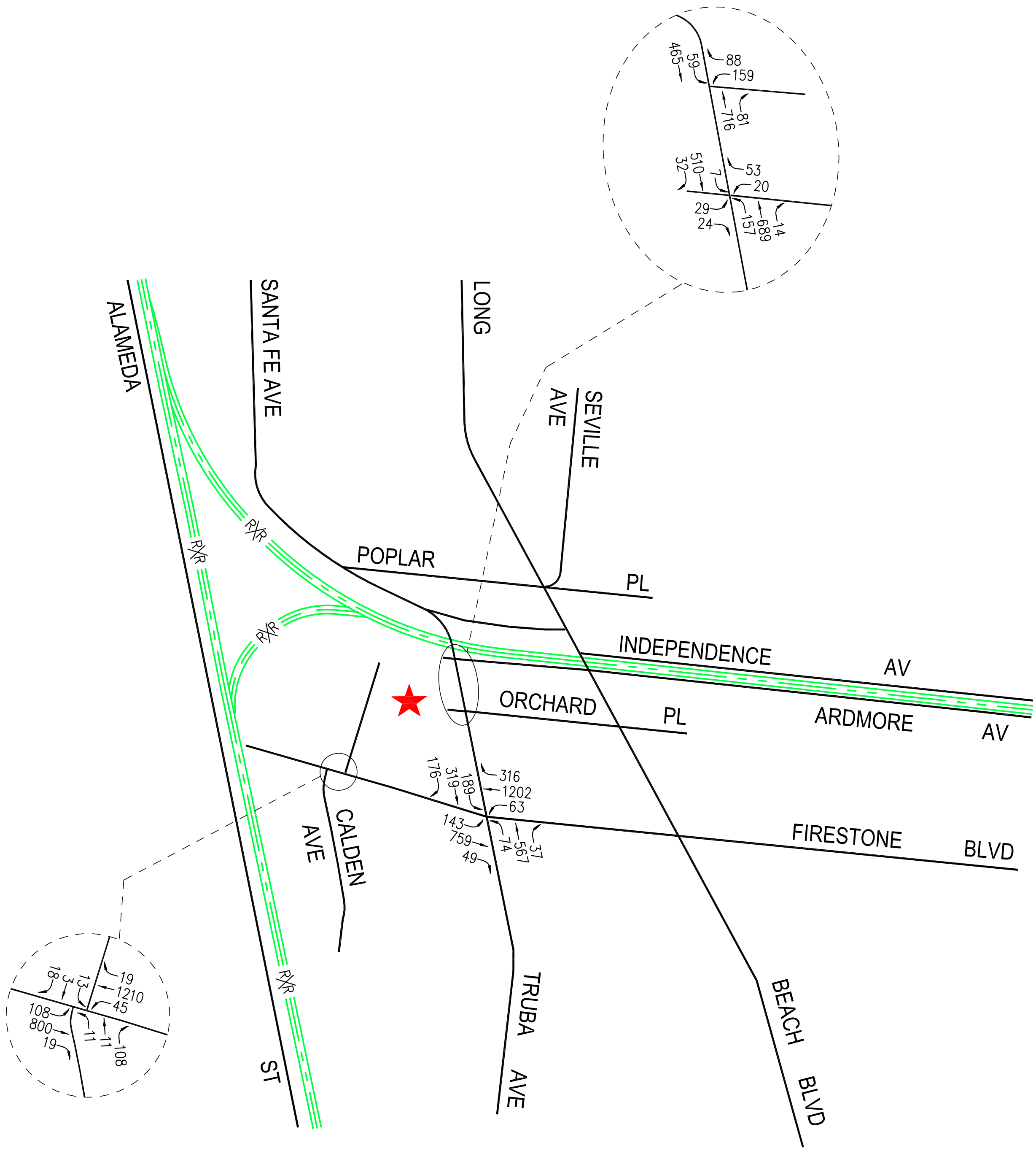
N

NOT TO SCALE

FIGURE 4-4
EXISTING TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR

2015 SOUTH GATE EDUCATIONAL CENTER MASTER PLAN

LINSCOTT, LAW & GREENSPAN, engineers



NOT TO SCALE

PROJECT SITE

FIGURE 8-1

EXISTING WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

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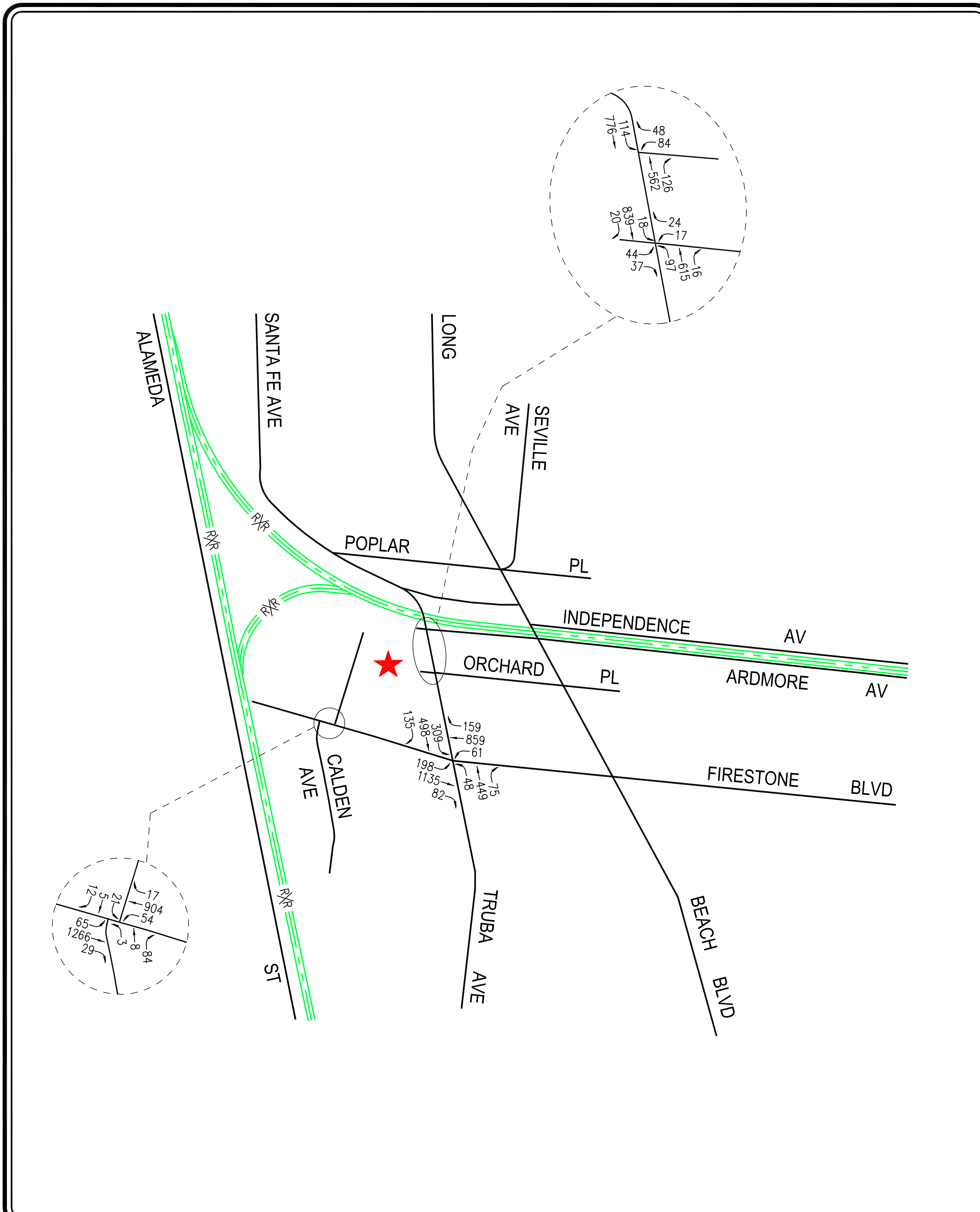

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NOT TO SCALE

★ PROJECT SITE

FIGURE 8-2
EXISTING WITH PROJECT TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR

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2015 SOUTH GATE EDUCATIONAL CENTER MASTER PLAN

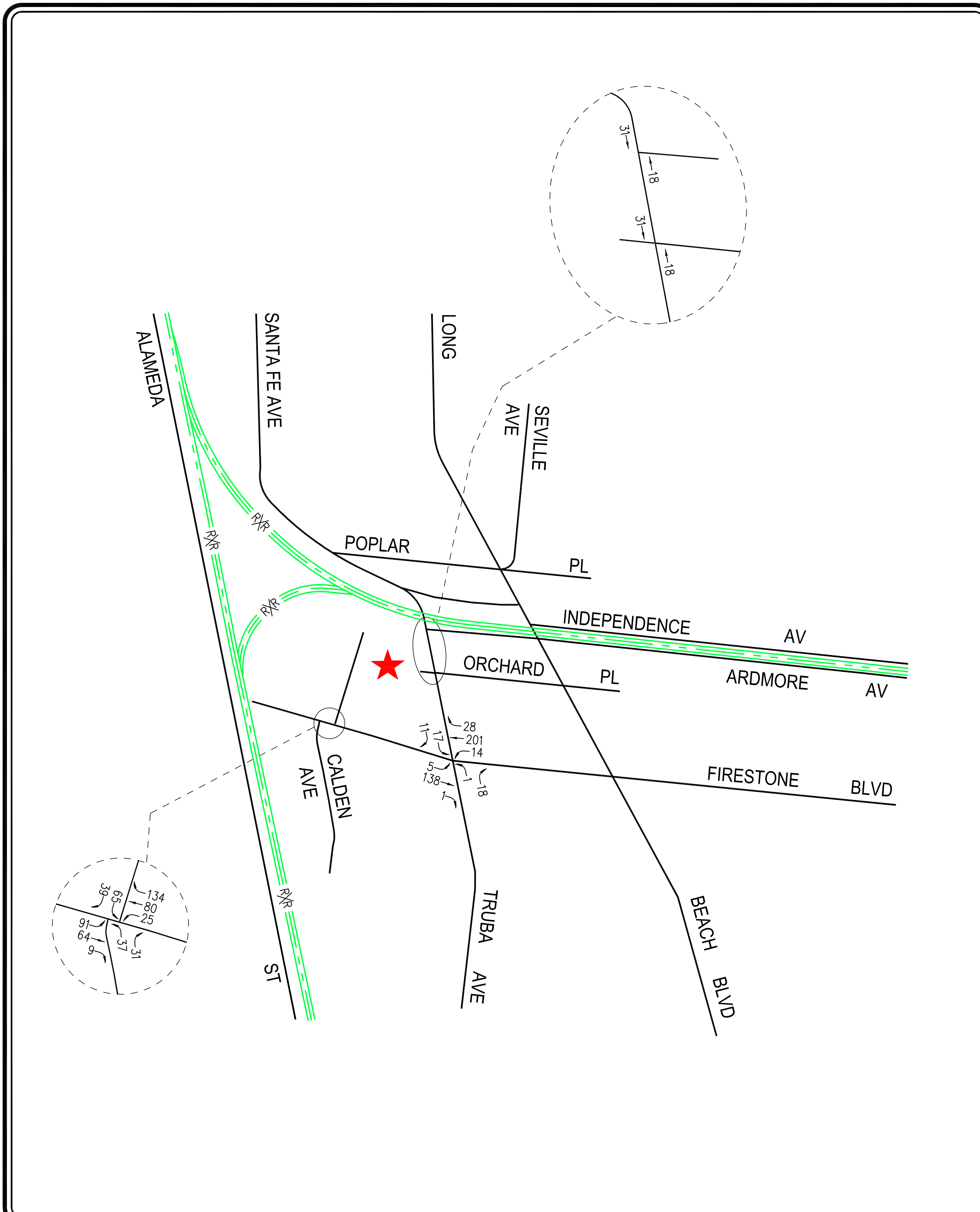

FIGURE 6-2
RELATED PROJECTS TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

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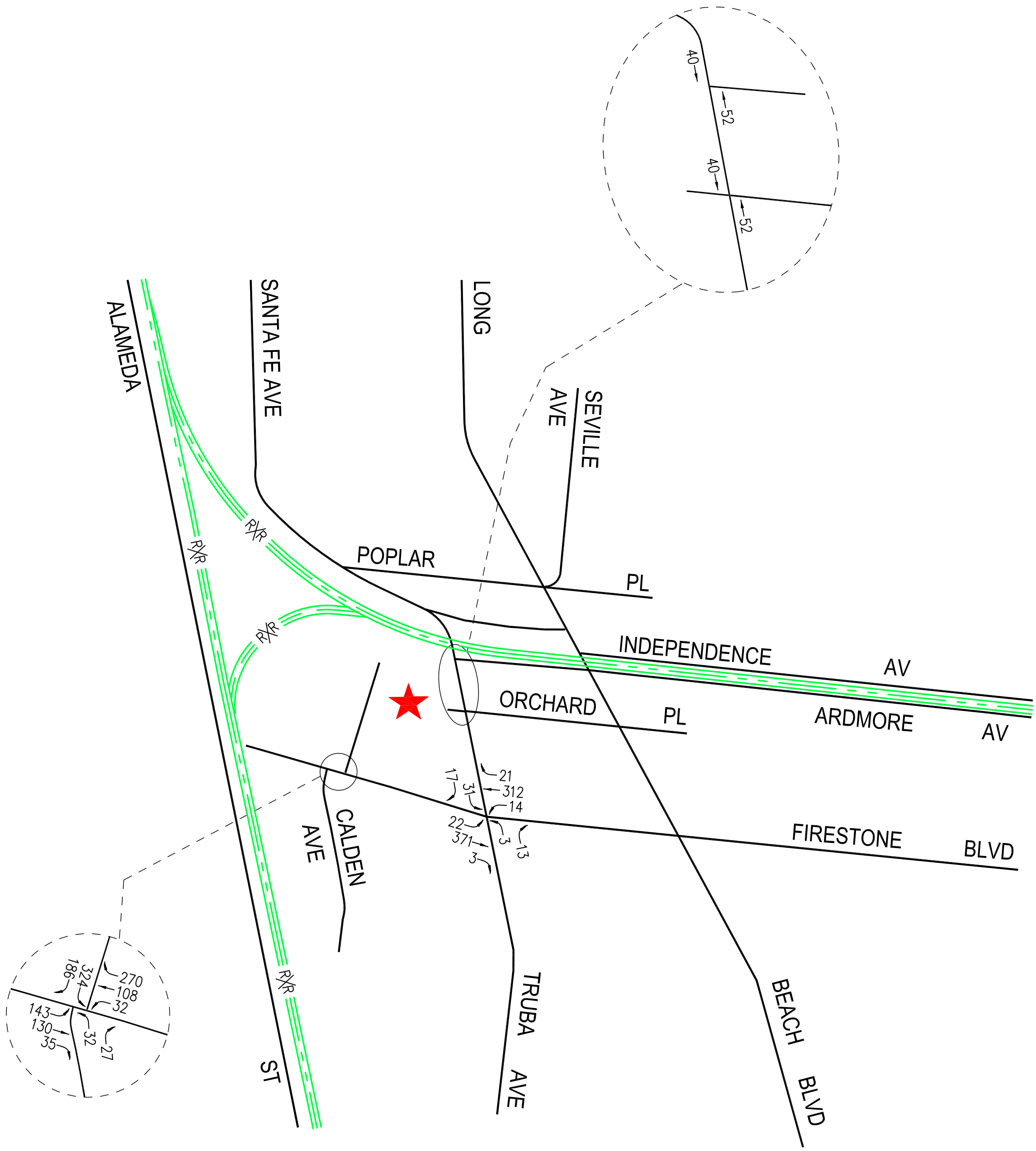
2015 SOUTH GATE EDUCATIONAL CENTER MASTER PLAN



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NOT TO SCALE

PROJECT SITE

FIGURE 6-3

RELATED PROJECTS TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

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2015 SOUTH GATE EDUCATIONAL CENTER MASTER PLAN

ambient traffic growth and traffic due to the related projects. The remaining three study intersections are expected to operate at LOS E or F during the peak hours shown in *Table 8-1* with the addition of ambient traffic and traffic due to the related projects.

The year 2031 without project (existing, ambient growth and related projects) conditions ICU and HCM data worksheets for the study intersections during the weekday AM and PM peak hours are contained in *Attachment B*. The ICU data worksheets for the unsignalized study intersections (analyzed for purposes of determining the incremental *v/c* increases) are also contained in *Attachment B*. The year 2031 without project traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in the attached ***Figures 8-3*** and ***8-4***, respectively.

Year 2031 With Project Conditions

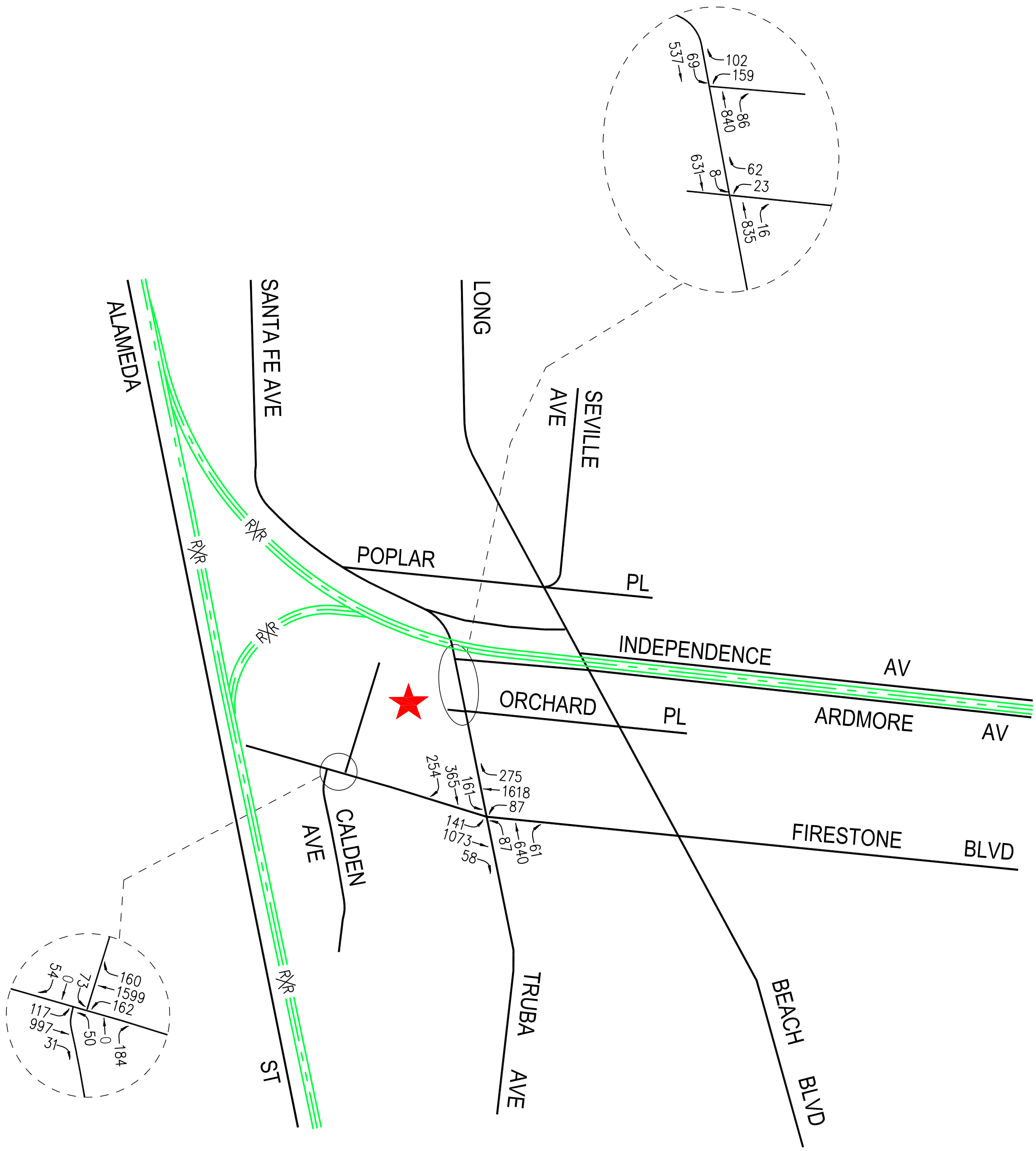
As shown in column [4] of *Table 8-1*, application of the City of South Gate's significant impact threshold criteria in the year 2031 with project scenario indicates that the proposed project is expected to result in significant impacts at two of the four study intersections analyzed in this supplemental traffic assessment during weekday conditions. Incremental but not significant impacts are noted at the remaining two study intersections as presented in *Table 8-1*. The two study intersections anticipated to be significantly impacted during the AM and/or PM peak hours in the year 2031 with project condition are as follows:

- Int. No. 9: Santa Fe Avenue/Project Driveway-Orchard Place (AM & PM peak hours)
- Int. No. 10: Santa Fe Avenue/Firestone Boulevard (AM & PM peak hours)

The year 2031 with project conditions ICU and HCM data worksheets for the study intersections during the weekday AM and PM peak hours are contained in *Attachment B*. The ICU data worksheets for the unsignalized study intersections (analyzed for purposes of determining the incremental *v/c* increases) are also contained in *Attachment B*. The year 2031 with project traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in the attached ***Figures 8-5*** and ***8-6***, respectively. As shown, no eastbound and westbound through movements will be permitted at the Santa Fe Avenue/Project Driveway-Orchard Place intersection.

ANALYSIS OF INTERIM FIRESTONE BOULEVARD ACCESS SCHEME

Consistent with the approved 2013 FEC Master Plan project traffic study, due to the offset between the existing shared access driveway and Calden Avenue, the lack of LACCD ownership to the west of the site's westerly property line (i.e., the area across from Calden Avenue), and the approved Calden Avenue/Firestone Boulevard



PROJECT SITE

NOT TO SCALE

FIGURE 8-3

YEAR 2031 WITHOUT PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

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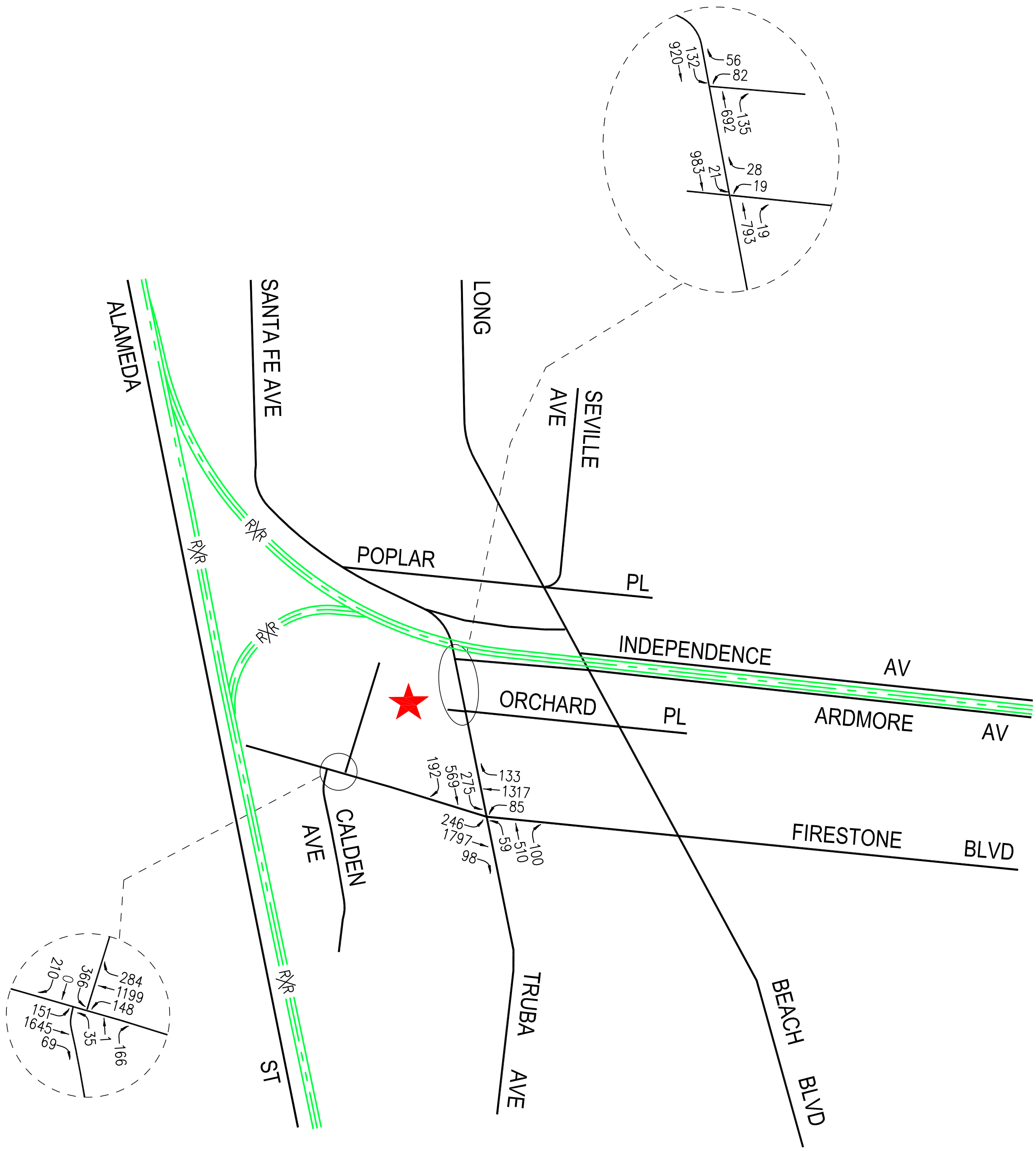

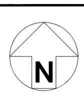

PROJECT SITE

FIGURE 8-4

YEAR 2031 WITHOUT PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

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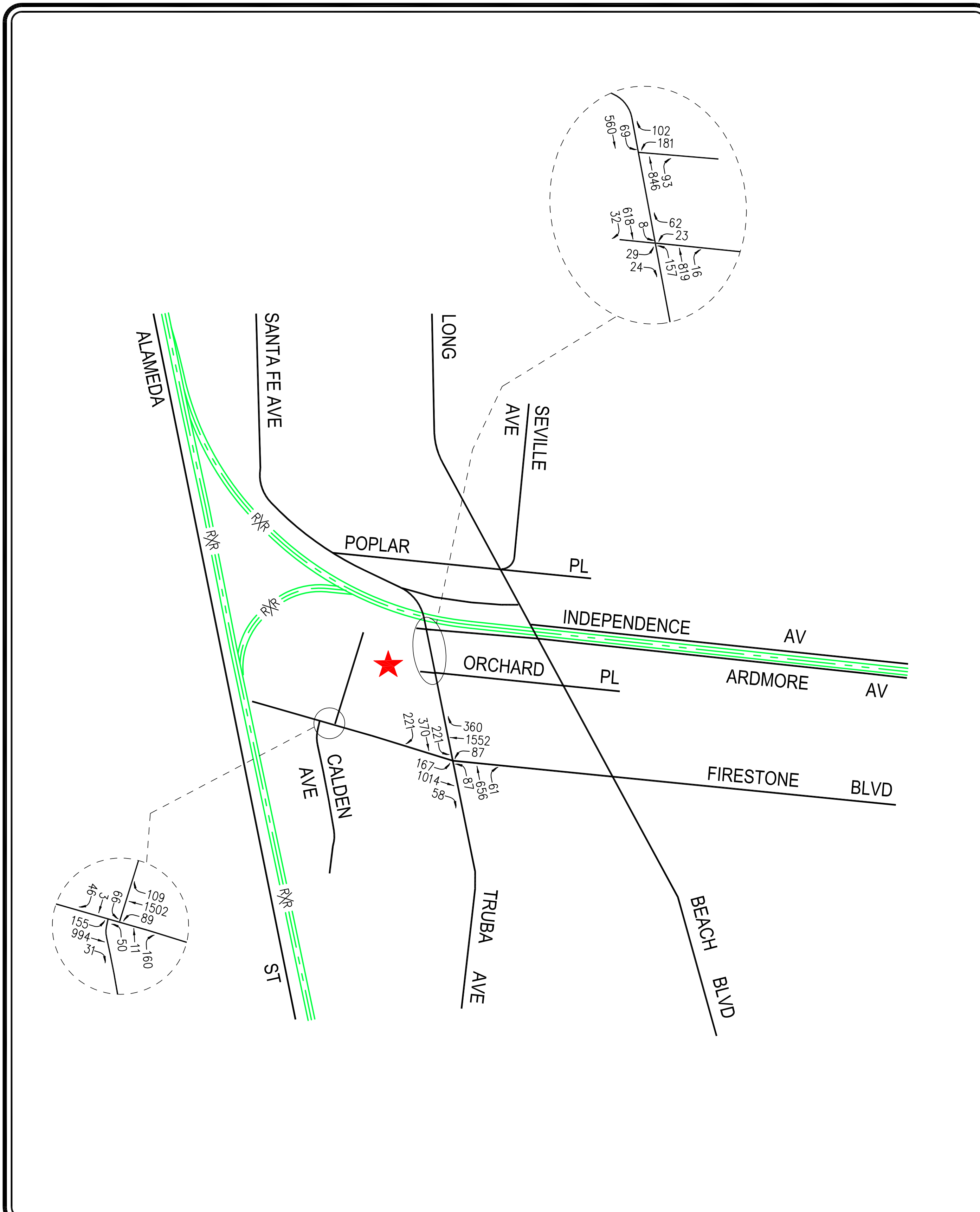


PROJECT SITE

NOT TO SCALE

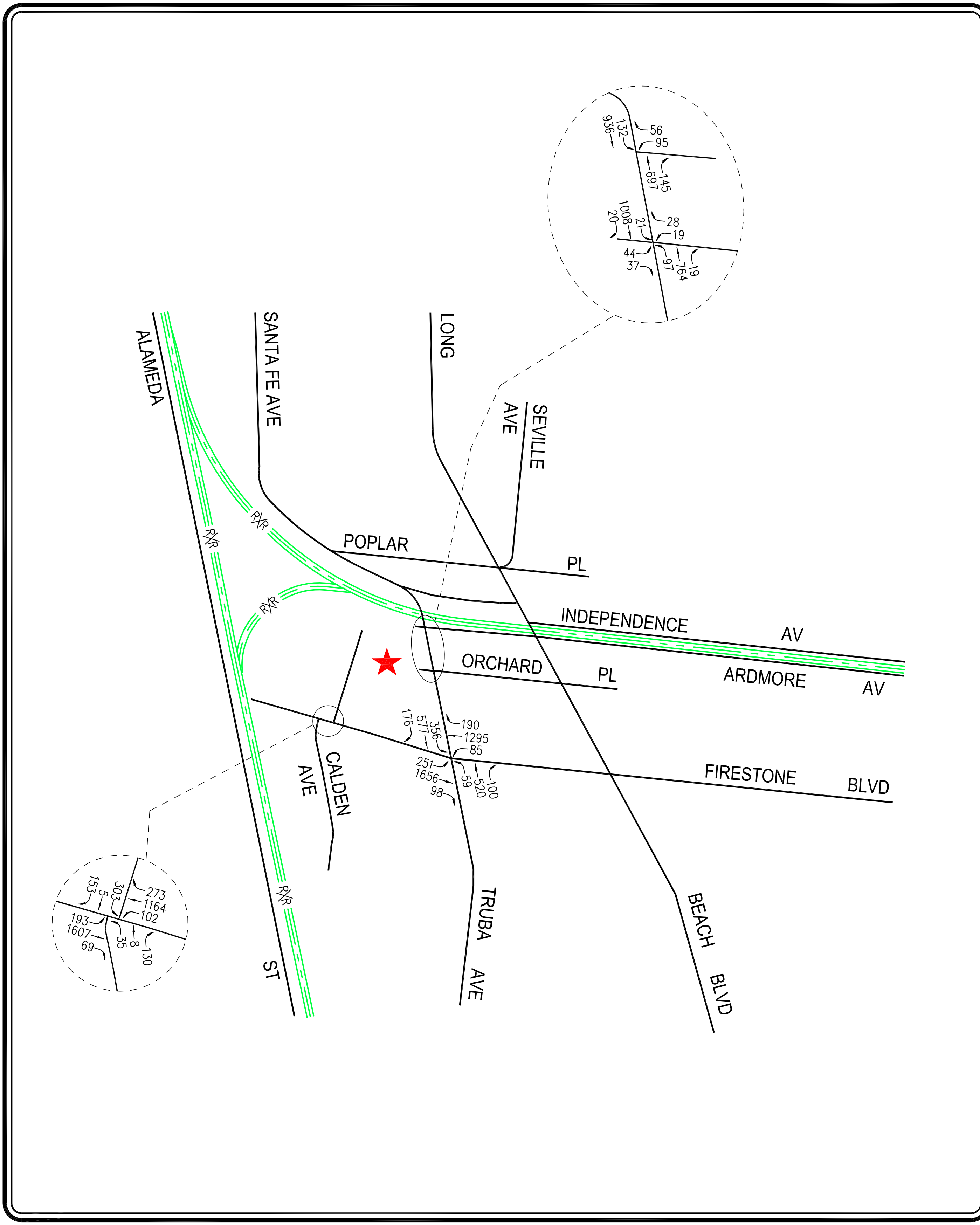
FIGURE 8-5

YEAR 2031 WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

2015 SOUTH GATE EDUCATIONAL CENTER MASTER PLAN



PROJECT SITE

NOT TO SCALE

FIGURE 8-6

YEAR 2031 WITH PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

2016 SOUTH GATE EDUCATIONAL CENTER MASTER PLAN

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traffic signal installation, this supplemental traffic assessment also includes an analysis of an interim condition in which the existing shared access point along the north side of Firestone Boulevard will remain and be signalized and operated in conjunction with the Calden Avenue/Firestone Boulevard traffic signal (i.e., in an offset configuration). Based on coordination with the City, under the interim condition, all vehicular turning movements will continue to be allowed at the joint traffic signal and the existing shared access driveway will accommodate both LACCD-related traffic as well as traffic associated with the further reuse of the adjacent property in the future (i.e., as manufacturing/warehousing uses under near-term conditions).

For purposes of the near-term analysis conditions, it is assumed that half of the adjacent property's building floor area will be occupied as manufacturing use and the remaining half as warehousing use, consistent with the approved traffic study. Traffic associated with the recent building expansion of the adjacent property is also included. In addition, the interim analysis condition focuses on year 2019 (i.e., approximately one year after the completion of project construction) but conservatively assumes project-related traffic based on the maximum student enrollment which is highly unlikely. As previously discussed in the approved 2013 FEC Master Plan project traffic study, the new FEC facility is envisioned to initially have approximately 5,000 students in year 2019 and the maximum enrollment of 9,000 students would likely not be achieved until year 2031. Thus, incorporating project-related traffic based on the maximum student enrollment by year 2019 provides a very conservative assessment of traffic operations at this location. It should be noted that under the interim analysis condition, two exiting travel lanes (i.e., one left-turn only lane and one right-turn only lane) would be provided at the existing shared access point (i.e., southbound approach). This interim Firestone Boulevard access scheme analysis is provided for informational purposes only.

The ICU data worksheets for the Project Driveway-Calden Avenue/Firestone Boulevard intersection for the year 2019 future with project conditions are contained in ***Attachment C***. The following provides a summary of the anticipated intersection Level of Service employing the ICU methodology:

<u>Year 2019 Future With Project and Interim Firestone Boulevard Access Conditions:</u>

AM Peak Hour: v/c = 0.830, LOS D

PM Peak Hour: v/c = 0.816, LOS D

In addition to the intersection capacity analysis, this interim condition analysis also includes an operational evaluation of the subject Project Driveway-Calden Avenue/Firestone Boulevard intersection given signalization in the proposed offset configuration. The operational analysis has been prepared using the *Synchro 9* software. Specific elements such as the proposed lane configurations, lane widths, offset distance between the shared access driveway and Calden Avenue, storage lengths, crosswalk locations, posted speed limits, recommended traffic signal

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phasing, signal cycle length, traffic volumes, etc., have all been coded as part of the year 2019 future with project AM and PM peak hour Synchro networks.

The Synchro analysis worksheets for the Project Driveway-Calden Avenue/Firestone Boulevard intersection for the year 2019 future with project conditions are also contained in *Attachment C*. The following provides a summary of the anticipated intersection operations based on the Synchro analysis:

<u>Year 2019 Future With Project and Interim Firestone Boulevard Access Conditions:</u>

AM Peak Hour: Delay = 22.5 seconds/vehicle, LOS C

PM Peak Hour: Delay = 22.2 seconds/vehicle, LOS C

Based on the above analyses, it is determined that the interim Firestone Boulevard access scheme (i.e., joint signalization of the Project Driveway-Calden Avenue/Firestone Boulevard intersection under an offset configuration) would accommodate the traffic volume forecasts under the year 2019 future with project conditions. Furthermore, it is important to note that the above interim access scheme analyses also do not assume the General Plan 2035 Mobility Element improvements (i.e., three through travel lanes in both the eastbound and westbound directions along Firestone Boulevard) which is consistent with the analysis prepared under year 2031 analysis conditions, however they do reflect attainment by 2019 of the maximum student enrollment of 9,000 students. The intersection operations would further improve during the weekday AM and PM peak hours when the General Plan improvements are completed and implemented.

SOUTH GATE GENERAL PLAN 2035 ROADWAY CLASSIFICATION

The General Plan roadway classifications for streets surrounding the project site are as follows:

- Firestone Boulevard is classified as a Boulevard (Primary Arterial) and ultimately will be constructed to provide a roadway cross section width of between 80 and 86 feet on a right-of-way cross section width of between 104 and 116 feet. In the case of Firestone Boulevard, an overall roadway width of between 80 and 86 feet on a right-of-way width of between 104 and 116 feet (i.e., between 40-foot and 43-foot ½ roadway width and between 52-foot and 58-foot ½ right-of-way width) is envisioned. Based on the existing Firestone Boulevard ½ roadway width of 37 feet and ½ right-of-way width of 50 feet, this would ultimately require between three-feet and six-feet of widening and between two-feet and eight-feet of dedication along both sides. Once the corresponding roadway dedications and widening occur, three travel lanes in each direction with associated raised median islands and left-turn lanes could be constructed.

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Based on the General Plan roadway classification, it is recommended that LACCD consider a roadway dedication of up to eight feet along the Firestone Boulevard Building 1 project frontage. It may also be required by the City to provide up to six feet of physical roadway widening along the Building 1 project frontage to meet City General Plan standards. However, it is important to note that Building 2 is not planned to be part of the 2015 South Gate Educational Center Master Plan project. As such, the surface parking area located south of Building 2 and along Firestone Boulevard will remain and continue to serve Building 2. Therefore, it is recommended that LACCD provide an irrevocable offer to dedicate since roadway widening along the Building 2 frontage along Firestone Boulevard can not occur until such time as that site is redeveloped.

As discussed more fully in the following section, right-of-way outside of the ELAC SGEC ownership (e.g., the adjoining property as well as other sites and frontages along Firestone Boulevard) cannot be assumed to be acquired by the future year conditions analysis scenarios (e.g., by year 2031). Thus, this supplemental traffic assessment conservatively assumes that any mitigation measures involving the need for three travel lanes in either direction along Firestone Boulevard cannot be implemented prior to Year 2035 (i.e., the future horizon year of the General Plan).

- Santa Fe Avenue is classified as a Street (Collector) and ranges from between 80 and 84 feet of overall right-of-way (with roadway width ranges between 56 and 60 feet). As noted in the Mobility Element this cross section provides for two lanes in each direction along with installation of bicycle lanes in lieu of on-street parking where appropriate (i.e., Santa Fe Avenue is designated for implementation of a Class II – Bike Lane between Independence/Ardmore Avenues and Southern Avenue). Based on previous discussions with the City of South Gate, the existing on-street parking along the east side of Santa Fe Avenue will likely remain while a bicycle lane may be installed along the west side of Santa Fe Avenue along the SGEC project frontage. It should be noted that the existing roadway width along the Santa Fe Avenue project frontage is approximately 74 feet which significantly exceeds the Mobility Element roadway standard. The existing roadway width of 74 feet will adequately accommodate one left-turn lane, two through travel lanes in each direction, parking along the east side of Santa Fe Avenue, and a Class II bike lane along the west side of Santa Fe Avenue. Alternatively, a Class II bike lane can also be provided along the east side of Santa Fe Avenue in lieu of on-street parking. No additional roadway dedication or widening is therefore required on Santa Fe Avenue.

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TRANSPORTATION IMPROVEMENT MEASURES

The following paragraphs provide an overview of the transportation improvement mitigation measures reviewed and considered for the four study intersections specifically evaluated in this supplemental traffic assessment. It should be noted that the corresponding findings and conclusions associated with all other improvement measures that were previously reviewed in the approved 2013 FEC Master Plan project traffic study remain valid, except as discussed below.

Intersection No. 7: Project Driveway-Calden Avenue/Firestone Boulevard

This location serves as one of five access points for students, faculty, staff and visitors of the FEC project. The driveway is currently 32 feet wide, is a shared access point for two entities (LACCD which owns the project site on the east side of the driveway and the new ownership of the adjoining property on the west of the driveway) and is offset to the east of Calden Avenue. As shown in *Table 8-1*, application of the City of South Gate's significant impact threshold criteria indicates that the proposed project is expected to result in incremental but not significant impacts at this intersection under the existing with project conditions and the year 2031 with project conditions.

However, due to the City approved installation of a traffic signal at the Calden Avenue/Firestone Boulevard intersection as part of the Calden Court Apartments project and the City's requirement against restricting any vehicular turning movements, the City has directed that the shared access point (between LACCD and the adjacent property) at Firestone Boulevard also be signalized and integrated into the Calden Avenue/Firestone Boulevard traffic signal under a single signal controller. The City and LACCD have previously agreed that LACCD's fair share contribution to the joint traffic signal design and installation is 50 percent. As discussed and analyzed above, the near-term operation under the signalized offset configuration is anticipated to accommodate existing and future traffic, including the new FEC facility at maximum enrollment, the Calden Court Apartments project at buildout, the full reuse of the adjacent/former HON site (as manufacturing/warehousing uses under interim conditions), other related development projects in the area, and regional traffic growth. Even though this study intersection is not anticipated to be significantly impacted by the proposed project utilizing the City of South Gate's significant impact threshold criteria, the City and LACCD have agreed to implement the joint traffic signal.

Based on recent clarification provided by the City of South Gate, the Calden Court Apartments project has fulfilled its conditions of approval requirements by finding its fair-share contribution towards the traffic signal and therefore is no longer involved in the design and construction of the signal. As discussed with the City, LACCD will likely be responsible for the design and construction of the joint traffic signal in order to facilitate all turning movements with the signal in an offset configuration and will

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receive partial reimbursement in the future. Appropriate roadway restriping and signage will be incorporated into the design. One left-turn only lane and one right-turn only lane will be provided at the joint LACCD/adjacent property access point (i.e., southbound approach of the offset intersection) such that vehicular access for both uses will be maintained. LACCD will work with the City to determine LACCD's appropriate fair-share amount at such time as the proposed FEC project moves forward and in no case shall the contribution exceed 50 percent of the design and construction costs.

Intersection No. 8: Santa Fe Avenue/Ardmore Avenue

The previous mitigation measure recommended for this location (as outlined in the prior 2013 FEC Master Plan traffic study) consisted of the installation of a traffic signal and the construction of the fourth leg of the intersection which would serve as the primary access point to the project parking structure. However, as the project parking structure is no longer planned to be a part of the 2015 South Gate Educational Center Master Plan project, vehicular access opposite Ardmore Avenue is no longer being proposed. In addition, as shown in *Table 8-1*, application of the City of South Gate's significant impact threshold criteria indicates that the proposed project is expected to result in incremental but not significant impacts at this intersection under the existing with project conditions and the year 2031 with project conditions. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the Santa Fe Avenue/Ardmore Avenue intersection.

Intersection No. 9: Santa Fe Avenue/Project Driveway-Orchard Place

This proposed access point is located along the west side of Santa Fe Avenue, opposite Orchard Place. The proposed project is expected to result in significant project impacts under the existing with project PM peak hour conditions and under the year 2031 with project AM and PM peak hour conditions. Mitigation for this location consists of the installation of a traffic signal and associated roadway restriping and signage to provide a northbound left-turn lane and a southbound left-turn lane. Refer to ***Attachment D*** for the traffic signal warrant analysis worksheets pursuant to Chapter 4C of the *California Manual on Uniform Traffic Control Devices* [MUTCD][2]. Since eastbound and westbound through movements will not be permitted at this location based on coordination with the City, strict application of the traffic signal warrant analysis worksheets in *Attachment D* indicates that the peak hour warrant is not met. However, according to the MUTCD document, protected left-turn phases should be considered at a traffic signal when there are 50 or more left turning vehicles per hour in one direction with the product of the left-turn vehicles and the conflicting through traffic during the peak hour totals 100,000 or more. Based on a review of the future traffic volume forecast at the subject intersection, the

[2] *California Manual on Uniform Traffic Control Devices (MUTCD)*, 2014 Edition.

northbound left-turn volumes are expected to exceed 50 vehicles during both the AM and PM peak hour. Furthermore, the product of the northbound left-turning vehicles and the conflicting southbound through and right-turning traffic will exceed 100,000 during the AM peak hour. This indicates that protected left-turn phasing for the northbound left-turn movement is warranted for consideration and by association suggests that a traffic signal installation is also warranted.

The above improvement can be accommodated within the existing Santa Fe Avenue roadway width. As discussed previously, the existing Santa Fe Avenue project frontage is approximately 74 feet wide which significantly exceeds the General Plan Mobility Element roadway width standards of between 56 and 60 feet for a Street (Collector) classification.

Adequate northbound left-turn storage along Santa Fe Avenue for entering (northbound) FEC motorists would be provided. This design is expected to facilitate traffic flow along Santa Fe Avenue as well as to minimize any potential vehicle queuing into and out of the project driveway. This improvement is expected to reduce the project's significant impact to less than significant levels.

It should be noted that should the proposed project be approved, this mitigation would need to be formally designed and constructed prior to occupancy of the project. At such time as the formal signal design process is initiated, the necessary coordination with the California Public Utilities Commission (CPUC) and/or Union Pacific Railroad (UPRR) will occur and details (i.e., such as the need for and design of traffic signal preemption given the proximity of the existing Santa Fe Avenue railroad crossing gates and control) will be discussed and addressed as part of the traffic signal pre-design coordination effort.

Intersection No. 10: Santa Fe Avenue/Firestone Boulevard

The proposed project is expected to result in significant project impacts during the weekday AM peak hour under the existing with project AM peak hour conditions and under the year 2031 with project AM and PM peak hour conditions. Mitigation for this intersection consists of the installation of an exclusive westbound right-turn only lane. Based on field measurements, the existing westbound combination through-right turn lane is 22 feet in width and thus, could be restriped to provide a 10-foot through lane with a 12-foot wide right-turn only lane for the westbound approach. Up to two on-street parking spaces would likely require removal along the north side of Firestone Boulevard. This improvement is expected to reduce the project's significant traffic impacts to less than significant levels.

It should be noted that the prior 2013 FEC Master Plan traffic study also included the recommendation to install an eastbound right-turn only lane at this location as well as consideration to relocate the existing eastbound near-side bus stop to a far-side bus stop. However, based on this updated traffic impact analysis, the previously recommended eastbound improvement measures are no longer required to fully

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mitigate the proposed project impacts. Therefore, no eastbound improvement measures at this location are required or recommended as part of the 2015 South Gate Educational Center Master Plan project.

CONCLUSIONS

This supplemental traffic assessment has been prepared to identify and evaluate the potential impacts of traffic generated by the proposed 2015 South Gate Educational Center (SGEC) Master Plan. A comprehensive traffic impact study was previously prepared and was included as a technical appendix of the 2013 Firestone Education Center Master Plan Subsequent EIR. The impact study evaluated traffic impacts at 31 study intersections in association with a FEC enrollment increase to a maximum of 9,000 students. The project resulted in significant traffic impacts to the surrounding street system and traffic mitigation measures were recommended so as to reduce the impacts to less than significant levels. The 2013 FEC Master Plan was approved, and the Subsequent Final EIR was certified on May 7, 2014.

LACCD now proposes to update the 2013 FEC Master Plan. The purpose of this supplemental traffic assessment is to determine whether any additional traffic impacts and corresponding mitigation measures may result due to the proposed updates as compared to the 2013 FEC Master Plan traffic study. The primary difference between the proposed 2015 SGEC Master Plan and the approved 2013 FEC Master Plan is that Buildings 1 and 3 are now being proposed for demolition, and surface parking would be provided throughout the project site instead of via a parking structure. As these site access and circulation updates will only result in a slightly different assignment of project trips at the driveways, four study intersections located immediately adjacent to the project site have been identified for evaluation in this supplemental traffic assessment.

The proposed 2015 South Gate Educational Center Master Plan project is expected to generate 240 net new vehicle trips (193 inbound trips and 47 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 159 net new vehicle trips (128 inbound trips and 31 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 2,126 net new daily trip ends during a typical weekday (1,063 inbound trips and 1,063 outbound trips)

Where feasible, roadway improvement measures have been recommended to reduce the respective significant impacts to less than significant levels. For those locations (highlighted in the certified EIR traffic study) where opportunities for potential physical measures were limited (i.e., right-of-way constraints, presence of the Alameda Corridor grade-separated rail line, etc.), the project and cumulative project impacts have been reported as significant and unavoidable.

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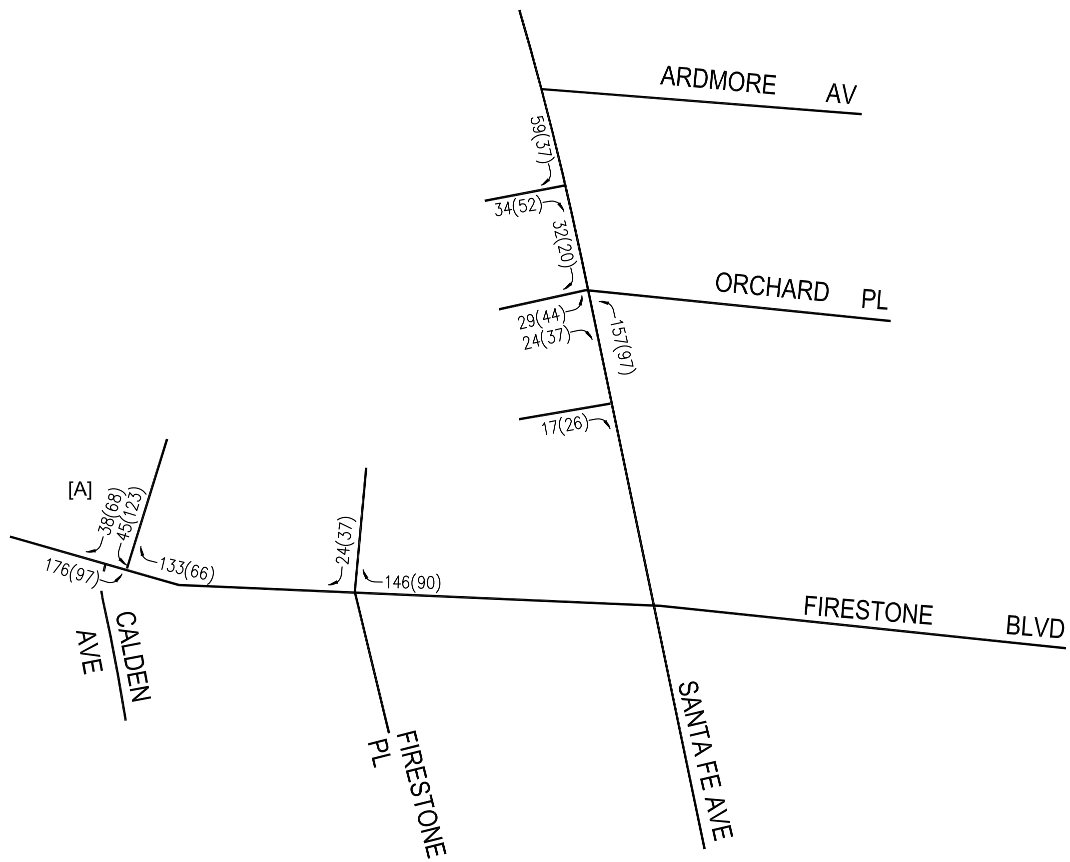
Please feel free to call us at 626.796.2322 with any questions or comments regarding this supplemental traffic assessment prepared for the proposed 2015 South Gate Educational Center Master Plan project.

c: File

ATTACHMENT A

PROJECT DRIVEWAY TRAFFIC VOLUMES AT BUILDOUT



[A] INCLUDES TRAFFIC ASSOCIATED WITH FULL BUILDOUT OF FEC PROJECT AND RE-OCCUPANCY OF THE FORMER HON SITE (AS HALF MANUFACTURING USE AND HALF WAREHOUSING USE). FURTHERMORE, TRAFFIC ASSOCIATED WITH THE RECENT BUILDING EXPANSION OF THE FORMER HON SITE IS ALSO REFLECTED.

NOT TO SCALE

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ATTACHMENT A
PROJECT DRIVEWAY TRAFFIC VOLUMES AT BUILDOUT

WEEKDAY AM(PM) PEAK HOURS

2015 SOUTH GATE EDUCATIONAL CENTER MASTER PLAN

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ATTACHMENT B

ICU/HCM DATA WORKSHEETS:
WEEKDAY AM AND PM PEAK HOURS

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INTERSECTION CAPACITY UTILIZATION

N-S St: Project Driveway-Calden Avenue
E-W St: Firestone Boulevard
Project: 2015 Firestone Education Center Master Plan / 1-15-4116-1
File: ICU7

Project Driveway-Calden Avenue @ Firestone Boulevard
Peak hr: AM
Annual Growth: 0.85%

Date: 10/20/2015
Date of Count: 2012
Projection Year: 2031

	2012 EXIST. TRAFFIC			2012 EXISTING W/PROJ. BUILDOUT				2012 EXIST. W/PROJ. + MITIGATION				2031 FUTURE WITHOUT PROJECT [3]				2031 FUTURE W/PROJ. BUILDOUT				2031 FUTURE W/PROJ.+MITIGATION [3]			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	11	0	0.007	0	11	0	0.007	0	11	0	0.007	39	50	0	0.031	0	50	0	0.031	0	50	0	0.031
Nb Thru	0	1600	0.089 *	11	11	1600	0.081 *	0	11	1600	0.081 *	0	0	1600	0.146 *	11	11	1600	0.138 *	0	11	1600	0.138 *
Nb Right	132	0	-	-24	108	0	-	0	108	0	-	52	184	0	-	-24	160	0	-	0	160	0	-
Sb Left	7	0	0.004 *	6	13	0	0.008 *	0	13	0	0.008 *	66	73	0	0.023	-7	66	0	0.021	0	66	0	0.021
Sb Thru	0	1600	0.013	3	3	1600	0.021	0	3	1600	0.021	0	0	3200	0.023	3	3	3200	0.022 *	0	3	3200	0.022 *
Sb Right	13	0	-	5	18	0	-	0	18	0	-	41	54	1600	0.000	-8	46	1600	0.000	0	46	1600	0.000
Eb Left	22	1600	0.014 *	86	108	1600	0.068 *	0	108	1600	0.068 *	95	117	1600	0.073 *	38	155	1600	0.097 *	0	155	1600	0.097 *
Eb Thru	803	3200	0.257	-3	800	3200	0.256	0	800	3200	0.256	194	997	3200	0.321	-3	994	3200	0.320	0	994	3200	0.320
Eb Right	19	0	-	0	19	0	-	0	19	0	-	12	31	0	-	0	31	0	-	0	31	0	-
Wb Left	118	1600	0.074	-73	45	1600	0.028	0	45	1600	0.028	44	162	1600	0.101	-73	89	1600	0.056	0	89	1600	0.056
Wb Thru	1307	3200	0.415 *	-97	1210	3200	0.384 *	0	1210	3200	0.384 *	292	1599	3200	0.550 *	-97	1502	3200	0.503 *	0	1502	3200	0.503 *
Wb Right	22	0	-	-3	19	0	-	0	19	0	-	138	160	0	-	-51	109	0	-	0	109	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
(Existing Two-Way Stop Control Intersection)																							
ICU			0.623				0.641				0.641				0.892				0.860				0.860
LOS			B				B				B				D				D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 Based on information provided by the City, as part of the mitigation measure for the approved Calden Court Apartments project, the Calden Avenue/Firestone Boulevard intersection would be signalized. Furthermore, under the long term analysis conditions when the adjacent former HON project is developed into a shopping center, it is assumed that the north leg of this intersection would be constructed in order to facilitate vehicular access to and from the former HON site. Therefore, this intersecti is appropriately analyzed as a 4-legged signalized intersection in the year 2031 conditions. It is assumed that one left-turn only lane, one shared left/through lane, and one right-turn only lane would be provided in the southbound approach and that the northbound and southbound approaches would operate under split phasing. In addition, a southbound right-turn overlap phase to be operated concurrently during the eastbound left-turn phase is assumed.

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INTERSECTION CAPACITY UTILIZATION

Project Driveway-Calden Avenue @ Firestone Boulevard
Peak hr: PM
Annual Growth: 0.85%

N-S St: Project Driveway-Calden Avenue
E-W St: Firestone Boulevard
Project: 2015 Firestone Education Center Master Plan / 1-15-4116-1
File: ICU7

Date: 10/20/2015
Date of Count: 2012
Projection Year: 2031

	2012 EXIST. TRAFFIC			2012 EXISTING W/PROJ. BUILDOUT				2012 EXIST. W/PROJ. + MITIGATION				2031 FUTURE WITHOUT PROJECT [3]				2031 FUTURE W/PROJ. BUILDOUT				2031 FUTURE W/PROJ.+MITIGATION [3]			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	3	0	0.002	0	3	0	0.002	0	3	0	0.002	32	35	0	0.022	0	35	0	0.022	0	35	0	0.022
Nb Thru	1	1600	0.078 *	7	8	1600	0.059 *	0	8	1600	0.059 *	0	1	1600	0.127 *	7	8	1600	0.109 *	0	8	1600	0.109 *
Nb Right	120	0	-	-36	84	0	-	0	84	0	-	46	166	0	-	-36	130	0	-	0	130	0	-
Sb Left	36	0	0.023 *	-15	21	0	0.013 *	0	21	0	0.013 *	330	366	0	0.114	-63	303	0	0.095	0	303	0	0.095
Sb Thru	0	1600	0.036	5	5	1600	0.024	0	5	1600	0.024	0	0	3200	0.114	5	5	3200	0.096 *	0	5	3200	0.096 *
Sb Right	21	0	-	-9	12	0	-	0	12	0	-	189	210	1600	0.037	-57	153	1600	0.000	0	153	1600	0.000
Eb Left	7	1600	0.004	58	65	1600	0.041	0	65	1600	0.041	144	151	1600	0.094	42	193	1600	0.121	0	193	1600	0.121
Eb Thru	1304	3200	0.417 *	-38	1266	3200	0.405 *	0	1266	3200	0.405 *	341	1645	3200	0.535 *	-38	1607	3200	0.524 *	0	1607	3200	0.524 *
Eb Right	29	0	-	0	29	0	-	0	29	0	-	40	69	0	-	0	69	0	-	0	69	0	-
Wb Left	100	1600	0.063 *	-46	54	1600	0.034 *	0	54	1600	0.034 *	48	148	1600	0.093 *	-46	102	1600	0.064 *	0	102	1600	0.064 *
Wb Thru	939	3200	0.297	-35	904	3200	0.288	0	904	3200	0.288	260	1199	3200	0.463	-35	1164	3200	0.449	0	1164	3200	0.449
Wb Right	12	0	-	5	17	0	-	0	17	0	-	272	284	0	-	-11	273	0	-	0	273	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
(Existing Two-Way Stop Control Intersection)																							
ICU			0.679				0.611				0.611				0.969				0.892				0.892
LOS			B				B				B				E				D				D

* Key conflicting movement as a part of ICU
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 Based on information provided by the City, as part of the mitigation measure for the approved Calden Court Apartments project, the Calden Avenue/Firestone Boulevard intersection would be signalized. Furthermore, under the long term analysis conditions when the adjacent former HON project is developed into a shopping center, it is assumed that the north leg of this intersection would be constructed in order to facilitate vehicular access to and from the former HON site. Therefore, this intersecti is appropriately analyzed as a 4-legged signalized intersection in the year 2031 conditions. It is assumed that one left-turn only lane, one shared left/through lane, and one right-turn only lane would be provided in the southbound approach and that the northbound and southbound approaches would operate under split phasing. In addition, a southbound right-turn overlap phase to be operated concurrently during the eastbound left-turn phase is assumed.

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*ACY*	Intersection	*7*
Agency/Co.	*LLG Engineers*	Jurisdiction	*City of South Gate*
Date Performed	*07/13/15*	Analysis Year	*Existing Conditions*
Analysis Time Period	*Weekday AM Peak Hour*		

Project Description

East/West Street: *Firestone Boulevard*	North/South Street: *Project Driveway-Calden Avenue*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*22*	*803*	*19*	*118*	*1307*	*22*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*22*	*803*	*19*	*118*	*1307*	*22*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*1*	*2*	*0*
Configuration	*L*	*T*	*TR*	*L*	*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*11*	*0*	*132*	*7*	*0*	*13*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*11*	*0*	*132*	*7*	*0*	*13*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*		*LTR*			*LTR*	
v (veh/h)	*22*	*118*		*143*			*20*	
C (m) (veh/h)	*526*	*816*		*326*			*65*	
v/c	*0.04*	*0.14*		*0.44*			*0.31*	
95% queue length	*0.13*	*0.50*		*2.14*			*1.11*	
Control Delay (s/veh)	*12.1*	*10.2*		*24.4*			*83.3*	
LOS	*B*	*B*		*C*			*F*	
Approach Delay (s/veh)	--	--	*24.4*			*83.3*		
Approach LOS	--	--	*C*			*F*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*ACY*	Intersection	*7*
Agency/Co.	*LLG Engineers*	Jurisdiction	*City of South Gate*
Date Performed	*07/13/15*	Analysis Year	*Existing Conditions*
Analysis Time Period	*Weekday PM Peak Hour*		

Project Description

East/West Street: *Firestone Boulevard* | North/South Street: *Project Driveway-Calden Avenue*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*7*	*1304*	*29*	*100*	*939*	*12*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*7*	*1304*	*29*	*100*	*939*	*12*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*1*	*2*	*0*
Configuration	*L*	*T*	*TR*	*L*	*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*3*	*1*	*120*	*36*	*0*	*21*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*3*	*1*	*120*	*36*	*0*	*21*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*		*LTR*			*LTR*	
v (veh/h)	*7*	*100*		*124*			*57*	
C (m) (veh/h)	*730*	*524*		*307*			*46*	
v/c	*0.01*	*0.19*		*0.40*			*1.24*	
95% queue length	*0.03*	*0.70*		*1.88*			*5.36*	
Control Delay (s/veh)	*10.0*	*13.5*		*24.4*			*352.8*	
LOS	*A*	*B*		*C*			*F*	
Approach Delay (s/veh)	--	--	*24.4*			*352.8*		
Approach LOS	--	--	*C*			*F*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*ACY*	Intersection	*7*
Agency/Co.	*LLG Engineers*	Jurisdiction	*City of South Gate*
Date Performed	*10/11/15*	Analysis Year	*Existing With Project*
Analysis Time Period	*Weekday AM Peak Hour*		

Project Description *2015 Firestone Education Center Master Plan (1-15-4116-1)*

East/West Street: *Firestone Boulevard*	North/South Street: *Project Driveway-Calden Avenue*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*108*	*800*	*19*	*45*	*1210*	*19*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*108*	*800*	*19*	*45*	*1210*	*19*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*1*	*2*	*0*
Configuration	*L*	*T*	*TR*	*L*	*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*11*	*11*	*108*	*13*	*3*	*18*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*11*	*11*	*108*	*13*	*3*	*18*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*		*LTR*			*LTR*	
v (veh/h)	*108*	*45*		*130*			*34*	
C (m) (veh/h)	*574*	*818*		*157*			*41*	
v/c	*0.19*	*0.06*		*0.83*			*0.83*	
95% queue length	*0.69*	*0.17*		*5.50*			*3.16*	
Control Delay (s/veh)	*12.7*	*9.7*		*89.4*			*239.4*	
LOS	*B*	*A*		*F*			*F*	
Approach Delay (s/veh)	--	--	*89.4*			*239.4*		
Approach LOS	--	--	*F*			*F*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*ACY*	Intersection	*7*
Agency/Co.	*LLG Engineers*	Jurisdiction	*City of South Gate*
Date Performed	*10/11/15*	Analysis Year	*Existing With Project*
Analysis Time Period	*Weekday PM Peak Hour*		

Project Description *2015 Firestone Education Center Master Plan (1-15-4116-1)*
East/West Street: *Firestone Boulevard* | North/South Street: *Project Driveway-Calden Avenue*
Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*65*	*1266*	*29*	*54*	*904*	*17*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*65*	*1266*	*29*	*54*	*904*	*17*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*1*	*2*	*0*
Configuration	*L*	*T*	*TR*	*L*	*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*3*	*8*	*84*	*21*	*5*	*12*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*3*	*8*	*84*	*21*	*5*	*12*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*		*LTR*			*LTR*	
v (veh/h)	*65*	*54*		*95*			*38*	
C (m) (veh/h)	*750*	*542*		*153*			*39*	
v/c	*0.09*	*0.10*		*0.62*			*0.97*	
95% queue length	*0.28*	*0.33*		*3.36*			*3.71*	
Control Delay (s/veh)	*10.3*	*12.4*		*60.9*			*292.8*	
LOS	*B*	*B*		*F*			*F*	
Approach Delay (s/veh)	--	--		*60.9*			*292.8*	
Approach LOS	--	--		*F*			*F*	

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INTERSECTION CAPACITY UTILIZATION

N-S St: Santa Fe Avenue
E-W St: Ardmore Avenue
Project: 2015 Firestone Education Center Master Plan / 1-15-4116-1
File: ICU8

Santa Fe Avenue @ Ardmore Avenue
Peak hr: AM
Annual Growth: 0.85%

Date: 10/20/2015
Date of Count: 2012
Projection Year: 2031

	2012 EXIST. TRAFFIC			2012 EXISTING W/PROJ. BUILDOUT				2012 EXIST. W/PROJ. + MITIGATION				2031 FUTURE WITHOUT PROJECT				2031 FUTURE W/PROJ. BUILDOUT				2031 FUTURE W/PROJ. + MITIGATION			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	708	3200	0.244 *	8	716	3200	0.249 *	0	716	3200	0.249 *	132	840	3200	0.289 *	6	846	3200	0.294 *	0	846	3200	0.294 *
Nb Right	74	0	-	7	81	0	-	0	81	0	-	12	86	0	-	7	93	0	-	0	93	0	-
Sb Left	59	0	0.037 *	0	59	0	0.037 *	0	59	0	0.037 *	10	69	0	0.043 *	0	69	0	0.043 *	0	69	0	0.043 *
Sb Thru	436	3200	0.155	29	465	3200	0.164	0	465	3200	0.164	101	537	3200	0.189	23	560	3200	0.197	0	560	3200	0.197
Sb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	137	0	0.086	22	159	0	0.099	0	159	0	0.099	22	159	0	0.099	22	181	0	0.113	0	181	0	0.113
Wb Thru	0	1600	0.141 *	0	0	1600	0.154 *	0	0	1600	0.154 *	0	0	1600	0.163 *	0	0	1600	0.177 *	0	0	1600	0.177 *
Wb Right	88	0	-	0	88	0	-	0	88	0	-	14	102	0	-	0	102	0	-	0	102	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
(Existing Two-Way Stop Control Intersection)																							
ICU			0.522				0.540				0.540				0.596				0.613				0.613
LOS			A				A				A				A				B				B

* Key conflicting movement as a part of ICU
1 Counts conducted by National Data & Surveying Services
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Santa Fe Avenue @ Ardmore Avenue
Peak hr: PM
Annual Growth: 0.85%

N-S St: Santa Fe Avenue
E-W St: Ardmore Avenue
Project: 2015 Firestone Education Center Master Plan / 1-15-4116-1
File: ICU8

Date: 10/20/2015
Date of Count: 2012
Projection Year: 2031

	2012 EXIST. TRAFFIC			2012 EXISTING W/PROJ. BUILDOUT				2012 EXIST. W/PROJ. + MITIGATION				2031 FUTURE WITHOUT PROJECT				2031 FUTURE W/PROJ. BUILDOUT				2031 FUTURE W/PROJ. + MITIGATION			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	551	3200	0.208 *	11	562	3200	0.215 *	0	562	3200	0.215 *	141	692	3200	0.258 *	5	697	3200	0.263 *	0	697	3200	0.263 *
Nb Right	116	0	-	10	126	0	-	0	126	0	-	19	135	0	-	10	145	0	-	0	145	0	-
Sb Left	114	0	0.071 *	0	114	0	0.071 *	0	114	0	0.071 *	18	132	0	0.083 *	0	132	0	0.083 *	0	132	0	0.083 *
Sb Thru	758	3200	0.273	18	776	3200	0.278	0	776	3200	0.278	162	920	3200	0.329	16	936	3200	0.334	0	936	3200	0.334
Sb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	71	0	0.044	13	84	0	0.053	0	84	0	0.053	11	82	0	0.052	13	95	0	0.060	0	95	0	0.060
Wb Thru	0	1600	0.074 *	0	0	1600	0.083 *	0	0	1600	0.083 *	0	0	1600	0.086 *	0	0	1600	0.095 *	0	0	1600	0.095 *
Wb Right	48	0	-	0	48	0	-	0	48	0	-	8	56	0	-	0	56	0	-	0	56	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
(Existing Two-Way Stop Control Intersection)																							
ICU			0.454				0.469				0.469				0.527				0.540				0.540
LOS			A				A				A				A				A				A

* *Key conflicting movement as a part of ICU*
1 *Counts conducted by National Data & Surveying Services*
2 *Capacity expressed in veh/hour of green*

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*ACY*	Intersection	*8*
Agency/Co.	*LLG Engineers*	Jurisdiction	*City of South Gate*
Date Performed	*07/16/15*	Analysis Year	*Existing Conditions*
Analysis Time Period	*Weekday AM Peak Hour*		

Project Description	
East/West Street: *Ardmore Avenue*	North/South Street: *Santa Fe Avenue*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*708*	*74*	*59*	*436*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*708*	*74*	*59*	*436*	*0*
Percent Heavy Vehicles	*0*	*--*	*--*	*0*	*--*	*--*
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*	*LT*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*137*		*88*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*137*	*0*	*88*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*59*		*225*				
C (m) (veh/h)		*845*		*276*				
v/c		*0.07*		*0.82*				
95% queue length		*0.22*		*6.54*				
Control Delay (s/veh)		*9.6*		*57.2*				
LOS		*A*		*F*				
Approach Delay (s/veh)	*--*	*--*	*57.2*					
Approach LOS	*--*	*--*	*F*					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*ACY*
Agency/Co.	*LLG Engineers*
Date Performed	*07/13/15*
Analysis Time Period	*Weekday PM Peak Hour*

Site Information

Intersection	*8*
Jurisdiction	*City of South Gate*
Analysis Year	*Existing Conditions*

Project Description

East/West Street: *Ardmore Avenue* — North/South Street: *Santa Fe Avenue*

Intersection Orientation: *North-South* — Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*551*	*116*	*114*	*758*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*551*	*116*	*114*	*758*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*	*LT*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*71*		*48*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*71*	*0*	*48*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*114*		*119*				
C (m) (veh/h)		*932*		*225*				
v/c		*0.12*		*0.53*				
95% queue length		*0.42*		*2.78*				
Control Delay (s/veh)		*9.4*		*37.7*				
LOS		*A*		*E*				
Approach Delay (s/veh)	--	--		*37.7*				
Approach LOS	--	--		*E*				

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*ACY*	Intersection	*8*
Agency/Co.	*LLG Engineers*	Jurisdiction	*City of South Gate*
Date Performed	*07/13/15*	Analysis Year	*Existing With Project*
Analysis Time Period	*Weekday AM Peak Hour*		

Project Description *2015 Firestone Education Center Master Plan (1-15-4116-1)*

East/West Street: *Ardmore Avenue*	North/South Street: *Santa Fe Avenue*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*716*	*81*	*59*	*465*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*716*	*81*	*59*	*465*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*	*LT*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*159*		*88*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*159*	*0*	*88*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*59*		*247*				
C (m) (veh/h)		*834*		*258*				
v/c		*0.07*		*0.96*				
95% queue length		*0.23*		*8.96*				
Control Delay (s/veh)		*9.6*		*87.5*				
LOS		*A*		*F*				
Approach Delay (s/veh)	--	--	*87.5*					
Approach LOS	--	--	*F*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*ACY*	Intersection	*8*
Agency/Co.	*LLG Engineers*	Jurisdiction	*City of South Gate*
Date Performed	*07/13/15*	Analysis Year	*Existing With Project*
Analysis Time Period	*Weekday PM Peak Hour*		

Project Description	*2015 Firestone Education Center Master Plan (1-15-4116-1)*
East/West Street: *Ardmore Avenue*	North/South Street: *Santa Fe Avenue*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*562*	*126*	*114*	*776*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*562*	*126*	*114*	*776*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*	*LT*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*84*		*48*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*84*	*0*	*48*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*114*		*132*				
C (m) (veh/h)		*916*		*209*				
v/c		*0.12*		*0.63*				
95% queue length		*0.42*		*3.71*				
Control Delay (s/veh)		*9.5*		*47.8*				
LOS		*A*		*E*				
Approach Delay (s/veh)	--	--	*47.8*					
Approach LOS	--	--	*E*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*ACY*	Intersection	*8*
Agency/Co.	*LLG Engineers*	Jurisdiction	*City of South Gate*
Date Performed	*07/13/15*	Analysis Year	*2031 Without Project*
Analysis Time Period	*Weekday AM Peak Hour*		

Project Description	*2015 Firestone Education Center Master Plan (1-15-4116-1)*
East/West Street: *Ardmore Avenue*	North/South Street: *Santa Fe Avenue*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*840*	*86*	*69*	*537*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*840*	*86*	*69*	*537*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*	*LT*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*159*		*102*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*159*	*0*	*102*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*69*		*261*				
C (m) (veh/h)		*746*		*204*				
v/c		*0.09*		*1.28*				
95% queue length		*0.30*		*14.08*				
Control Delay (s/veh)		*10.3*		*204.3*				
LOS		*B*		*F*				
Approach Delay (s/veh)	--	--	*204.3*					
Approach LOS	--	--	*F*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*ACY*	Intersection	*8*
Agency/Co.	*LLG Engineers*	Jurisdiction	*City of South Gate*
Date Performed	*07/13/15*	Analysis Year	*2031 Without Project*
Analysis Time Period	*Weekday PM Peak Hour*		

Project Description	*2015 Firestone Education Center Master Plan (1-15-4116-1)*
East/West Street: *Ardmore Avenue*	North/South Street: *Santa Fe Avenue*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*692*	*135*	*132*	*920*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*692*	*135*	*132*	*920*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*	*LT*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*82*		*56*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*82*	*0*	*56*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*132*		*138*				
C (m) (veh/h)		*813*		*151*				
v/c		*0.16*		*0.91*				
95% queue length		*0.58*		*6.43*				
Control Delay (s/veh)		*10.3*		*110.4*				
LOS		*B*		*F*				
Approach Delay (s/veh)	--	--	*110.4*					
Approach LOS	--	--	*F*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*ACY*	Intersection	*8*
Agency/Co.	*LLG Engineers*	Jurisdiction	*City of South Gate*
Date Performed	*07/13/15*	Analysis Year	*2031 With Project Buildout*
Analysis Time Period	*Weekday AM Peak Hour*		

Project Description	*2015 Firestone Education Center Master Plan (1-15-4116-1)*		
East/West Street:	*Ardmore Avenue*	North/South Street:	*Santa Fe Avenue*
Intersection Orientation:	*North-South*	Study Period (hrs):	*0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*846*	*93*	*69*	*560*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*846*	*93*	*69*	*560*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*	*LT*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*181*		*102*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*181*	*0*	*102*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*69*		*283*				
C (m) (veh/h)		*738*		*192*				
v/c		*0.09*		*1.47*				
95% queue length		*0.31*		*17.45*				
Control Delay (s/veh)		*10.4*		*284.7*				
LOS		*B*		*F*				
Approach Delay (s/veh)	--	--	*284.7*					
Approach LOS	--	--	*F*					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*ACY*
Agency/Co.	*LLG Engineers*
Date Performed	*07/13/15*
Analysis Time Period	*Weekday PM Peak Hour*

Site Information

Intersection	*8*
Jurisdiction	*City of South Gate*
Analysis Year	*2031 With Project Buildout*

Project Description *2015 Firestone Education Center Master Plan (1-15-4116-1)*

East/West Street: *Ardmore Avenue* | North/South Street: *Santa Fe Avenue*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*697*	*145*	*132*	*936*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*697*	*145*	*132*	*936*	*0*
Percent Heavy Vehicles	*0*	*--*	*--*	*0*	*--*	*--*
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*	*LT*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*95*		*56*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*95*	*0*	*56*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*132*		*151*				
C (m) (veh/h)		*802*		*140*				
v/c		*0.16*		*1.08*				
95% queue length		*0.59*		*8.24*				
Control Delay (s/veh)		*10.4*		*161.5*				
LOS		*B*		*F*				
Approach Delay (s/veh)	*--*	*--*	*161.5*					
Approach LOS	*--*	*--*	*F*					

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INTERSECTION CAPACITY UTILIZATION

N-S St: Santa Fe Avenue
E-W St: Project Driveway-Orchard Place
Project: 2015 Firestone Education Center Master Plan / 1-15-4116-1
File: ICU9

Santa Fe Avenue @ Project Driveway-Orchard Place
Peak hr: AM
Annual Growth: 0.85%

Date: 10/20/2015
Date of Count: 2012
Projection Year: 2031

Movement	2012 EXIST. TRAFFIC 1 Volume	2 Capacity	V/C Ratio	2012 EXISTING W/PROJ. BUILDOUT Added Volume	Total Volume	Capacity	V/C Ratio	2012 EXIST. W/PROJ. + MITIGATION Added Volume	Total Volume	2 Capacity	V/C Ratio	2031 FUTURE WITHOUT PROJECT Added Volume	Total Volume	2 Capacity	V/C Ratio	2031 FUTURE W/PROJ. BUILDOUT Added Volume	Total Volume	2 Capacity	V/C Ratio	2031 FUTURE W/PROJ.+MITIGATION[3] Added Volume	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000	157	157	0	0.098	0	157	1600	0.098 *	0	0	0	0.000	157	157	0	0.098	0	157	1600	0.098 *
Nb Thru	703	3200	0.224 *	-14	689	3200	0.269 *	0	689	3200	0.220	132	835	3200	0.266 *	-16	819	3200	0.310 *	0	819	3200	0.261
Nb Right	14	0	-	0	14	0	-	0	14	0	-	2	16	0	-	0	16	0	-	0	16	0	-
Sb Left	7	0	0.004 *	0	7	0	0.004 *	0	7	1600	0.004	1	8	0	0.005 *	0	8	0	0.005 *	0	8	1600	0.005
Sb Thru	517	3200	0.164	-7	510	3200	0.172	0	510	3200	0.169 *	114	631	3200	0.200	-13	618	3200	0.206	0	618	3200	0.203 *
Sb Right	0	0	-	32	32	0	-	0	32	0	-	0	0	0	-	32	32	0	-	0	32	0	-
Eb Left	0	0	0.000 *	29	29	0	0.018 *	0	29	0	0.018 *	0	0	0	0.000 *	29	29	0	0.018 *	0	29	0	0.018 *
Eb Thru	0	0	0.000	0	0	1600	0.033	0	0	1600	0.033	0	0	0	0.000	0	0	1600	0.033	0	0	1600	0.033
Eb Right	0	0	-	24	24	0	-	0	24	0	-	0	0	0	-	24	24	0	-	0	24	0	-
Wb Left	20	0	0.013	0	20	0	0.013	0	20	0	0.013	3	23	0	0.014	0	23	0	0.014	0	23	0	0.014
Wb Thru	0	1600	0.046 *	0	0	1600	0.046 *	0	0	1600	0.046 *	0	0	1600	0.053 *	0	0	1600	0.053 *	0	0	1600	0.053 *
Wb Right	53	0	-	0	53	0	-	0	53	0	-	9	62	0	-	0	62	0	-	0	62	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
(Existing Two-Way Stop Control Intersection)																							
ICU			0.374				0.437				0.431				0.424				0.486				0.472
LOS			A				A				A				A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 Mitigation consists of the installation of a traffic signal at this location. In addition, restripe the northbound and southbound Santa Fe Avenue approaches to provide a left-turn lane. The resultant northbound and southbound lane configurations will be one l lane, one through lane and one shared through/right-turn lane.

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INTERSECTION CAPACITY UTILIZATION

Santa Fe Avenue @ Project Driveway-Orchard Place
Peak hr: PM
Annual Growth: 0.85%

N-S St: Santa Fe Avenue
E-W St: Project Driveway-Orchard Place
Project: 2015 Firestone Education Center Master Plan / 1-15-4116-1
File: ICU9

Date: 10/20/2015
Date of Count: 2012
Projection Year: 2031

	2012 EXIST. TRAFFIC			2012 EXISTING W/PROJ. BUILDOUT				2012 EXIST. W/PROJ. + MITIGATION				2031 FUTURE WITHOUT PROJECT				2031 FUTURE W/PROJ. BUILDOUT				2031 FUTURE W/PROJ.+MITIGATION[3]			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	97	97	0	0.061 *	0	97	1600	0.061 *	0	0	0	0.000 *	97	97	0	0.061 *	0	97	1600	0.061 *
Nb Thru	638	3200	0.204	-23	615	3200	0.228	0	615	3200	0.197	155	793	3200	0.254	-29	764	3200	0.275	0	764	3200	0.245
Nb Right	16	0	-	0	16	0	-	0	16	0	-	3	19	0	-	0	19	0	-	0	19	0	-
Sb Left	18	0	0.011	0	18	0	0.011	0	18	1600	0.011	3	21	0	0.013	0	21	0	0.013	0	21	1600	0.013
Sb Thru	812	3200	0.259 *	27	839	3200	0.274 *	0	839	3200	0.268 *	171	983	3200	0.314 *	25	1008	3200	0.328 *	0	1008	3200	0.321 *
Sb Right	0	0	-	20	20	0	-	0	20	0	-	0	0	0	-	20	20	0	-	0	20	0	-
Eb Left	0	0	0.000 *	44	44	0	0.028	0	44	0	0.028	0	0	0	0.000 *	44	44	0	0.028	0	44	0	0.028
Eb Thru	0	0	0.000	0	0	1600	0.051 *	0	0	1600	0.051 *	0	0	0	0.000	0	0	1600	0.051 *	0	0	1600	0.051 *
Eb Right	0	0	-	37	37	0	-	0	37	0	-	0	0	0	-	37	37	0	-	0	37	0	-
Wb Left	17	0	0.011	0	17	0	0.011 *	0	17	0	0.011 *	2	19	0	0.012	0	19	0	0.012 *	0	19	0	0.012 *
Wb Thru	0	1600	0.026 *	0	0	1600	0.026	0	0	1600	0.026	0	0	1600	0.029 *	0	0	1600	0.029	0	0	1600	0.029
Wb Right	24	0	-	0	24	0	-	0	24	0	-	4	28	0	-	0	28	0	-	0	28	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
(Existing Two-Way Stop Control Intersection)																							
ICU			0.385				0.496				0.490				0.443				0.551				0.544
LOS			A				A				A				A				A				A

* *Key conflicting movement as a part of ICU*
1 *Counts conducted by City Traffic Counters*
2 *Capacity expressed in veh/hour of green*
3 *Mitigation consists of the installation of a traffic signal at this location. In addition, restripe the northbound and southbound Santa Fe Avenue approaches to provide a left-turn lane. The resultant northbound and southbound lane configurations will be one l lane, one through lane and one shared through/right-turn lane.*

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*ACY*	Intersection	*9*
Agency/Co.	*LLG Engineers*	Jurisdiction	*City of South Gate*
Date Performed	*07/13/15*	Analysis Year	*Existing Conditions*
Analysis Time Period	*Weekday AM Peak Hour*		

Project Description *2015 Firestone Education Center Master Plan (1-15-4116-1)*

East/West Street: *Project Driveway-Orchard Place*	North/South Street: *Santa Fe Avenue*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*703*	*14*	*7*	*517*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*703*	*14*	*7*	*517*	*0*
Percent Heavy Vehicles	*0*	*--*	*--*	*0*	*--*	*--*
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*	*LT*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*20*		*53*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*20*	*0*	*53*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*7*		*73*				
C (m) (veh/h)		*893*		*464*				
v/c		*0.01*		*0.16*				
95% queue length		*0.02*		*0.55*				
Control Delay (s/veh)		*9.1*		*14.2*				
LOS		*A*		*B*				
Approach Delay (s/veh)	*--*	*--*	*14.2*					
Approach LOS	*--*	*--*	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*ACY*	Intersection	*9*
Agency/Co.	*LLG Engineers*	Jurisdiction	*City of South Gate*
Date Performed	*07/13/15*	Analysis Year	*Existing Conditions*
Analysis Time Period	*Weekday PM Peak Hour*		

Project Description *2015 Firestone Education Center Master Plan (1-15-4116-1)*	
East/West Street: *Project Driveway-Orchard Place*	North/South Street: *Santa Fe Avenue*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*638*	*16*	*18*	*812*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*638*	*16*	*18*	*812*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*	*LT*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*17*		*24*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*17*	*0*	*24*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*18*		*41*				
C (m) (veh/h)		*943*		*357*				
v/c		*0.02*		*0.11*				
95% queue length		*0.06*		*0.39*				
Control Delay (s/veh)		*8.9*		*16.4*				
LOS		*A*		*C*				
Approach Delay (s/veh)	--	--	*16.4*					
Approach LOS	--	--	*C*					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*ACY*
Agency/Co.	*LLG Engineers*
Date Performed	*10/11/15*
Analysis Time Period	*Weekday AM Peak Hour*

Site Information

Intersection	*9*
Jurisdiction	*City of South Gate*
Analysis Year	*Existing With Project*

Project Description *2015 Firestone Education Center Master Plan (1-15-4116-1)*

East/West Street: *Project Driveway-Orchard Place*	North/South Street: *Santa Fe Avenue*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*157*	*689*	*14*	*7*	*510*	*32*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*157*	*689*	*14*	*7*	*510*	*32*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration	*LT*		*TR*	*LT*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*29*		*24*	*20*		*53*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*29*	*0*	*24*	*20*	*0*	*53*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*			*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*	*LT*		*LR*			*LR*	
v (veh/h)	*157*	*7*		*73*			*53*	
C (m) (veh/h)	*1037*	*904*		*270*			*187*	
v/c	*0.15*	*0.01*		*0.27*			*0.28*	
95% queue length	*0.53*	*0.02*		*1.07*			*1.11*	
Control Delay (s/veh)	*9.1*	*9.0*		*23.2*			*31.7*	
LOS	*A*	*A*		*C*			*D*	
Approach Delay (s/veh)	--	--	*23.2*			*31.7*		
Approach LOS	--	--	*C*			*D*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*ACY*	Intersection	*9*
Agency/Co.	*LLG Engineers*	Jurisdiction	*City of South Gate*
Date Performed	*10/11/15*	Analysis Year	*Existing With Project*
Analysis Time Period	*Weekday PM Peak Hour*		

Project Description	*2015 Firestone Education Center Master Plan (1-15-4116-1)*		
East/West Street:	*Project Driveway-Orchard Place*	North/South Street:	*Santa Fe Avenue*
Intersection Orientation:	*North-South*	Study Period (hrs):	*0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*97*	*615*	*16*	*18*	*839*	*20*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*97*	*615*	*16*	*18*	*839*	*20*
Percent Heavy Vehicles	*0*	*--*	*--*	*0*	*--*	*--*
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration	*LT*		*TR*	*LT*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*44*		*37*	*17*		*24*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*44*	*0*	*37*	*17*	*0*	*24*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*			*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*	*LT*		*LR*			*LR*	
v (veh/h)	*97*	*18*		*41*			*81*	
C (m) (veh/h)	*791*	*961*		*210*			*147*	
v/c	*0.12*	*0.02*		*0.20*			*0.55*	
95% queue length	*0.42*	*0.06*		*0.70*			*2.76*	
Control Delay (s/veh)	*10.2*	*8.8*		*26.3*			*56.1*	
LOS	*B*	*A*		*D*			*F*	
Approach Delay (s/veh)	--	--	*26.3*			*56.1*		
Approach LOS	--	--	*D*			*F*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*ACY*	Intersection	*9*
Agency/Co.	*LLG Engineers*	Jurisdiction	*City of South Gate*
Date Performed	*07/13/15*	Analysis Year	*2031 Without Project*
Analysis Time Period	*Weekday AM Peak Hour*		

Project Description *2015 Firestone Education Center Master Plan (1-15-4116-1)*	
East/West Street: *Project Driveway-Orchard Place*	North/South Street: *Santa Fe Avenue*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*835*	*16*	*8*	*631*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*835*	*16*	*8*	*631*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*	*LT*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*23*		*62*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*23*	*0*	*62*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*8*		*85*				
C (m) (veh/h)		*796*		*384*				
v/c		*0.01*		*0.22*				
95% queue length		*0.03*		*0.83*				
Control Delay (s/veh)		*9.6*		*17.0*				
LOS		*A*		*C*				
Approach Delay (s/veh)	--	--	*17.0*					
Approach LOS	--	--	*C*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*ACY*	Intersection	*9*
Agency/Co.	*LLG Engineers*	Jurisdiction	*City of South Gate*
Date Performed	*07/13/15*	Analysis Year	*2031 Without Project*
Analysis Time Period	*Weekday PM Peak Hour*		

Project Description *2015 Firestone Education Center Master Plan (1-15-4116-1)*

East/West Street: *Project Driveway-Orchard Place*	North/South Street: *Santa Fe Avenue*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*793*	*19*	*21*	*983*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*793*	*19*	*21*	*983*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*	*LT*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*19*		*28*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*19*	*0*	*28*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*21*		*47*				
C (m) (veh/h)		*823*		*268*				
v/c		*0.03*		*0.18*				
95% queue length		*0.08*		*0.62*				
Control Delay (s/veh)		*9.5*		*21.3*				
LOS		*A*		*C*				
Approach Delay (s/veh)	--	--	*21.3*					
Approach LOS	--	--	*C*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*ACY*	Intersection	*9*
Agency/Co.	*LLG Engineers*	Jurisdiction	*City of South Gate*
Date Performed	*10/11/15*	Analysis Year	*2031 With Project*
Analysis Time Period	*Weekday AM Peak Hour*		

Project Description	*2015 Firestone Education Center Master Plan (1-15-4116-1)*		
East/West Street:	*Project Driveway-Orchard Place*	North/South Street:	*Santa Fe Avenue*
Intersection Orientation:	*North-South*	Study Period (hrs):	*0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*157*	*819*	*16*	*8*	*618*	*32*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*157*	*819*	*16*	*8*	*618*	*32*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration	*LT*		*TR*	*LT*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*29*		*24*	*23*		*62*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*29*	*0*	*24*	*23*	*0*	*62*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*			*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*	*LT*		*LR*			*LR*	
v (veh/h)	*157*	*8*		*85*			*53*	
C (m) (veh/h)	*946*	*807*		*208*			*138*	
v/c	*0.17*	*0.01*		*0.41*			*0.38*	
95% queue length	*0.59*	*0.03*		*1.85*			*1.62*	
Control Delay (s/veh)	*9.6*	*9.5*		*33.8*			*46.5*	
LOS	*A*	*A*		*D*			*E*	
Approach Delay (s/veh)	--	--	*33.8*			*46.5*		
Approach LOS	--	--	*D*			*E*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*ACY*	Intersection	*9*
Agency/Co.	*LLG Engineers*	Jurisdiction	*City of South Gate*
Date Performed	*10/11/15*	Analysis Year	*2031 With Project*
Analysis Time Period	*Weekday PM Peak Hour*		
Project Description	*2015 Firestone Education Center Master Plan (1-15-4116-1)*		
East/West Street:	*Project Driveway-Orchard Place*	North/South Street:	*Santa Fe Avenue*
Intersection Orientation:	*North-South*	Study Period (hrs):	*0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*97*	*764*	*19*	*21*	*1008*	*20*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*97*	*764*	*19*	*21*	*1008*	*20*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration	*LT*		*TR*	*LT*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*44*		*37*	*19*		*28*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*44*	*0*	*37*	*19*	*0*	*28*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*			*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*	*LT*		*LR*			*LR*	
v (veh/h)	*97*	*21*		*47*			*81*	
C (m) (veh/h)	*683*	*844*		*145*			*96*	
v/c	*0.14*	*0.02*		*0.32*			*0.84*	
95% queue length	*0.49*	*0.08*		*1.30*			*4.65*	
Control Delay (s/veh)	*11.1*	*9.4*		*41.3*			*131.7*	
LOS	*B*	*A*		*E*			*F*	
Approach Delay (s/veh)	--	--	*41.3*			*131.7*		
Approach LOS	--	--	*E*			*F*		

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LINSCOTT, LAW & GREENSPAN, ENGINEERS
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INTERSECTION CAPACITY UTILIZATION

Santa Fe Avenue @ Firestone Boulevard
Peak hr: AM
Annual Growth: 0.85%

N-S St: Santa Fe Avenue
E-W St: Firestone Boulevard
Project: 2015 Firestone Education Center Master Plan / 1-15-4116-1
File: ICU10

Date: 10/20/2015
Date of Count: 2012
Projection Year: 2031

	2012 EXIST. TRAFFIC			2012 EXISTING W/PROJ. BUILDOUT				2012 EXIST. W/PROJ. + MITIGATION			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	74	1600	0.046	0	74	1600	0.046	0	74	1600	0.046
Nb Thru	551	3200	0.184 *	16	567	3200	0.189 *	0	567	3200	0.189 *
Nb Right	37	0	-	0	37	0	-	0	37	0	-
Sb Left	124	1600	0.078 *	65	189	1600	0.118 *	0	189	1600	0.118 *
Sb Thru	314	3200	0.098	5	319	3200	0.100	0	319	3200	0.100
Sb Right	209	1600	0.131	-33	176	1600	0.110	0	176	1600	0.110
Eb Left	117	1600	0.073 *	26	143	1600	0.089 *	0	143	1600	0.089 *
Eb Thru	805	3200	0.267	-46	759	3200	0.253	0	759	3200	0.253
Eb Right	49	0	-	0	49	0	-	0	49	0	-
Wb Left	63	1600	0.039	0	63	1600	0.039	0	63	1600	0.039
Wb Thru	1220	3200	0.448 *	-18	1202	3200	0.474 *	0	1202	3200	0.376 *
Wb Right	213	0	-	103	316	0	-	0	316	1600	0.198
Yellow Allowance:			0.100 *				0.100 *				0.100 *
ICU			0.882				0.971				0.872
LOS			D				E				D

	2031 FUTURE WITHOUT PROJECT				2031 FUTURE W/PROJ. BUILDOUT				2031 FUTURE W/PROJ.+MITIGATION[3]			
	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	13	87	1600	0.054	0	87	1600	0.054	0	87	1600	0.054
Nb Thru	89	640	3200	0.219 *	16	656	3200	0.224 *	0	656	3200	0.224 *
Nb Right	24	61	0	-	0	61	0	-	0	61	0	-
Sb Left	37	161	1600	0.101 *	60	221	1600	0.138 *	0	221	1600	0.138 *
Sb Thru	51	365	3200	0.114	5	370	3200	0.116	0	370	3200	0.116
Sb Right	45	254	1600	0.159	-33	221	1600	0.138	0	221	1600	0.138
Eb Left	24	141	1600	0.088 *	26	167	1600	0.104 *	0	167	1600	0.104 *
Eb Thru	268	1073	3200	0.353	-59	1014	3200	0.335	0	1014	3200	0.335
Eb Right	9	58	0	-	0	58	0	-	0	58	0	-
Wb Left	24	87	1600	0.054	0	87	1600	0.054	0	87	1600	0.054
Wb Thru	398	1618	3200	0.592 *	-66	1552	3200	0.598 *	0	1552	3200	0.485 *
Wb Right	62	275	0	-	85	360	0	-	0	360	1600	0.225
Yellow Allowance:				0.100 *				0.100 *				0.100 *
ICU				1.099				1.164				1.052
LOS				F				F				F

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 Mitigation consists of restriping the westbound approach to provide one left-turn lane, two through lanes, and one right-turn only lane.

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INTERSECTION CAPACITY UTILIZATION

Santa Fe Avenue @ Firestone Boulevard
Peak hr: PM
Annual Growth: 0.85%

N-S St: Santa Fe Avenue
E-W St: Firestone Boulevard
Project: 2015 Firestone Education Center Master Plan / 1-15-4116-1
File: ICU10

Date: 10/20/2015
Date of Count: 2012
Projection Year: 2031

	2012 EXIST. TRAFFIC			2012 EXISTING W/PROJ. BUILDOUT			
	1	2	V/C	Added	Total		V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	48	1600	0.030	0	48	1600	0.030
Nb Thru	439	3200	0.161 *	10	449	3200	0.164 *
Nb Right	75	0	-	0	75	0	-
Sb Left	210	1600	0.131 *	99	309	1600	0.193 *
Sb Thru	490	3200	0.153	8	498	3200	0.156
Sb Right	151	1600	0.094	-16	135	1600	0.084
Eb Left	193	1600	0.121	5	198	1600	0.124 *
Eb Thru	1228	3200	0.409 *	-93	1135	3200	0.380
Eb Right	82	0	-	0	82	0	-
Wb Left	61	1600	0.038 *	0	61	1600	0.038
Wb Thru	865	3200	0.300	-6	859	3200	0.318 *
Wb Right	96	0	-	63	159	0	-
Yellow Allowance:			0.100 *				0.100 *
ICU			0.839				0.899
LOS			D				D

	2012 EXIST. W/PROJ. + MITIGATION				2031 FUTURE WITHOUT PROJECT			
	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	48	1600	0.030	11	59	1600	0.037
Nb Thru	0	449	3200	0.164 *	71	510	3200	0.191 *
Nb Right	0	75	0	-	25	100	0	-
Sb Left	0	309	1600	0.193 *	65	275	1600	0.172 *
Sb Thru	0	498	3200	0.156	79	569	3200	0.178
Sb Right	0	135	1600	0.084	41	192	1600	0.120
Eb Left	0	198	1600	0.124	53	246	1600	0.154
Eb Thru	0	1135	3200	0.380 *	569	1797	3200	0.592 *
Eb Right	0	82	0	-	16	98	0	-
Wb Left	0	61	1600	0.038 *	24	85	1600	0.053 *
Wb Thru	0	859	3200	0.268	452	1317	3200	0.453
Wb Right	0	159	1600	0.099	37	133	0	-
Yellow Allowance:				0.100 *				0.100 *
ICU				0.875				1.108
LOS				D				F

	2031 FUTURE W/PROJ. BUILDOUT				2031 FUTURE W/PROJ.+MITIGATION[3]			
	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	59	1600	0.037	0	59	1600	0.037
Nb Thru	10	520	3200	0.194 *	0	520	3200	0.194 *
Nb Right	0	100	0	-	0	100	0	-
Sb Left	81	356	1600	0.222 *	0	356	1600	0.222 *
Sb Thru	8	577	3200	0.180	0	577	3200	0.180
Sb Right	-16	176	1600	0.110	0	176	1600	0.110
Eb Left	5	251	1600	0.157 *	0	251	1600	0.157
Eb Thru	-141	1656	3200	0.548	0	1656	3200	0.548 *
Eb Right	0	98	0	-	0	98	0	-
Wb Left	0	85	1600	0.053	0	85	1600	0.053 *
Wb Thru	-22	1295	3200	0.464 *	0	1295	3200	0.405
Wb Right	57	190	0	-	0	190	1600	0.118
Yellow Allowance:				0.100 *				0.100 *
ICU				1.137				1.118
LOS				F				F

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 Mitigation consists of restriping the westbound approach to provide one left-turn lane, two through lanes, and one right-turn only lane.

ATTACHMENT C

INTERIM FIRESTONE BOULEVARD ACCESS:

ICU DATA WORKSHEETS

YEAR 2019 FUTURE WITH PROJECT
TRAFFIC SIGNAL WARRANT ANALYSIS

SYNCHRO ANALYSIS WORKSHEETS

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INTERSECTION CAPACITY UTILIZATION

Project Driveway-Calden Avenue @ Firestone Boulevard
Peak hr: AM
Annual Growth: 0.85%

N-S St: Project Driveway-Calden Avenue
E-W St: Firestone Boulevard
Project: 2015 Firestone Education Center Master Plan / 1-15-4116-1
File: ICU7

Date: 10/20/2015
Date of Count: 2012
Projection Year: 2019

Interim Conditions (Signalized Off-Set Configurations)

	2012 EXIST. TRAFFIC			2012 EXISTING W/PROJ. BUILDOUT				2012 EXIST. W/PROJ. + MITIGATION				2019 FUTURE WITHOUT PROJECT [3]				2019 FUTURE W/PROJ. BUILDOUT			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	11	0	0.007	0	11	0	0.007	0	11	0	0.007	38	49	0	0.030	0	49	0	0.030
Nb Thru	0	1600	0.089 *	11	11	1600	0.081 *	0	11	1600	0.081 *	0	0	1600	0.137 *	11	11	1600	0.129 *
Nb Right	132	0	-	-24	108	0	-	0	108	0	-	39	171	0	-	-24	147	0	-
Sb Left	7	0	0.004 *	6	13	0	0.008 *	0	13	0	0.008 *	45	52	1600	0.033 *	-7	45	1600	0.028 *
Sb Thru	0	1600	0.013	3	3	1600	0.021	0	3	1600	0.021	0	0	1600	0.027	3	3	1600	0.024
Sb Right	13	0	-	5	18	0	-	0	18	0	-	30	43	0	-	-8	35	0	-
Eb Left	22	1600	0.014 *	86	108	1600	0.068 *	0	108	1600	0.068 *	105	127	1600	0.080 *	38	165	1600	0.103 *
Eb Thru	803	3200	0.257	-3	800	3200	0.256	0	800	3200	0.256	112	915	3200	0.295	-3	912	3200	0.294
Eb Right	19	0	-	0	19	0	-	0	19	0	-	10	29	0	-	0	29	0	-
Wb Left	118	1600	0.074	-73	45	1600	0.028	0	45	1600	0.028	32	150	1600	0.094	-73	77	1600	0.048
Wb Thru	1307	3200	0.415 *	-97	1210	3200	0.384 *	0	1210	3200	0.384 *	159	1466	3200	0.516 *	-97	1369	3200	0.469 *
Wb Right	22	0	-	-3	19	0	-	0	19	0	-	162	184	0	-	-51	133	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
(Existing Two-Way Stop Control Intersection)																			
ICU			0.623				0.641				0.641				0.865				0.830
LOS			B				B				B				D				D

* *Key conflicting movement as a part of ICU*
1 *Counts conducted by City Traffic Counters*
2 *Capacity expressed in veh/hour of green*
3 *Based on information provided by the City, as part of the mitigation measure for the approved Calden Court Apartments project, the Calden Avenue/Firestone Boulevard intersection would be signalized. Furthermore, under the near term analysis conditions the adjacent former HON site is assumed to be reused as manufacturing/warehousing uses. Thus, the joint HON-project driveway is assumed to be integrated into the overall traffic signal and operated under the current off-set, jogged alignment. One left-turn only lane and one right-turn only lane would be provided in the southbound approach and the northbound and southbound approaches would operate under split phasing.*

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INTERSECTION CAPACITY UTILIZATION

N-S St: Project Driveway-Calden Avenue
E-W St: Firestone Boulevard
Project: 2015 Firestone Education Center Master Plan / 1-15-4116-1
File: ICU7

Project Driveway-Calden Avenue @ Firestone Boulevard
Peak hr: PM
Annual Growth: 0.85%

Date: 10/20/2015
Date of Count: 2012
Projection Year: 2019

Interim Conditions (Signalized Off-Set Configurations)

	2012 EXIST. TRAFFIC			2012 EXISTING W/PROJ. BUILDOUT				2012 EXIST. W/PROJ. + MITIGATION				2019 FUTURE WITHOUT PROJECT [3]				2019 FUTURE W/PROJ. BUILDOUT			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	3	0	0.002	0	3	0	0.002	0	3	0	0.002	32	35	0	0.022	0	35	0	0.022
Nb Thru	1	1600	0.078 *	7	8	1600	0.059 *	0	8	1600	0.059 *	0	1	1600	0.119 *	7	8	1600	0.101 *
Nb Right	120	0	-	-36	84	0	-	0	84	0	-	34	154	0	-	-36	118	0	-
Sb Left	36	0	0.023 *	-15	21	0	0.013 *	0	21	0	0.013 *	150	186	1600	0.116 *	-63	123	1600	0.077 *
Sb Thru	0	1600	0.036	5	5	1600	0.024	0	5	1600	0.024	0	0	1600	0.075	5	5	1600	0.043
Sb Right	21	0	-	-9	12	0	-	0	12	0	-	99	120	0	-	-57	63	0	-
Eb Left	7	1600	0.004	58	65	1600	0.041	0	65	1600	0.041	40	47	1600	0.030	42	89	1600	0.056
Eb Thru	1304	3200	0.417 *	-38	1266	3200	0.405 *	0	1266	3200	0.405 *	208	1512	3200	0.493 *	-38	1474	3200	0.481 *
Eb Right	29	0	-	0	29	0	-	0	29	0	-	37	66	0	-	0	66	0	-
Wb Left	100	1600	0.063 *	-46	54	1600	0.034 *	0	54	1600	0.034 *	38	138	1600	0.086 *	-46	92	1600	0.057 *
Wb Thru	939	3200	0.297	-35	904	3200	0.288	0	904	3200	0.288	164	1103	3200	0.369	-35	1068	3200	0.354
Wb Right	12	0	-	5	17	0	-	0	17	0	-	65	77	0	-	-11	66	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
(Existing Two-Way Stop Control Intersection)																			
ICU			0.679				0.611				0.611				0.914				0.816
LOS			B				B				B				E				D

* *Key conflicting movement as a part of ICU*
1 *Counts conducted by City Traffic Counters*
2 *Capacity expressed in veh/hour of green*
3 *Based on information provided by the City, as part of the mitigation measure for the approved Calden Court Apartments project, the Calden Avenue/Firestone Boulevard intersection would be signalized. Furthermore, under the near term analysis conditions the adjacent former HON site is assumed to be reused as manufacturing/warehousing uses. Thus, the joint HON-project driveway is assumed to be integrated into the overall traffic signal and operated under the current off-set, jogged alignment. One left-turn only lane and one right-turn only lane would be provided in the southbound approach and the northbound and southbound approaches would operate under split phasing.*

Future Year 2019 with Project (Interim Conditions)

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)

COUNT DATE ______
CALC AY DATE 10/20/2015
CHK ______ DATE ______

DIST ____ CO ____ RTE ____ PM ____

Major St: Firestone Boulevard — Critical Approach Speed 35 mph
Minor St: Project Driveway - Calden Avenue — Critical Approach Speed 25 mph

Speed limit or critical speed on major street traffic > 40 mph ☐ or
In built up area of isolated community of < 10,000 population ☐ } RURAL (R)
☑ URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume SATISFIED YES ☐ NO ☐
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume
100% SATISFIED YES ☐ NO ☐
80% SATISFIED YES ☐ NO ☐

MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)	U	R	U	R	Hour							
APPROACH LANES	1		2 or More									
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)								
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)								

Condition B - Interruption of Continuous Traffic
100% SATISFIED YES ☐ NO ☐
80% SATISFIED YES ☐ NO ☐

MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)	U	R	U	R	Hour							
APPROACH LANES	1		2 or More									
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)								
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)								

Combination of Conditions A & B SATISFIED YES ☐ NO ☐

REQUIREMENT	CONDITION	√	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☐
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Future Year 2019 with Project (Interim Conditions)

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	Hour	Hour	Hour	Hour
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☑ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☐**
(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☐

PART B **SATISFIED YES ☑ NO ☐**

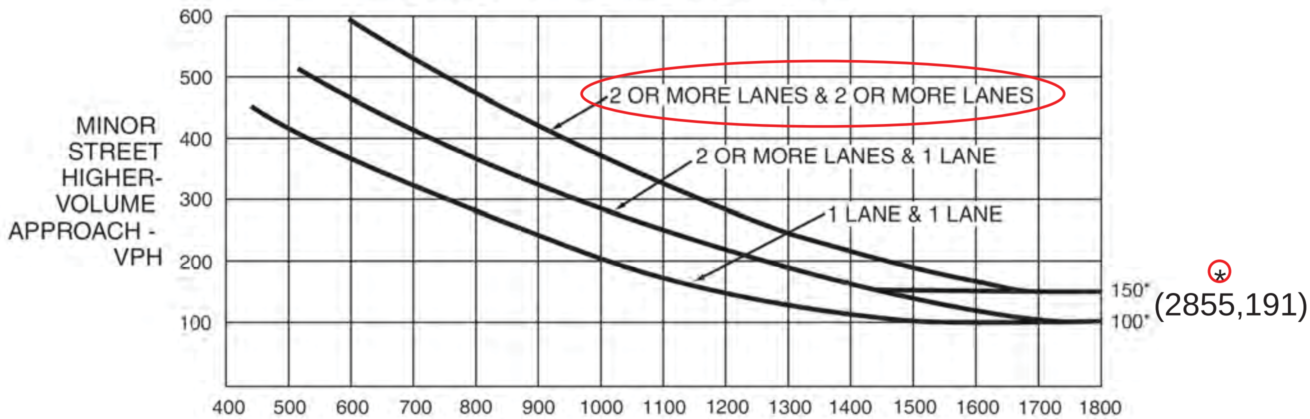
APPROACH LANES	One	2 or More	PM Hour
Both Approaches - Major Street		✓	2855
Higher Approach - Minor Street		✓	191

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☑ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Future Year 2019 with Project (Interim Conditions)

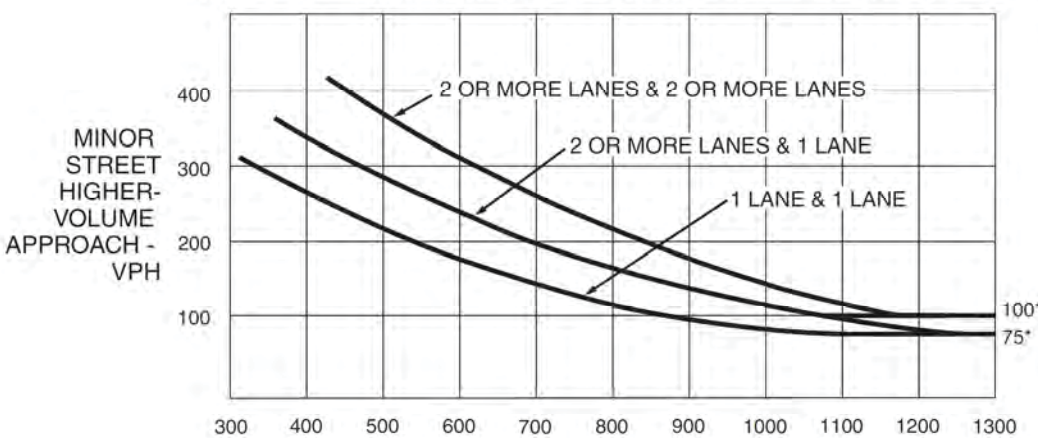
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



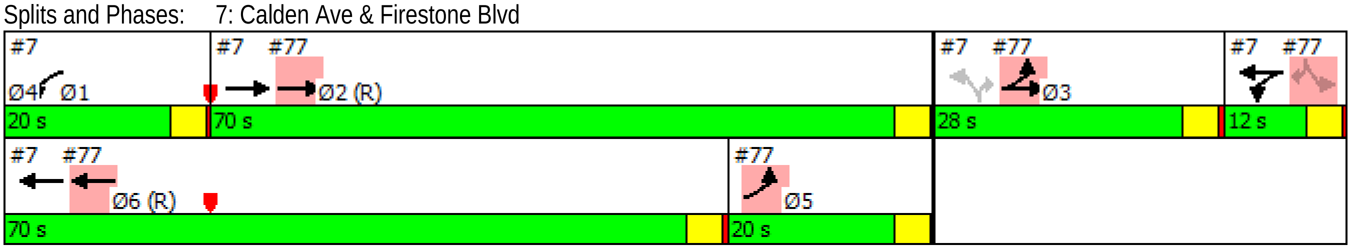
*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø1	Ø4	Ø5	Ø6
Lane Configurations										
Traffic Volume (vph)	1077	29	80	1404	49	158				
Future Volume (vph)	1077	29	80	1404	49	158				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900				
Lane Util. Factor	0.91	0.91	1.00	0.95	1.00	1.00				
Ped Bike Factor	1.00		0.98		0.95					
Frt	0.996					0.850				
Flt Protected			0.950		0.950					
Satd. Flow (prot)	5046	0	1770	3539	1770	1583				
Flt Permitted			0.950		0.950					
Satd. Flow (perm)	5046	0	1729	3539	1680	1583				
Right Turn on Red		Yes				No				
Satd. Flow (RTOR)	4									
Link Speed (mph)	30			30	30					
Link Distance (ft)	847			135	713					
Travel Time (s)	19.3			3.1	16.2					
Confl. Peds. (#/hr)		30	30		30					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				
Adj. Flow (vph)	1171	32	87	1526	53	172				
Shared Lane Traffic (%)										
Lane Group Flow (vph)	1203	0	87	1526	53	172				
Turn Type	NA		Prot	NA	Perm	Perm				
Protected Phases	2		1 4	6 4			1	4	5	6
Permitted Phases					3	3				
Detector Phase	2		1 4	6 4	3	3				
Switch Phase										
Minimum Initial (s)	4.0				4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0				27.0	27.0	20.0	8.0	20.0	20.0
Total Split (s)	70.0				28.0	28.0	20.0	12.0	20.0	70.0
Total Split (%)	53.8%				21.5%	21.5%	15%	9%	15%	54%
Maximum Green (s)	66.0				24.0	24.0	16.0	8.0	16.0	66.0
Yellow Time (s)	3.5				3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5				0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0				0.0	0.0				
Total Lost Time (s)	4.0				4.0	4.0				
Lead/Lag	Lag				Lead	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?										
Vehicle Extension (s)	3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max				None	None	None	None	None	C-Max
Walk Time (s)	5.0				4.0	4.0	5.0		5.0	5.0
Flash Dont Walk (s)	11.0				19.0	19.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	30				30	30	30		30	30
Act Effct Green (s)	70.2		25.0	79.2	22.8	22.8				
Actuated g/C Ratio	0.54		0.19	0.61	0.18	0.18				
v/c Ratio	0.44		0.26	0.71	0.18	0.62				
Control Delay	19.2		66.3	5.9	46.6	59.9				
Queue Delay	0.1		19.4	0.5	0.0	0.0				
Total Delay	19.4		85.7	6.4	46.6	59.9				
LOS	B		F	A	D	E				

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø1	Ø4	Ø5	Ø6
Approach Delay	19.4			10.7	56.7					
Approach LOS	B			B	E					
90th %ile Green (s)	66.0				24.0	24.0	16.0	8.0	16.0	66.0
90th %ile Term Code	Coord				Max	Max	Ped	Max	Max	Coord
70th %ile Green (s)	66.0				24.0	24.0	16.0	8.0	16.0	66.0
70th %ile Term Code	Coord				Max	Max	Ped	Max	Max	Coord
50th %ile Green (s)	66.0				24.0	24.0	16.0	8.0	16.0	66.0
50th %ile Term Code	Coord				Max	Max	Ped	Max	Ped	Coord
30th %ile Green (s)	76.4				24.0	24.0	5.6	8.0	16.0	66.0
30th %ile Term Code	Coord				Max	Max	Gap	Max	Hold	Coord
10th %ile Green (s)	76.5				17.9	17.9	5.5	14.1	16.0	66.0
10th %ile Term Code	Coord				Gap	Gap	Gap	Max	Hold	Coord
Queue Length 50th (ft)	232		55	105	38	134				
Queue Length 95th (ft)	271		m86	86	77	213				
Internal Link Dist (ft)	767			55	633					
Turn Bay Length (ft)										
Base Capacity (vph)	2725		398	2156	310	292				
Starvation Cap Reductn	0		293	239	0	0				
Spillback Cap Reductn	536		0	0	0	0				
Storage Cap Reductn	0		0	0	0	0				
Reduced v/c Ratio	0.55		0.83	0.80	0.17	0.59				

Intersection Summary	
Area Type: Other	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 48.8%	ICU Level of Service A
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 7: Calden Ave & Firestone Blvd



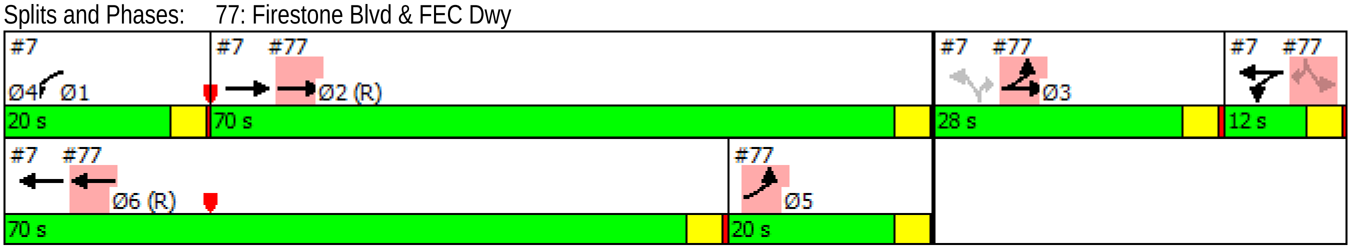
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø2	Ø3	Ø5
Lane Configurations										
Traffic Volume (vph)	176	1059	1446	133	45	38				
Future Volume (vph)	176	1059	1446	133	45	38				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900				
Lane Util. Factor	1.00	0.95	0.91	0.91	1.00	1.00				
Ped Bike Factor	0.99		0.99							
Frt			0.987			0.850				
Flt Protected	0.950				0.950					
Satd. Flow (prot)	1770	3539	4960	0	1770	1583				
Flt Permitted	0.950				0.950					
Satd. Flow (perm)	1750	3539	4960	0	1770	1583				
Right Turn on Red				Yes		No				
Satd. Flow (RTOR)			17							
Link Speed (mph)		30	30		30					
Link Distance (ft)		135	1019		702					
Travel Time (s)		3.1	23.2		16.0					
Confl. Peds. (#/hr)	30			30						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				
Adj. Flow (vph)	191	1151	1572	145	49	41				
Shared Lane Traffic (%)										
Lane Group Flow (vph)	191	1151	1717	0	49	41				
Turn Type	Prot	NA	NA		Perm	Perm				
Protected Phases	5 3	2 3	6				1	2	3	5
Permitted Phases					4	4				
Detector Phase	5 3	2 3	6		4	4				
Switch Phase										
Minimum Initial (s)			4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)			20.0		8.0	8.0	20.0	20.0	27.0	20.0
Total Split (s)			70.0		12.0	12.0	20.0	70.0	28.0	20.0
Total Split (%)			53.8%		9.2%	9.2%	15%	54%	22%	15%
Maximum Green (s)			66.0		8.0	8.0	16.0	66.0	24.0	16.0
Yellow Time (s)			3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)			0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)			0.0		0.0	0.0				
Total Lost Time (s)			4.0		4.0	4.0				
Lead/Lag			Lead		Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?										
Vehicle Extension (s)			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode			C-Max		None	None	None	C-Max	None	None
Walk Time (s)			5.0				5.0	5.0	4.0	5.0
Flash Dont Walk (s)			11.0				11.0	11.0	19.0	11.0
Pedestrian Calls (#/hr)			30				30	30	30	30
Act Effct Green (s)	42.8	97.0	66.0		9.2	9.2				
Actuated g/C Ratio	0.33	0.75	0.51		0.07	0.07				
v/c Ratio	0.33	0.44	0.68		0.39	0.37				
Control Delay	30.8	1.7	25.5		68.6	68.6				
Queue Delay	66.5	0.1	0.2		0.0	0.2				
Total Delay	97.3	1.8	25.7		68.6	68.8				
LOS	F	A	C		E	E				

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø2	Ø3	Ø5
Approach Delay		15.4	25.7		68.7					
Approach LOS		B	C		E					
90th %ile Green (s)			66.0		8.0	8.0	16.0	66.0	24.0	16.0
90th %ile Term Code			Coord		Max	Max	Ped	Coord	Max	Max
70th %ile Green (s)			66.0		8.0	8.0	16.0	66.0	24.0	16.0
70th %ile Term Code			Coord		Max	Max	Ped	Coord	Max	Max
50th %ile Green (s)			66.0		8.0	8.0	16.0	66.0	24.0	16.0
50th %ile Term Code			Coord		Max	Max	Ped	Coord	Max	Ped
30th %ile Green (s)			66.0		8.0	8.0	5.6	76.4	24.0	16.0
30th %ile Term Code			Coord		Max	Max	Gap	Coord	Max	Hold
10th %ile Green (s)			66.0		14.1	14.1	5.5	76.5	17.9	16.0
10th %ile Term Code			Coord		Max	Max	Gap	Coord	Gap	Hold
Queue Length 50th (ft)	135	43	383		41	34				
Queue Length 95th (ft)	207	36	438		85	73				
Internal Link Dist (ft)		55	939		622					
Turn Bay Length (ft)										
Base Capacity (vph)	599	2672	2526		125	112				
Starvation Cap Reductn	425	474	0		0	0				
Spillback Cap Reductn	0	0	203		0	3				
Storage Cap Reductn	0	0	0		0	0				
Reduced v/c Ratio	1.10	0.52	0.74		0.39	0.38				

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 22.5 Intersection LOS: C
Intersection Capacity Utilization 54.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 77: Firestone Blvd & FEC Dwy

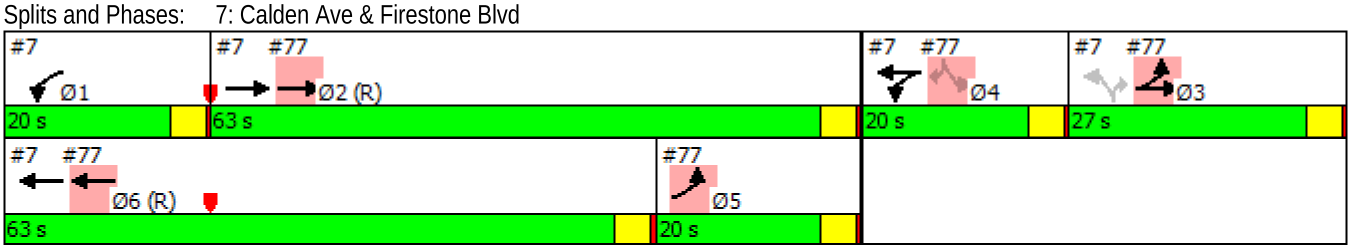


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø1	Ø4	Ø5	Ø6
Lane Configurations										
Traffic Volume (vph)	1563	66	97	1131	35	126				
Future Volume (vph)	1563	66	97	1131	35	126				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900				
Lane Util. Factor	0.91	0.91	1.00	0.95	1.00	1.00				
Ped Bike Factor	0.99		0.99		0.95					
Frt	0.994					0.850				
Flt Protected			0.950		0.950					
Satd. Flow (prot)	5026	0	1770	3539	1770	1583				
Flt Permitted			0.950		0.950					
Satd. Flow (perm)	5026	0	1751	3539	1680	1583				
Right Turn on Red		Yes				No				
Satd. Flow (RTOR)	6									
Link Speed (mph)	30			30	30					
Link Distance (ft)	847			135	713					
Travel Time (s)	19.3			3.1	16.2					
Confl. Peds. (#/hr)		30	30		30					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				
Adj. Flow (vph)	1699	72	105	1229	38	137				
Shared Lane Traffic (%)										
Lane Group Flow (vph)	1771	0	105	1229	38	137				
Turn Type	NA		Prot	NA	Perm	Perm				
Protected Phases	2		1 4	6 4			1	4	5	6
Permitted Phases					3	3				
Detector Phase	2		1 4	6 4	3	3				
Switch Phase										
Minimum Initial (s)	4.0				4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0				27.0	27.0	20.0	8.0	20.0	20.0
Total Split (s)	63.0				27.0	27.0	20.0	20.0	20.0	63.0
Total Split (%)	48.5%				20.8%	20.8%	15%	15%	15%	48%
Maximum Green (s)	59.0				23.0	23.0	16.0	16.0	16.0	59.0
Yellow Time (s)	3.5				3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5				0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0				0.0	0.0				
Total Lost Time (s)	4.0				4.0	4.0				
Lead/Lag	Lag				Lag	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes				Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max				None	None	None	None	None	C-Max
Walk Time (s)	5.0				4.0	4.0	5.0		5.0	5.0
Flash Dont Walk (s)	11.0				19.0	19.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	30				30	30	30		30	30
Act Effct Green (s)	62.8		28.2	75.0	23.0	23.0				
Actuated g/C Ratio	0.48		0.22	0.58	0.18	0.18				
v/c Ratio	0.73		0.27	0.60	0.13	0.49				
Control Delay	29.6		38.7	4.1	46.5	55.0				
Queue Delay	0.6		6.1	0.2	0.0	0.0				
Total Delay	30.1		44.8	4.3	46.5	55.0				
LOS	C		D	A	D	E				

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø1	Ø4	Ø5	Ø6
Approach Delay	30.1			7.5	53.2					
Approach LOS	C			A	D					
90th %ile Green (s)	59.0				23.0	23.0	16.0	16.0	16.0	59.0
90th %ile Term Code	Coord				Max	Max	Ped	Max	Ped	Coord
70th %ile Green (s)	59.0				23.0	23.0	16.0	16.0	16.0	59.0
70th %ile Term Code	Coord				Max	Max	Ped	Max	Ped	Coord
50th %ile Green (s)	59.0				23.0	23.0	16.0	16.0	16.0	59.0
50th %ile Term Code	Coord				Max	Max	Ped	Max	Ped	Coord
30th %ile Green (s)	68.1				23.0	23.0	6.9	16.0	16.0	59.0
30th %ile Term Code	Coord				Max	Max	Gap	Max	Hold	Coord
10th %ile Green (s)	68.9				23.0	23.0	6.1	16.0	16.0	59.0
10th %ile Term Code	Coord				Max	Max	Gap	Max	Hold	Coord
Queue Length 50th (ft)	450		56	77	27	105				
Queue Length 95th (ft)	513		102	68	60	174				
Internal Link Dist (ft)	767			55	633					
Turn Bay Length (ft)										
Base Capacity (vph)	2431		435	2041	297	280				
Starvation Cap Reductn	0		277	233	0	0				
Spillback Cap Reductn	282		0	0	0	2				
Storage Cap Reductn	0		0	0	0	0				
Reduced v/c Ratio	0.82		0.66	0.68	0.13	0.49				

Intersection Summary	
Area Type:	Other
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 22.2	Intersection LOS: C
Intersection Capacity Utilization 50.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Calden Ave & Firestone Blvd



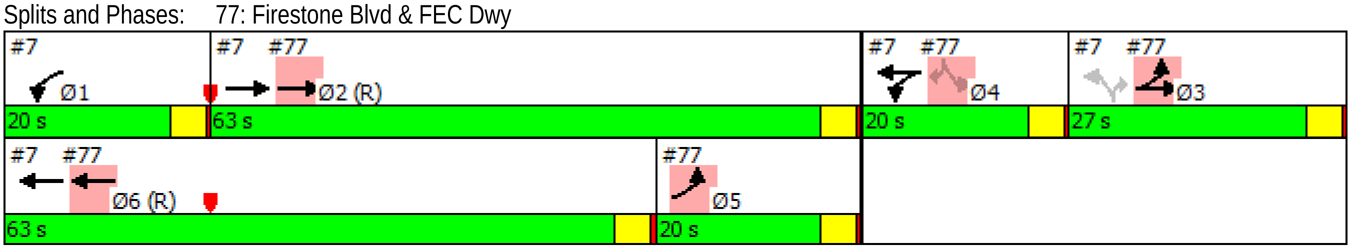
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø2	Ø3	Ø5
Lane Configurations										
Traffic Volume (vph)	97	1592	1160	66	123	68				
Future Volume (vph)	97	1592	1160	66	123	68				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900				
Lane Util. Factor	1.00	0.95	0.91	0.91	1.00	1.00				
Ped Bike Factor	0.98		0.99							
Frt			0.992			0.850				
Flt Protected	0.950				0.950					
Satd. Flow (prot)	1770	3539	5007	0	1770	1583				
Flt Permitted	0.950				0.950					
Satd. Flow (perm)	1736	3539	5007	0	1770	1583				
Right Turn on Red				Yes		No				
Satd. Flow (RTOR)			9							
Link Speed (mph)		30	30		30					
Link Distance (ft)		135	1019		702					
Travel Time (s)		3.1	23.2		16.0					
Confl. Peds. (#/hr)	30			30						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				
Adj. Flow (vph)	105	1730	1261	72	134	74				
Shared Lane Traffic (%)										
Lane Group Flow (vph)	105	1730	1333	0	134	74				
Turn Type	Prot	NA	NA		Perm	Perm				
Protected Phases	5 3	2 3	6				1	2	3	5
Permitted Phases					4	4				
Detector Phase	5 3	2 3	6		4	4				
Switch Phase										
Minimum Initial (s)			4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)			20.0		8.0	8.0	20.0	20.0	27.0	20.0
Total Split (s)			63.0		20.0	20.0	20.0	63.0	27.0	20.0
Total Split (%)			48.5%		15.4%	15.4%	15%	48%	21%	15%
Maximum Green (s)			59.0		16.0	16.0	16.0	59.0	23.0	16.0
Yellow Time (s)			3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)			0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)			0.0		0.0	0.0				
Total Lost Time (s)			4.0		4.0	4.0				
Lead/Lag			Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode			C-Max		None	None	None	C-Max	None	None
Walk Time (s)			5.0				5.0	5.0	4.0	5.0
Flash Dont Walk (s)			11.0				11.0	11.0	19.0	11.0
Pedestrian Calls (#/hr)			30				30	30	30	30
Act Effct Green (s)	39.0	85.8	59.0		16.0	16.0				
Actuated g/C Ratio	0.30	0.66	0.45		0.12	0.12				
v/c Ratio	0.20	0.74	0.59		0.62	0.38				
Control Delay	21.1	8.3	27.5		67.3	58.8				
Queue Delay	6.9	0.9	0.1		0.0	0.1				
Total Delay	28.0	9.3	27.6		67.3	58.9				
LOS	C	A	C		E	E				

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø2	Ø3	Ø5
Approach Delay		10.3	27.6		64.3					
Approach LOS		B	C		E					
90th %ile Green (s)			59.0		16.0	16.0	16.0	59.0	23.0	16.0
90th %ile Term Code			Coord		Max	Max	Ped	Coord	Max	Ped
70th %ile Green (s)			59.0		16.0	16.0	16.0	59.0	23.0	16.0
70th %ile Term Code			Coord		Max	Max	Ped	Coord	Max	Ped
50th %ile Green (s)			59.0		16.0	16.0	16.0	59.0	23.0	16.0
50th %ile Term Code			Coord		Max	Max	Ped	Coord	Max	Ped
30th %ile Green (s)			59.0		16.0	16.0	6.9	68.1	23.0	16.0
30th %ile Term Code			Coord		Max	Max	Gap	Coord	Max	Hold
10th %ile Green (s)			59.0		16.0	16.0	6.1	68.9	23.0	16.0
10th %ile Term Code			Coord		Max	Max	Gap	Coord	Max	Hold
Queue Length 50th (ft)	75	195	297		109	58				
Queue Length 95th (ft)	m96	178	346		180	109				
Internal Link Dist (ft)		55	939		622					
Turn Bay Length (ft)										
Base Capacity (vph)	531	2335	2277		217	194				
Starvation Cap Reductn	377	320	0		0	0				
Spillback Cap Reductn	0	0	208		0	3				
Storage Cap Reductn	0	0	0		0	0				
Reduced v/c Ratio	0.68	0.86	0.64		0.62	0.39				

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 20.5 Intersection LOS: C
Intersection Capacity Utilization 57.5% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 77: Firestone Blvd & FEC Dwy



ATTACHMENT D

YEAR 2031 FUTURE WITH PROJECT
TRAFFIC SIGNAL WARRANT ANALYSIS

Future Year 2031 with Project Buildout

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)

COUNT DATE ____
CALC AY DATE 10/20/2015
CHK ____ DATE ____

____ DIST ____ CO ____ RTE ____ PM

Major St: Santa Fe Avenue — Critical Approach Speed 35 mph
Minor St: Project Driveway - Orchard Place — Critical Approach Speed 25 mph

Speed limit or critical speed on major street traffic > 40 mph ☐ or
In built up area of isolated community of < 10,000 population ☐ } RURAL (R)
☑ URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume SATISFIED YES ☐ NO ☐
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume 100% SATISFIED YES ☐ NO ☐
80% SATISFIED YES ☐ NO ☐

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				Hour							
	U	R	U	R								
APPROACH LANES	1		2 or More									
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)								
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)								

Condition B - Interruption of Continuous Traffic 100% SATISFIED YES ☐ NO ☐
80% SATISFIED YES ☐ NO ☐

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				Hour							
	U	R	U	R								
APPROACH LANES	1		2 or More									
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)								
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)								

Combination of Conditions A & B SATISFIED YES ☐ NO ☐

REQUIREMENT	CONDITION	√	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☐
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Future Year 2031 with Project Buildout

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	Hour	Hour	Hour	Hour
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐	No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐	No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☑**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☐**
(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐	No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐	No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐	No ☐

PART B **SATISFIED YES ☐ NO ☑**

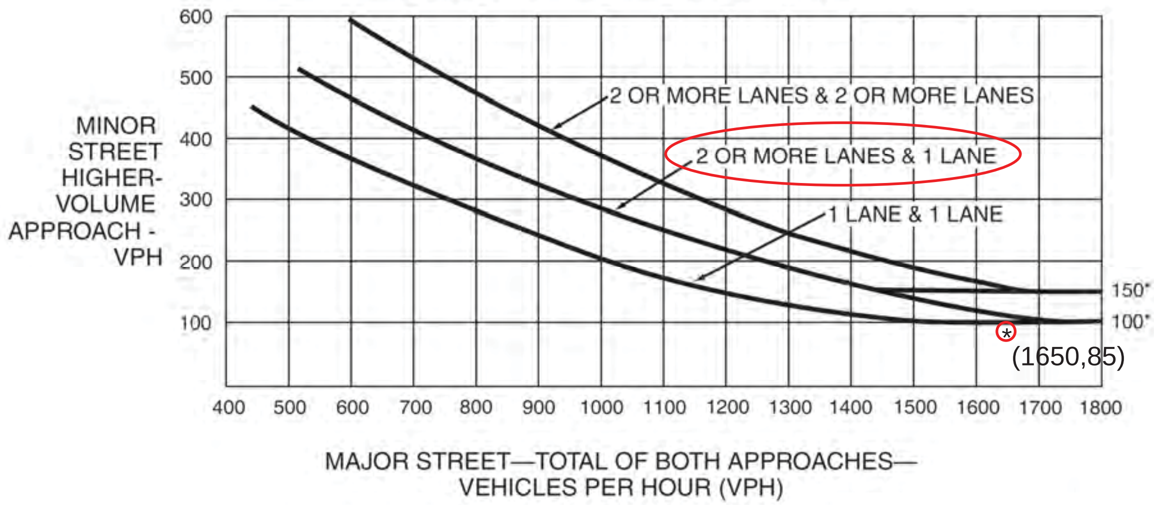
APPROACH LANES	One	2 or More	AM Hour
Both Approaches - Major Street		✓	1650
Higher Approach - Minor Street	✓		85

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐	No ☑
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐	No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Future Year 2031 with Project Buildout

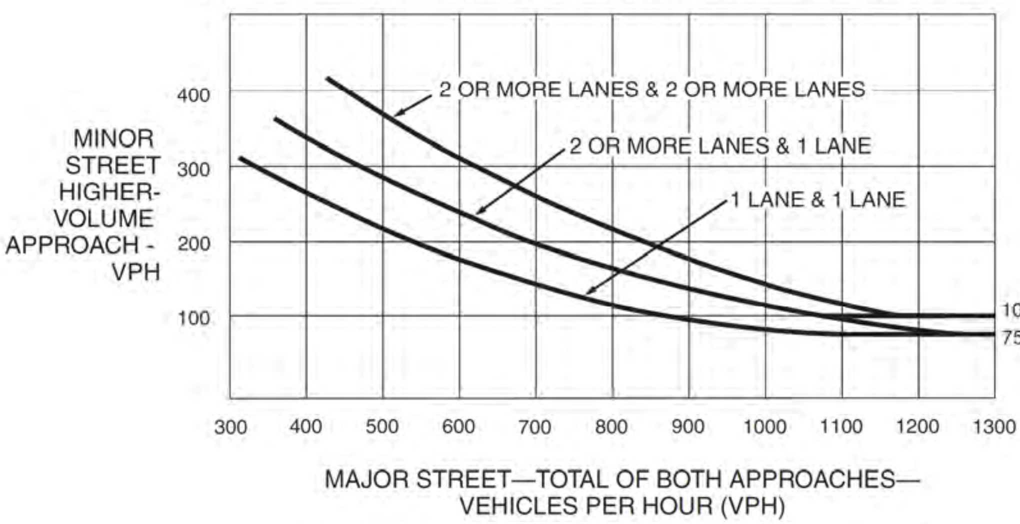
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

2013 Master Plan Traffic Impact Study

LINSCOTT LAW & GREENSPAN engineers

TRAFFIC IMPACT STUDY

2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

City of South Gate, California
November 21, 2013

Prepared for:

Terry A. Hayes Associates
8522 National Boulevard, Suite 102
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LLG Ref. 1-12-4000-1

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APPENDICES

APPENDIX

TRAFFIC IMPACT STUDY

2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

City of South Gate, California
November 21, 2013

1.0 INTRODUCTION

This traffic analysis has been prepared to identify and evaluate the potential traffic impacts of the proposed Los Angeles Community College District (LACCD) 2013 Firestone Educational Center (FEC) Master Plan (the "Project"). The Project is located at 2525 Firestone Boulevard, in the southeastern portion of the County of Los Angeles within the City of South Gate. The project site is bounded by the Union Pacific Railroad (UPRR) right-of-way on the north, Firestone Boulevard on the south, Santa Fe Avenue on the east, and a former furniture manufacturing facility (referred to as the HON site) on the west. The proposed project site location and general vicinity are shown in ***Figure 1-1***.

The traffic analysis follows City of South Gate guidelines and is also consistent with the traffic impact assessment guidelines set forth in the *2010 Congestion Management Program*[1]. This traffic analysis evaluates potential project-related impacts at 31 key intersections in the vicinity of the project site. The study intersections were determined in consultation with Los Angeles Community College District (LACCD), the Lead Agency for this Project, and were also based on comments received by the Lead Agency through the California Environmental Quality Act (CEQA) Notice of Preparation (NOP) process as well as prior public and agency comments received on the previous traffic study conducted for the site.

The Lead Agency determined that all study intersections would be evaluated using the methodologies utilized by the City of South Gate (i.e., where the project site is located). Thus, in accordance with guidelines provided by the City of South Gate, the Intersection Capacity Utilization (ICU) method was used to determine Volume-to-Capacity ratios and corresponding Levels of Service for the 27 signalized study intersections while the analysis method from the *HCM2010 Highway Capacity Manual*[2] (HCM2010) was utilized to determine intersection delay values and corresponding Levels of Service analysis for the four unsignalized study intersections. In addition, the County of Los Angeles ICU methodology was employed for the seven study intersections located either partially or solely within the County of Los Angeles. A review was also conducted of Los Angeles County Metropolitan Transportation Authority intersection and freeway monitoring stations to determine if a Congestion Management Program transportation impact assessment analysis is required for the Project.

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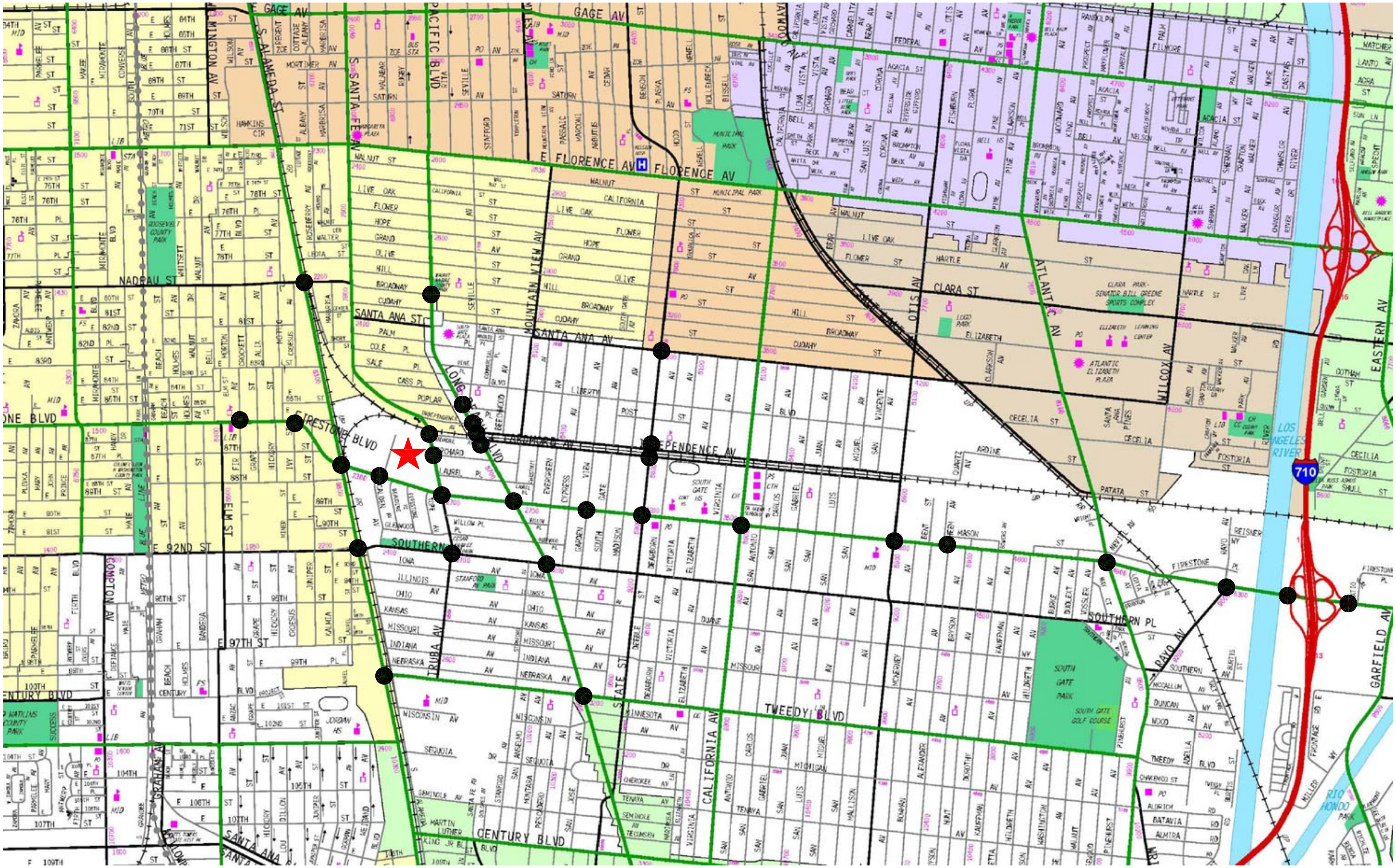
[1] *2010 Congestion Management Program*, Los Angeles County Metropolitan Transportation Authority, October 2010.
[2] *HCM2010 Highway Capacity Manual*, Transportation Research Board, National Research Council, Washington D.C., 2010.



MAP SOURCE: RAND MCNALLY & COMPANY

★ PROJECT SITE

● STUDY LOCATION

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FIGURE 1-1
VICINITY MAP

LINSCOTT, LAW & GREENSPAN, engineers

2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

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This study (i) presents existing traffic volumes, (ii) forecasts existing with the proposed Firestone Educational Center project traffic volumes, (iii) forecasts future traffic volumes with the related projects and regional traffic growth, (iv) forecasts future traffic volumes with the proposed Firestone Educational Center project, (v) determines proposed project-related impacts, and (vi) identifies mitigation measures, where necessary. This study also provides a brief summary of the City of South Gate General Plan 2035 Mobility Element and the specific components that relate to the project site as well as the surrounding street system.

1.1 Study Area

Based on direction from LACCD staff and through the CEQA NOP process, a total of 31 study intersections have been identified for evaluation. These study locations provide local access to the study area and define the extent of the boundaries for this traffic impact study. Further discussion of the existing street system and study area is provided in Section 4.0 herein.

The general location of the Project in relation to the study locations and surrounding street system is presented in *Figure 1–1*. The traffic analysis study area is generally comprised of those locations which have the greatest potential to experience significant traffic impacts due to the Project as defined by the Lead Agency. In the traffic engineering practice, the study area generally includes those intersections that are:

a. Immediately adjacent or in close proximity to the Project site;

b. In the vicinity of the Project site that are documented to have current or projected future adverse operational issues; and

c. In the vicinity of the Project site that are forecast to experience a relatively greater percentage of Project-related vehicular turning movements (e.g., at freeway ramp intersections).

The locations selected for analysis were based on the above criteria, the forecast Project peak hour vehicle trip generation, the anticipated distribution of Project vehicular trips and existing intersection/corridor operations. The 31 study intersections listed below provide local access to the study area and define the extent of the boundaries for this traffic impact investigation.

1. Fir Avenue & Firestone Boulevard
2. Ivy Street-Manchester Avenue & Firestone Boulevard
3. Alameda Street & Nadeau Street
4. Alameda Street & Firestone Boulevard
5. Alameda Street & 92nd Street-Southern Avenue
6. Alameda Street & Tweedy Boulevard
7. Project Driveway-Calden Avenue & Firestone Boulevard

8. Santa Fe Avenue & Project Driveway-Ardmore Avenue
9. Santa Fe Avenue & Project Driveway-Orchard Place
10. Santa Fe Avenue & Firestone Boulevard
11. Santa Fe Avenue-Truba Avenue & Southern Avenue
12. Pacific Boulevard & Broadway
13. Long Beach Boulevard & Poplar Place-Seville Avenue
14. Long Beach Boulevard & Independence Avenue (west leg)
15. Long Beach Boulevard & Independence Avenue (east leg)
16. Long Beach Boulevard & Ardmore Avenue
17. Long Beach Boulevard & Firestone Boulevard
18. Long Beach Boulevard & Southern Avenue
19. Long Beach Boulevard & Tweedy Boulevard
20. Garden View Avenue & Firestone Boulevard
21. State Street & Santa Ana Street
22. State Street & Independence Avenue
23. State Street & Ardmore Avenue
24. State Street & Firestone Boulevard
25. California Avenue & Firestone Boulevard
26. Otis Street & Firestone Boulevard
27. Rheem Avenue-Alexander Avenue & Firestone Boulevard
28. Atlantic Avenue & Firestone Boulevard
29. Rayo Avenue & Firestone Boulevard
30. I-710 Southbound Ramps & Firestone Boulevard
31. I-710 Northbound Ramps & Firestone Boulevard

The Volume-to-Capacity (for signalized intersections), Vehicle Delay (for unsignalized intersections) and Level of Service calculations for the study intersections were used to evaluate potential traffic-related impacts associated with area growth, cumulative projects and the proposed Firestone Educational Center project. When necessary, this report recommends intersection improvements that may be required to accommodate future traffic volumes and restore/maintain an acceptable Level of Service, and/or to mitigate the impact of the project.

2.0 PROJECT DESCRIPTION

2.1 Project Location

The proposed project is located at 2525 Firestone Boulevard in the City of South Gate. The project site is situated at the northwest corner of the Santa Fe Avenue/Firestone Boulevard intersection. The project site is bounded by the UPRR right-of-way on the north, Firestone Boulevard on the south, Santa Fe Avenue on the east and a former furniture manufacturing facility on the west. The proposed project site and general vicinity are shown in *Figure 1-1*.

The project location is well located to facilitate pedestrian activity, bicycle usage and use of public transit services, particularly due to the proximity of nearby commercial corridors. The project site is situated within walking distance to retail, restaurant, and other commercial businesses located along the Firestone Boulevard and Santa Fe Avenue corridors. Further, regional and local public bus transit stops are provided in close proximity to the project site.

2.2 Existing Project Site

The approximately 18.5-acre project site is currently occupied with four two- to four-story buildings (referred to as Buildings 1, 2, 3 and 4). Based on information provided by the project's Master Architect and the environmental consultant, the following is a summary of the gross square feet (GSF) of floor area associated with each existing on-site building and their respective occupancy status:

- Building 1: 455,949 GSF (234,152 GSF currently occupied as warehouse use)
- Building 2: 25,087 GSF (vacant)
- Building 3: 366,371 GSF (81,514 GSF currently occupied as warehouse use)
- Building 4: 220,550 GSF (189,212 GSF currently occupied as warehouse use)

Thus, a total of 504,878 GSF in Buildings 1, 3, and 4 is currently occupied. It should be noted that Building 2, while currently vacant, was previously occupied by the Los Angeles Unified School District (LAUSD) as an adult education facility.

2.3 Existing South Gate Education Center Site

The East Los Angeles College (ELAC) established the South Gate Education Center (SGEC) as a satellite campus in 1997 to better serve a growing student population that resides in the southern part of the college's service district. The existing SGEC is located across from (south) and just west of the project site at 2340 Firestone Boulevard. The approximately 4.2-acre SGEC site is occupied with a 51,000 square-foot building and has an enrollment of 4,912 students. However, rapid student growth and the lack of adequate facilities and curriculum offered at the existing SGEC have resulted in deficiencies in meeting the community's current and future needs.

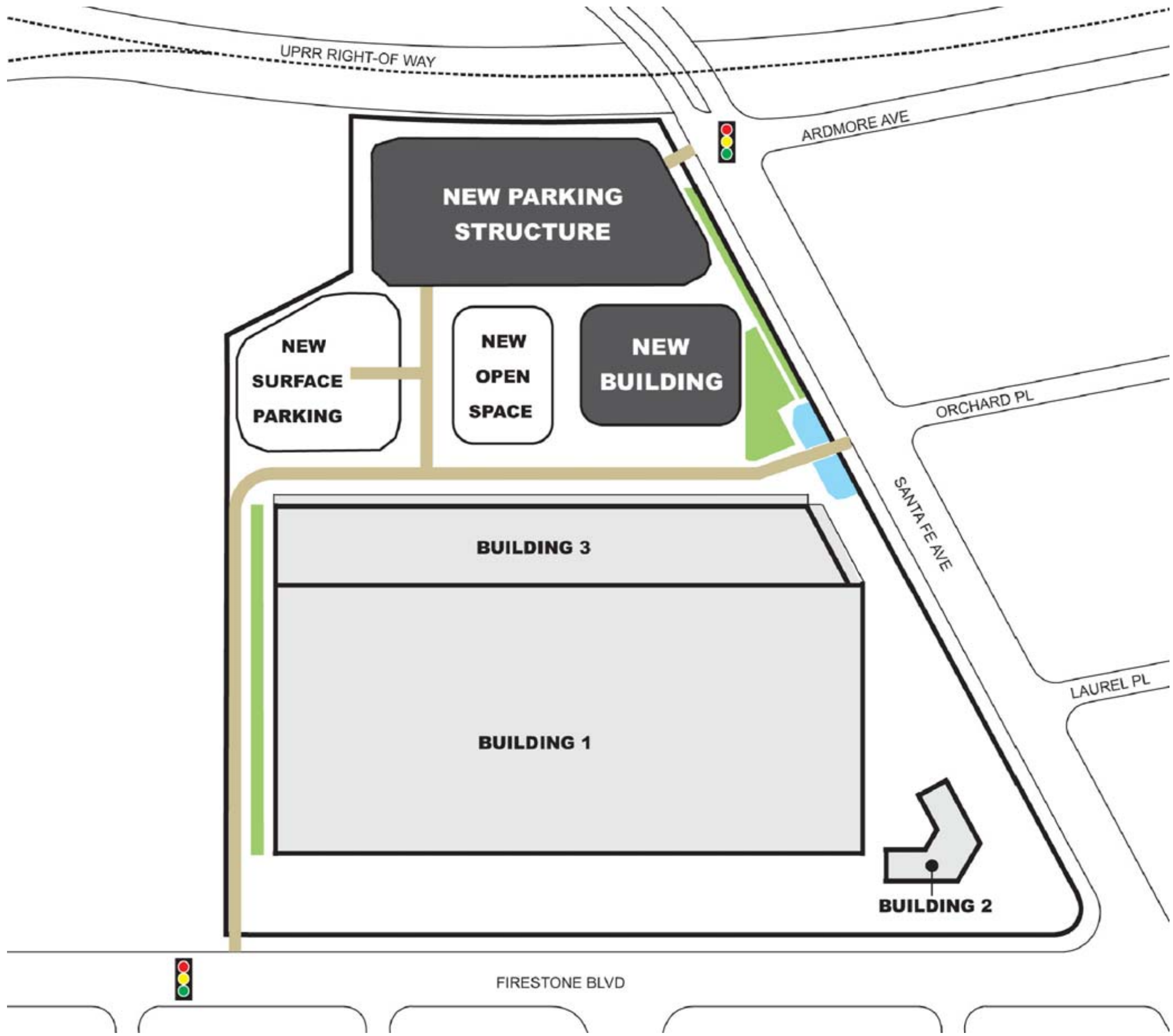
2.4 Project Description

The proposed Firestone Educational Center facility is planned to accommodate a maximum student enrollment of 9,000 students. The proposed project would consist of the construction of an approximately 105,000 square-foot building, a parking structure containing approximately 1,600 spaces, entry drives, potential drop-off/pick-up areas internal to the site, open space as well as surface parking areas with approximately 60 parking spaces for visitors and guests. The existing Building 4 on-site is proposed to be demolished while Buildings 1, 2 and 3 would remain (with no building alterations proposed). The new FEC campus area would be located to the north of Building 3. It should be noted that the existing truck yard serving Building 3 from the north will be eliminated for the new FEC campus. The loading docks located along the north side of Building 3 will remain in place but they will not be utilized. Separate loading docks at the east end of Building 3 will continue to be utilized. In addition, since Building 3 is connected internally to Building 1, the existing loading docks located along the south side of Building 1 may also be utilized for service purposes.

The existing SGEC facility located across from (south) and just west of the project site would continue to operate while the new FEC campus is being constructed. Construction of the proposed project is planned to commence in year 2015 and is anticipated to be completed by year 2018. Upon completion, the new FEC facility is envisioned to initially have approximately 5,000 students in year 2019 (by comparison, the existing SGEC has an enrollment of 4,912 students). The new FEC campus would allow LACCD to vacate the existing SGEC building. It should be noted that the date when maximum student enrollment could occur is dependent upon a number of factors, including the economy, State funding and growth restrictions, as well as the availability of similar educational facilities elsewhere. Based on information provided by LACCD and for analysis purposes, it is assumed that the maximum student enrollment of 9,000 students would be achieved in year 2031.

As discussed further in Section 11.1 of this report, the City of South Gate's General Plan 2035 Mobility Element identifies the roadway standards for streets surrounding the project site. The ultimate right-of-way and roadway widths are based on the respective roadway classifications. This would provide a half right-of-way width consistent with the City's standard for a Boulevard (Primary Arterial) which is the City's designation for Firestone Boulevard. It is important to note that Buildings 1, 2, and 3 will continue to be leased and therefore are not planned to be part of the Firestone Educational Center project. Thus, the surface parking lot along Firestone Boulevard will remain and continue to serve both truck and passenger car parking and circulation. Along the Santa Fe Avenue frontage, no additional roadway dedication or widening is required.

The conceptual site plan for the proposed Firestone Educational Center is illustrated in ***Figure 2-1***. Primary vehicular access to the project site will be provided via a new signalized driveway on the west side of Santa Fe Avenue, opposite Ardmore Avenue. In addition, the existing driveway on the north side of Firestone Boulevard, just east of Calden Avenue, is also planned for



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MAP SOURCE: BERLINER AND ASSOCIATES AND TAHA, 2013

FIGURE 2-1
PROJECT SITE PLAN

LINSCOTT, LAW & GREENSPAN, engineers

2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

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signalization and will provide vehicular access to the project site. Further discussion of the project's access and circulation scheme is provided in Section 3.0.

3.0 SITE ACCESS AND CIRCULATION

The proposed site access scheme for the Firestone Educational Center project is displayed in *Figure 2-1*. Descriptions of the existing site access and proposed project site access and circulation schemes are provided in the following subsections.

3.1 Existing Project Site Access

Primary vehicular access to Buildings 1, 3, and 4 is presently provided via one driveway on the north side of Firestone Boulevard, east of Calden Avenue. This driveway provides shared vehicular access with the adjacent HON Industries, Inc. (HON) site to the west (i.e., a former furniture manufacturing facility which is currently vacant). The property line between these two sites bisects the midpoint of the driveway and runs generally in a north-south direction. An agreement was previously executed between the owners of both sites (which runs with the land) which provides for shared use as well as the share in the maintenance costs of this driveway/drive aisle. The existing project site access driveway on Firestone Boulevard is unsignalized and accommodates full access turning movements (i.e., left-turn and right-turn ingress and egress turning movements). In addition to the primary access driveway on Firestone Boulevard, secondary driveways are provided along the west side of Santa Fe Avenue, just south of Orchard Place and opposite Laurel Place.

Vehicular access to Building 2 is separately provided via one driveway along the north side of Firestone Boulevard and one driveway along the west side of Santa Fe Avenue. All existing project driveways are proposed to remain and will continue to provide vehicular access to Buildings 1, 2 and 3.

3.2 Proposed Project Site Access

3.2.1 *Vehicular Site Access*

The proposed site access scheme for the Firestone Educational Center project is displayed in *Figure 2-1*. Primary vehicular access to the project will be provided via two proposed signalized access points: one along the west side of Santa Fe Avenue opposite Ardmore Avenue and one along the north side of Firestone Boulevard at the existing shared access driveway. A brief description of the proposed project primary site access scheme is provided in the following paragraphs.

- *<u>Santa Fe Avenue Proposed Signalized Driveway (Opposite Ardmore Avenue)</u>*

  This primary access point is located along the west side of Santa Fe Avenue, opposite Ardmore Avenue. This driveway is proposed to be signalized and will serve as the main vehicular access point to/from the project parking structure. Two inbound travel lanes and two outbound travel lanes are proposed so as to facilitate traffic flow along Santa Fe Avenue as well as to minimize any potential vehicle queuing into and out of the proposed parking structure. Consistent with current practice and parking designs at other LACCD parking structure facilities, the proposed parking structure access points will not be gate-controlled (i.e., free flow inbound and outbound movements are anticipated). Thus, with the two inbound lanes proposed at this driveway, vehicular queuing back out onto Santa Fe Avenue towards the UPRR right-of-way (i.e., north of the driveway) is not anticipated. Furthermore, it is anticipated that the majority of project traffic utilizing the proposed driveway on Santa Fe Avenue will originate from and be destined to the south, based on a detailed review of the existing South Gate Education Center student population zip code data and the locations of surrounding major traffic corridors (refer to Section 5.2 for further discussion). An approximately 240-foot northbound left-turn storage/pocket on Santa Fe Avenue will be provided for entering FEC motorists. The proposed project site driveway along Santa Fe Avenue will be constructed to City of South Gate design standards.

- *Firestone Boulevard Proposed Signalized Driveway (east of Calden Avenue)*

  This access point is located along the north side of Firestone Boulevard, approximately 135 feet east of Calden Avenue (as measured from the centerline of the driveway to the centerline of Calden Avenue). Based on information provided by the City of South Gate pursuant to the Conditions of Approval of the nearby Calden Court Apartments project, a traffic signal has been approved for installation at the intersection of Calden Avenue and Firestone Boulevard. In addition, if and when redevelopment of the adjacent HON site occurs (i.e., to be potentially redeveloped in the long-term conditions as a shopping center as discussed in more detail within Section 6.2 of this report), it is assumed that the Applicant of the HON project will be required to tie into the Calden Avenue/Firestone Boulevard traffic signal and construct the fourth leg of the intersection (i.e., in the area directly across from Calden Avenue which is under HON ownership). Under this analysis condition, the existing shared access point on Firestone Boulevard would likely be closed and the north leg of the signalized Calden Avenue/Firestone Boulevard intersection would facilitate vehicular access for both the redeveloped HON shopping center and the project.

  Due to the offset between the existing shared access driveway and Calden Avenue, the lack of LACCD ownership to the west of the site's westerly property line (i.e., the area across from Calden Avenue), and the approved Calden Avenue/Firestone Boulevard traffic signal installation, this traffic study includes an analysis of an interim condition in which the existing shared access point along the north side of Firestone Boulevard will remain and be signalized and operated in conjunction with the Calden Avenue/Firestone Boulevard traffic signal (i.e., in an offset configuration). Based on coordination with the City, under the interim condition, all vehicular turning movements will continue to be allowed at the joint traffic signal and the existing shared access driveway will accommodate both LACCD-related traffic as well as traffic associated with the potential reuse of the adjacent HON site (i.e., as manufacturing/warehousing uses under near-term conditions). Refer to Section 10.0 for a discussion of the Project Driveway-Calden Avenue/Firestone Boulevard interim analysis condition.

In addition to the primary access points described above, a driveway is proposed along the west side of Santa Fe Avenue opposite Orchard Place to provide access for fire/emergency vehicles, delivery vehicles, and potential visitors/guests of the proposed FEC facility. This driveway is not proposed to be signalized.

3.2.2 *Pedestrian Site Access*

The proposed project site has been designed to encourage pedestrian activity and walking as a transportation mode[3]. Walkability is a term for the extent to which walking is readily available as a safe, connected, accessible and pleasant mode of transport.[4] There are five basic requirements that are widely accepted as key aspects of the walkability of urban areas that should be satisfied. The underlying principle is that pedestrians should not be delayed, diverted, or placed in danger. The five primary characteristics of walkability are as follows:

- Connectivity: People can walk from one place to another without encountering major obstacles, obstructions, or loss of connectivity.

- Convivial: Pedestrian routes are friendly and attractive, and are perceived as such by pedestrians.

- Conspicuous: Suitable levels of lighting, visibility and surveillance over its entire length, with high quality delineation and signage.

- Comfortable: High quality and well-maintained footpaths of suitable widths, attractive landscaping and architecture, shelter and rest spaces, and a suitable allocation of road space to pedestrians.

- Convenient: Walking is a realistic travel choice, partly because of the impact of the other criteria set forth above, but also because walking routes are of a suitable length as a result of land use planning with minimal delays.

A review of the project site plan and nearby pedestrian walkway network indicates that these five primary characteristics are accommodated as part of the proposed project. The pedestrian walkways and the adjacent sidewalks are designed to provide a friendly walking environment. The project site is adjacent to and accessible from nearby commercial uses (e.g., retail, restaurant, etc.) and other amenities along the Santa Fe Avenue and Firestone Boulevard corridors, as well as adjacent public bus transit stops. For example, Metro transit stops are located adjacent to the project site with routes that serve the Santa Fe Avenue and Firestone Boulevard corridors which offer convenient pedestrian access into and out of the project site.

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[3] For example, refer to http://www.walkscore.com/, which generates a walkability score of approximately 71 ("Very Walkable") out of 100 for the project site. Walk Score calculates the walkability of an address by locating nearby stores, restaurants, schools, parks, etc. Walk Score measures how easy it is to live a car-lite lifestyle—not how pretty the area is for walking.

[4] Chapter 4 of the *Pedestrian Network Planning and Facilities Design Guide*, Government of New Zealand, from the www.ltsa.govt.nz website.

Sidewalks are provided along all key roadways in the project vicinity and pedestrian crosswalks are provided at the existing signalized intersections near the project site. Additionally, crosswalks are also proposed to be provided at the two new signalized driveways to facilitate pedestrian access across Santa Fe Avenue and Firestone Boulevard.

4.0 EXISTING CONDITIONS

4.1 Existing Street System

The local network of streets serving the proposed Firestone Educational Center project includes Santa Fe Avenue and Firestone Boulevard. Of the 31 study intersections selected for analysis, 27 intersections are currently traffic signal controlled. The existing roadway configurations and intersection controls at the 31 study intersections are displayed in ***Figure 4-1***.

4.1.1 *Roadway Classifications*

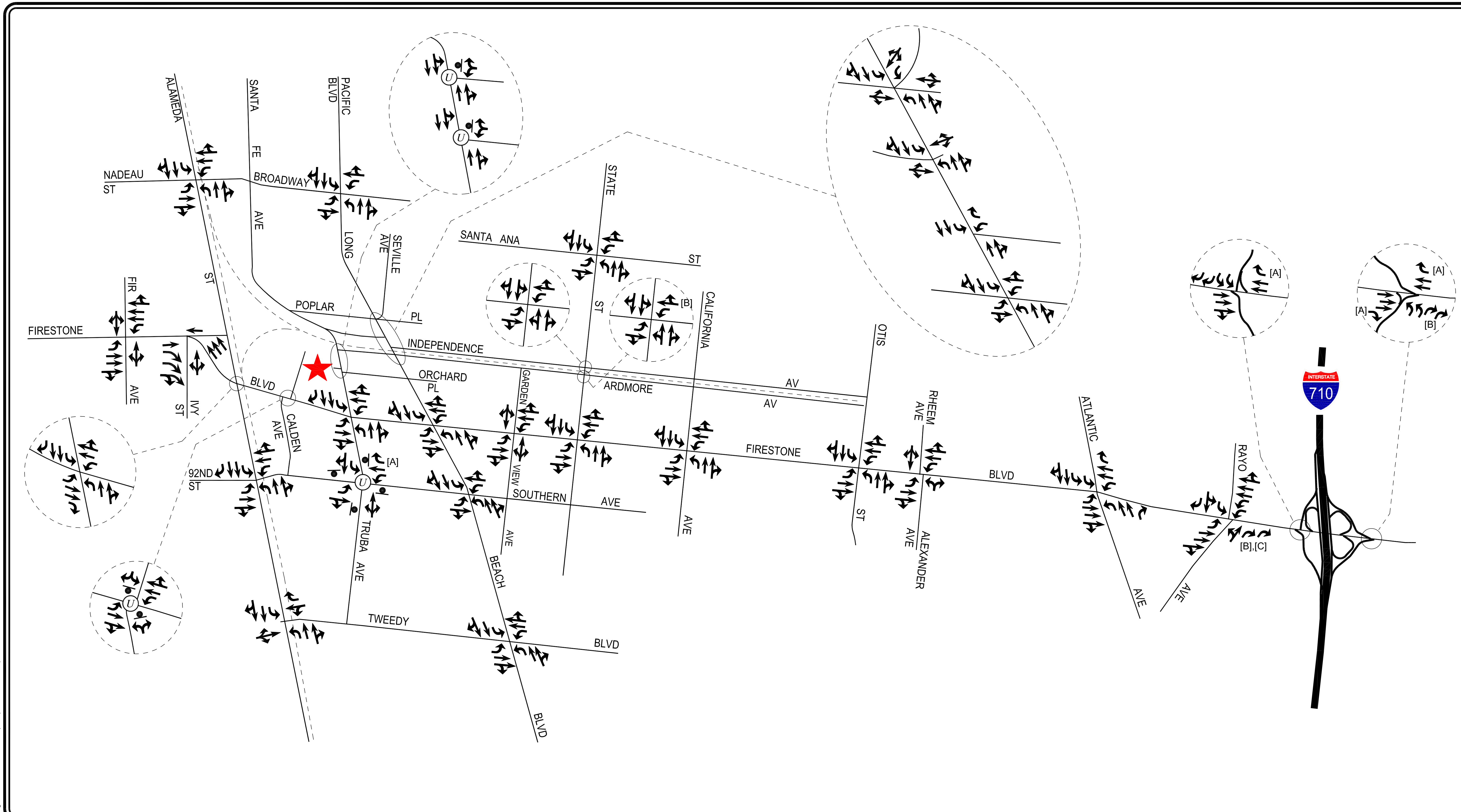
The City of South Gate utilizes the roadway categories recognized by regional, state and federal transportation agencies. There are four categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided roadways with the lowest capacity. The roadway categories are summarized as follows:

- *Freeways* are limited-access and high speed travel ways included in the state and federal highway systems. Their purpose is to carry regional through-traffic. Access is provided by interchanges with typical spacing of one mile or greater. No local access is provided to adjacent land uses. The I-105, I-710, and the I-110 freeways are located approximately two to three miles to the south, east, and west, respectively, of the project site.

- *Arterial* roadways are major streets that primarily serve through-traffic and provide access to abutting properties as a secondary function. Arterials are generally designed with two to six travel lanes and their major intersections are signalized. This roadway type is divided into two categories: primary and secondary arterials. Primary arterials are typically four-or-more lane roadways and serve both local and regional through-traffic. Secondary arterials are typically two-to-four lane streets that service local and commute traffic.

- *Collector* roadways are streets that provide access and traffic circulation within residential and non-residential (e.g., commercial and industrial) areas. Collector roadways connect local streets to arterials and are typically designed with two through travel lanes (i.e., one through travel lane in each direction) that may accommodate on-street parking. They may also provide access to abutting properties.

- *Local* roadways distribute traffic within a neighborhood, or similar adjacent neighborhoods, and are not intended for use as a through-street or a link between higher capacity facilities such as collector or arterial roadways. Local streets are fronted by residential uses and do not typically serve commercial uses.



NOT TO SCALE

PROJECT SITE

UNSIGNALIZED INTERSECTION

STOP SIGN

[A] FREE-FLOW MOVEMENT

[B] NO RIGHT-TURN ON RED

[C] OVERLAPPING PHASE

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 4-1

EXISTING ROADWAY CONFIGURATIONS AND INTERSECTION CONTROLS

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4.1.2 *Roadway Descriptions*

A review of the characteristics (e.g., street classification, number of travel lanes, etc.) of important roadways in the project site vicinity and study area is summarized in ***Table 4-1***. As indicated in *Table 4-1*, the important roadways within the project study area were inventoried on a segment basis in terms of the number of lanes provided, parking restrictions, posted speed limits, etc.

4.2 Existing Transit Services

4.2.1 *Existing Public Bus Transit Service*

Public bus transit service within the vicinity of the project study area is currently provided by the Los Angeles County Metropolitan Transportation Authority (Metro). A summary of the existing transit service including the transit routes, destinations and peak hour headways is presented in ***Table 4-2***. The existing public transit routes in the project study area are illustrated in ***Figure 4-2***.

4.2.2 *Existing Metro Blue Line*

The Metro Rail system is comprised of the Metro Blue, Green, Red, Purple, and Gold Lines. The project study area is currently served by the Metro Blue Line. The closest Metro Blue Line Station to the project site is the Firestone Station which is located approximately one mile to the west near the Graham Avenue/Firestone Boulevard intersection. Students, faculty and staff of the FEC project can utilize the Blue Line train service to access the site via a single transfer to existing bus/transit service along Firestone Boulevard or use alternative modes of transportation (e.g., bicycling and walking). The Metro Blue Line currently provides headway of 10 trains per hour in each direction during the weekday morning and afternoon peak commuter hours.

4.2.3 *ELAC-SGEC Shuttle Services*

As a supplement to the public bus transit service, ELAC operates an inter-campus shuttle that transfers students between the ELAC main campus in the City of Monterey Park and the existing SGEC satellite facility. The ELAC-SGEC shuttle operates Mondays through Thursdays with 18 daily round trips (i.e., nine shuttle trips each way). The first shuttle departs SGEC at 6:30 AM and arrives at ELAC at 7:05 AM. The last shuttle departs ELAC at 10:10 PM and arrives at SGEC at 10:35 PM. This free shuttle service is available to ELAC-SGEC students, staff, and faculty. Based on information provided by ELAC, the total recorded ridership for the Fall Semester of 2010 was over 24,000 one-way trips. It should be noted that due to budget cuts, this free shuttle service was cancelled in the Fall Semester of 2012. However, it has been reinstated since the Spring Semester of 2013.

4.3 Existing Pedestrian and Bicycle Facilities

Sidewalks are provided along all key roadways in the project vicinity and pedestrian crosswalks are provided at signalized intersections near the project site. Pedestrian access within the project vicinity is accommodated via clear pathways, well maintained sidewalks, and ambient light from

Table 4-1
EXISTING ROADWAY DESCRIPTIONS

Primary Street Segments	Classification	LANES NB/EB	LANES SB/WB	Median Types	Parking Restrictions NB/EB	Parking Restrictions SB/WB	Speed Limit
Alameda Street							
from Nadeau St to Firestone Blvd	Primary Arterial	2	2	DY	NPAT	NS 6:30a-8a	40
from Firestone Blvd to 92nd St/Southern Ave	Primary Arterial	2	2	DY	NPAT	NS 6:30a-8a	40
from 92nd St/Southern Ave to Tweedy Blvd	Primary Arterial	2	2	DY	NPAT	NSAT	40
Calden Avenue							
from Firestone Blvd to Southern Ave	Local	1	1	None	NP M-R 4-10p (permit), NP T 8a-3:30p	NP W 8a-3:30p	25
Santa Fe Avenue							
from Nadeau St to Ardmore Ave	Collector	1	1	DY/RM	PA	PA	35
from Ardmore Ave to Southern Ave	Collector	2	2	DY	NP W 3-8a, PA	NP T 8a-4:30p, PA	35
Truba Avenue							
from Southern Ave to Tweedy Blvd	Collector	1	1	None	NP T 8a-3:30p	PA / TANP 10p-6a nightly	35
Pacific Boulevard							
from Broadway to Poplar Pl	Primary Arterial	2	2	DY	PA	PA	35
Long Beach Boulevard							
from Poplar Pl to Tweedy Blvd	Primary Arterial	2	2	DY	2hr 7a-6p	2hr 7a-6p	35
State Street							
from Santa Ana St to Southern Ave	Secondary Arterial	2	2	DY	NP W 3-8a, 2hr 7a-6p	NP R 3-8a, 2hr 7a-6p	35
California Avenue							
from Santa Ana St to Southern Ave	Secondary Arterial	2	2	DY	PA	PA	35
Independence Avenue							
from Long Beach Blvd to Otis St	Collector	1	1	DY	NSAT	PA	35
Ardmore Avenue							
from Santa Fe Ave to Otis St	Collector	1	1	DY	PA	NSAT	35
Orchard Place							
from Santa Fe Ave to Mountain View Ave	Local	1	1	None	NSAT	NP W 3-8a	25
Firestone Boulevard							
from Elm St to Ivy St	Primary Arterial	3	3	DY/2LT	NS 7a-9a, 4p-6p, 1hr 9a-4p	NS 7a-9a, 4p-6p, 1hr 9a-4p	35
from Ivy St to Alameda St	Primary Arterial	3	3	DY	NS 7a-9a, 4p-6p, 1hr 9a-4p	NS 7a-9a, 4p-6p, 1hr 9a-4p	35
from Alameda St to Atlantic Ave	Primary Arterial	2	2	DY/2LT	NSAT / 2hr 9a-6p	NSAT / 2hr 9a-6p	35
from Atlantic Ave to Rayo Ave	Primary Arterial	3	3	DY/2LT	NP 6a-9a, 3p-6p, 2hr 9a-3p	NP 6a-9a, 3p-6p, 2hr 9a-3p	35
from Rayo Ave to Garfield Ave	Primary Arterial	3	3	DY	NSAT	NSAT	35
Southern Avenue							
from Alameda St to California Ave	Collector	1	1	DY	PA	NSAT	25

Table 4-1 (Continued)
EXISTING ROADWAY DESCRIPTIONS

Primary Street	Segments	Classification	LANES NB/EB	LANES SB/WB	Median Types	Parking Restrictions NB/EB	Parking Restrictions SB/WB	Speed Limit
Tweedy Avenue								
	from Alameda St to California Ave	Secondary Arterial	2	2	DY	PA	PA	30

Footnotes and Abbreviations:

Lanes
- # Number of lanes
- #/# Off peak hr # of lanes/Peak hr # of lanes
- x=>y Changed from x number of lanes to y number of lanes

Median Type
- DY Double Yellow
- RM Rasied Median
- 2LT 2way Left Turn pocket

Parking
- TANSAT Tow-Away No Stopping AnyTime
- NSAT No Stopping AnyTime
- NPAT No Parking AnyTime
- RC Red Curb
- NP No Parking
- MP Metered Parking
- / Change in Parking Restriction
- None No parking restrictions
- NS No Stopping
- PA Parking Available
- GC Green Curb
- TS Truck Speed - 25mph
- TANP Tow-Away No Parking

- Ex. Except
- M Monday
- T Tuesday
- W Wednesday
- R Thursday
- F Friday
- Sa Saturday
- S Sunday
- H Holiday

Table 4-2
EXISTING TRANSIT ROUTES [1]

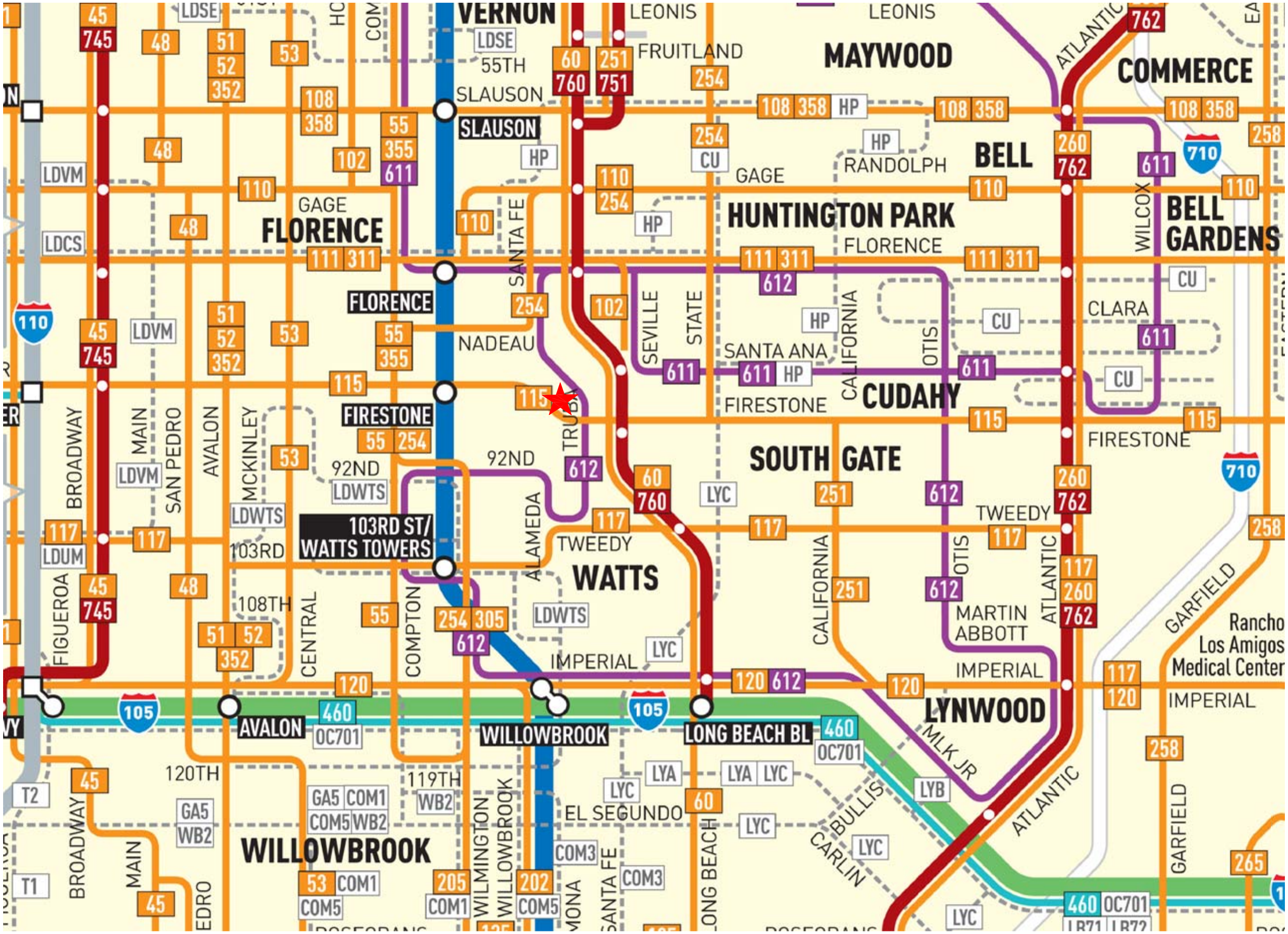
ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES/TRAINS DURING PEAK HOUR		
			DIR	AM	PM
Metro Route 60	Compton to Downtown Los Angeles via Lynwood, South Gate and Vernon.	Pacific Boulevard, Long Beach Boulevard, Broadway, Independence Avenue, Southern Avenue, Firestone Boulevard, Tweedy Boulevard	NB SB	5 5	5 6
Metro Route 115	Playa del Rey to Norwalk via Westchester, Inglewood, Los Angeles, Florence, South Gate, Downey.	Firestone Boulevard, Fir Avenue, Ivy Street, Alameda Street, Calden Avenue, Santa Fe Avenue, Long Beach Boulevard, Garden View Avenue, State Street, California Avenue, Otis Avenue, Alexander Avenue, Atlantic Avenue, Rayo Avenue	EB WB	6 5	7 5
Metro Route 117	LAX to Downey via Inglewood, Los Angeles, Watts, South Gate.	Tweedy Boulevard, Alameda Street, Long Beach Boulevard, State Street, California Avenue, Otis Avenue, Alexander Avenue, Atlantic Avenue	EB WB	3 3	3 3
Metro Route 251	Lynwood to Cypress Park via Huntington Park, Boyle Heights, Lincoln Park.	State Street, Santa Ana Street, Firestone Boulevard, California Avenue, Tweedy Boulevard	NB SB	3 3	3 3
Metro Route 254	Watts to Boyle Heights via Los Angeles, Huntington Park Vernon.	Santa Fe Avenue, Nadeau Street	NB SB	1 2	1 1
Metro Route 260	Compton to Altadena via Lynwood, Maywood, East Los Angeles, Alhambra, Pasadena.	Atlantic Avenue, Firestone Boulevard	NB SB	5 4	4 5
Metro Route 611	Cudahy to Maywood via Huntington Park, Florence, Los Angeles, Vernon.	Santa Ana Street, State Street	EB WB	2 2	2 2
Metro Route 612	Willowbrook to Lynwood via Watts, South Gate, Huntington Park, Bell.	Firestone Boulevard, Santa Fe Avenue, Tweedy Boulevard	EB WB	2 2	2 2

[1] Sources: Los Angeles County Metropolitan Transportation Authority (Metro) and the City of South Gate websites, 2013.

Table 4-2 (Continued)
EXISTING TRANSIT ROUTES [1]

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES/TRAINS DURING PEAK HOUR DIR	AM	PM
Metro Rapid 760	Lynwood to Downtown Los Angeles via South Gate, Huntington Park.	Pacific Boulevard, Santa Ana Street, Firestone Boulevard, Tweedy Boulevard, Long Beach Boulevard	NB SB	7 5	4 5
Metro Rapid 762	Compton to Pasadena via Lynwood, East Los Angeles, Alhambra	Atlantic Boulevard, Firestone Boulevard	NB SB	3 3	2 3
Metro Blue Line 801	Long Beach to 7th Street/Metro Center via Carson, Compton, Willowbrook, Watts, Florence, Los Angeles	Firestone Boulevard Station	NB SB	10 10	10 10
The Gate	Get Around Town Express - City of South Gate	Santa Fe Avenue, Firestone Boulevard, Ardmore Avenue, California Avenue, Southern Avenue, Atlantic Avenue, Tweedy Boulevard	WB	3	3
			Total	94	91

[1] Sources: Los Angeles County Metropolitan Transportation Authority (Metro) and the City of South Gate websites, 2013.



MAP SOURCE: METROPOLITAN TRANSPORTATION AUTHORITY (METRO) WEBSITE

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FIGURE 4-2
EXISTING PUBLIC TRANSIT ROUTES

2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

street lights for night time. It should be noted that no bicycle facilities (i.e., Class I, II or III facilities) are currently provided in the immediate vicinity of the project site. Refer to Section 11.1 of this report for a summary of the bicycle facilities as outlined in the Mobility Element of the City of South Gate General Plan 2035.

4.4 Existing Traffic Volumes

4.4.1 *Intersection Manual Traffic Counts*

Existing manual traffic counts of vehicular turning movements were conducted in late 2009/2010 by traffic count subconsultants at each of the 31 study intersections during the weekday morning (AM) and afternoon (PM) commuter periods to determine the peak hour traffic volumes. The manual traffic counts at the study intersections were conducted from 7:00 AM to 9:00 AM to determine the weekday AM peak commuter hour and from 4:00 PM to 6:00 PM to determine the weekday PM peak commuter hour. The traffic counts were conducted when the SGEC facility and local schools in the area were in session. Traffic volumes at the study intersections show the weekday morning and afternoon peak periods typically associated with peak hours in the metropolitan area.

A review of each of the traffic counts was conducted to determine the highest one-hour period of traffic volume for each time period surveyed, based on 15-minute increments (e.g., 7:00 AM to 8:00 AM, 7:15 AM to 8:15 AM, etc.). The resulting existing weekday AM and PM peak hour manual counts of turning vehicles at the 31 study intersections are summarized in ***Table 4-3***. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in ***Figures 4-3*** and ***4-4***, respectively. Summary data worksheets of the manual traffic counts of the study intersections are contained in ***Appendix A***.

It should be noted that as part of the proposed 2013 Firestone Educational Center Master Plan project, supplemental weekday AM and PM peak period manual traffic counts were conducted in late 2012 at the following five key study intersections in the more immediate project vicinity:

4. Alameda Street & Firestone Boulevard
7. Project Driveway-Calden Avenue & Firestone Boulevard
8. Santa Fe Avenue & Project Driveway-Ardmore Avenue
10. Santa Fe Avenue & Firestone Boulevard
17. Long Beach Boulevard & Firestone Boulevard

A comparative traffic volume review was conducted between the supplemental 2012 traffic counts and the previously conducted traffic count data at the five common study intersections. The resulting AM and PM peak hour traffic volume comparisons are summarized in ***Appendix Table A-1***. As shown in *Appendix Table A-1*, the previously conducted traffic count data were determined to be higher than the supplemental 2012 traffic counts at all five study intersections. Based on this review, it was determined that the previously conducted traffic count data remains

Table 4-3
EXISTING TRAFFIC VOLUMES [1]

NO.	INTERSECTION	DIR	AM PEAK HOUR BEGAN	AM PEAK HOUR VOLUME	PM PEAK HOUR BEGAN	PM PEAK HOUR VOLUME
1	Fir Avenue/	NB	7:15	185	5:00	131
	Firestone Boulevard	SB		232		115
	[2]	EB		964		1,372
		WB		1,038		908
2	Ivy Street-Manchester Avenue/	NB	7:00	26	5:00	45
	Firestone Boulevard	SB		50		113
	[2]	EB		1,013		1,475
		WB		1,007		798
3	Alameda Street/	NB	7:15	1,329	4:45	1,071
	Nadeau Street	SB		751		1,286
	[2]	EB		780		1,012
		WB		950		868
4	Alameda Street/	NB	7:15	1,192	5:00	1,085
	Firestone Boulevard	SB		839		1,194
	[2]	EB		885		1,316
		WB		1,342		955
5	Alameda Street/	NB	7:15	991	4:45	967
	92nd Street-Southern Avenue	SB		1,033		1,380
	[2]	EB		638		698
		WB		512		469
6	Alameda Street/	NB	7:15	964	5:00	997
	Tweedy Boulevard	SB		1,180		1,488
	[2]	EB		0		0
		WB		617		603
7	Project Driveway-Calden Avenue/	NB	7:15	143	5:00	124
	Firestone Boulevard	SB		20		57
	[2]	EB		844		1,340
		WB		1,447		1,051
8	Santa Fe Avenue/	NB	7:00	782	5:00	667
	Project Driveway-Ardmore Avenue	SB		495		872
	[3]	EB		0		0
		WB		225		119
9	Santa Fe Avenue/	NB	7:00	717	5:00	654
	Project Driveway-Orchard Place	SB		524		830
	[2]	EB		0		0
		WB		73		41
10	Santa Fe Avenue/	NB	7:15	662	5:00	562
	Firestone Boulevard	SB		647		851
	[2]	EB		971		1,503
		WB		1,496		1,022

[1] The supplemental 2012 traffic counts were reviewed and determined to be lower than the previously conducted traffic counts. Therefore, use of the prior traffic count data remain appropriate and conservative. Refer to report text for further discussion.
[2] Counts conducted by City Traffic Counters in Nov/Dec 2010.
[3] Counts conducted by National Data & Surveying Services in Nov 2009.

Table 4-3 (Continued)
EXISTING TRAFFIC VOLUMES [1]

NO.	INTERSECTION	DIR	AM PEAK HOUR BEGAN	AM PEAK HOUR VOLUME	PM PEAK HOUR BEGAN	PM PEAK HOUR VOLUME
11	Santa Fe Avenue-Truba Avenue/	NB	7:00	410	4:15	315
	Southern Avenue	SB		456		581
	[2]	EB		444		465
		WB		400		251
12	Pacific Boulevard/	NB	7:15	1,141	4:45	1,014
	Broadway	SB		463		936
	[2]	EB		344		512
		WB		287		252
13	Long Beach Boulevard	NB	7:15	1,137	4:45	1,181
	Poplar Place-Seville Avenue	SB		474		961
	[2]	EB		40		20
		WB		387		224
14	Long Beach Boulevard/	NB	7:15	1,079	4:45	1,107
	Independence Avenue (West Leg)	SB		776		1,125
	[2]	EB		89		119
		WB		24		37
15	Long Beach Boulevard/	NB	7:15	1,186	4:45	1,188
	Independence Avenue (East Leg)	SB		755		1,110
	[2]	EB		0		0
		WB		295		188
16	Long Beach Boulevard/	NB	7:15	1,051	4:45	1,146
	Ardmore Avenue	SB		952		1,223
	[2]	EB		162		218
		WB		207		110
17	Long Beach Boulevard/	NB	7:15	1,056	5:00	913
	Firestone Boulevard	SB		869		1,080
	[2]	EB		931		1,537
		WB		1,470		1,175
18	Long Beach Boulevard/	NB	7:15	1,135	4:00	960
	Southern Avenue	SB		786		916
	[2]	EB		364		491
		WB		196		114
19	Long Beach Boulevard/	NB	7:00	876	4:45	980
	Tweedy Boulevard	SB		972		954
	[2]	EB		771		663
		WB		873		666
20	Garden View Avenue/	NB	7:15	85	5:00	33
	Firestone Boulevard	SB		48		35
	[2]	EB		1,046		1,505
		WB		1,519		1,262

[1] The supplemental 2012 traffic counts were reviewed and determined to be lower than the previously conducted traffic counts. Therefore, use of the prior traffic count data remain appropriate and conservative. Refer to report text for further discussion.
[2] Counts conducted by City Traffic Counters in Nov/Dec 2010.
[3] Counts conducted by National Data & Surveying Services in Nov 2009.

Table 4-3 (Continued)
EXISTING TRAFFIC VOLUMES [1]

NO.	INTERSECTION	DIR	AM PEAK HOUR BEGAN	AM PEAK HOUR VOLUME	PM PEAK HOUR BEGAN	PM PEAK HOUR VOLUME
21	State Street/	NB	7:15	677	4:45	614
	Santa Ana Street	SB		609		949
	[3]	EB		389		470
		WB		449		485
22	State Street/	NB	7:15	701	5:00	612
	Independence Avenue	SB		640		727
	[2]	EB		180		157
		WB		195		138
23	State Street/	NB	7:15	660	5:00	596
	Ardmore Avenue	SB		750		761
	[2]	EB		116		138
		WB		186		111
24	State Street/	NB	7:00	553	5:00	557
	Firestone Boulevard	SB		616		653
	[2]	EB		1,158		1,651
		WB		1,436		1,331
25	California Avenue/	NB	7:00	743	4:45	595
	Firestone Boulevard	SB		671		642
	[3]	EB		1,190		1,490
		WB		1,383		1,229
26	Otis Street/	NB	7:00	650	5:00	462
	Firestone Boulevard	SB		767		873
	[3]	EB		1,358		1,479
		WB		1,482		1,335
27	Rheem Avenue-Alexander Avenue/	NB	7:00	420	4:30	160
	Firestone Boulevard	SB		15		66
	[3]	EB		1,530		1,641
		WB		1,197		1,347
28	Atlantic Avenue/	NB	7:15	727	5:00	685
	Firestone Boulevard	SB		1,125		1,308
	[2]	EB		1,505		1,643
		WB		1,630		1,656
29	Rayo Avenue/	NB	7:00	677	4:30	672
	Firestone Boulevard	SB		25		106
	[2]	EB		2,069		2,146
		WB		2,117		2,228
30	I-710 Southbound Ramps/	NB	7:00	0	4:45	0
	Firestone Boulevard	SB		736		910
	[3]	EB		2,738		2,867
		WB		2,352		2,535

[1] The supplemental 2012 traffic counts were reviewed and determined to be lower than the previously conducted traffic counts. Therefore, use of the prior traffic count data remain appropriate and conservative. Refer to report text for further discussion.
[2] Counts conducted by City Traffic Counters in Nov/Dec 2010.
[3] Counts conducted by National Data & Surveying Services in Nov 2009.

Table 4-3 (Continued)
EXISTING TRAFFIC VOLUMES [1]

NO.	INTERSECTION	DIR	AM PEAK HOUR		PM PEAK HOUR	
			BEGAN	VOLUME	BEGAN	VOLUME
31	I-710 Northbound Ramps/	NB	7:15	544	4:45	1,270
	Firestone Boulevard	SB		0		0
	[3]	EB		2,144		2,654
		WB		2,522		2,283

[1] The supplemental 2012 traffic counts were reviewed and determined to be lower than the previously conducted traffic counts. Therefore, use of the prior traffic count data remain appropriate and conservative. Refer to report text for further discussion.
[2] Counts conducted by City Traffic Counters in Nov/Dec 2010.
[3] Counts conducted by National Data & Surveying Services in Nov 2009.

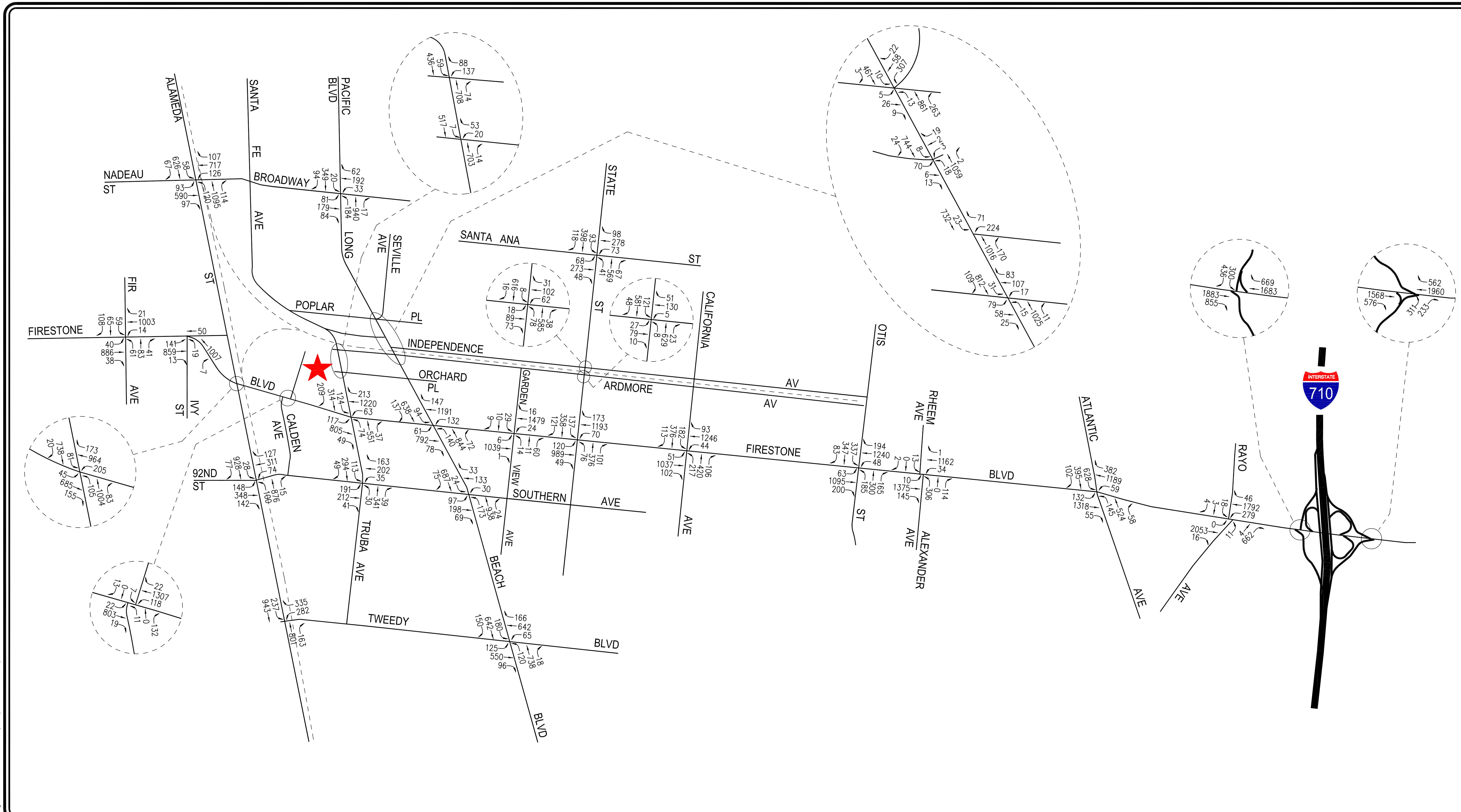

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FIGURE 4-3
EXISTING TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR
2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

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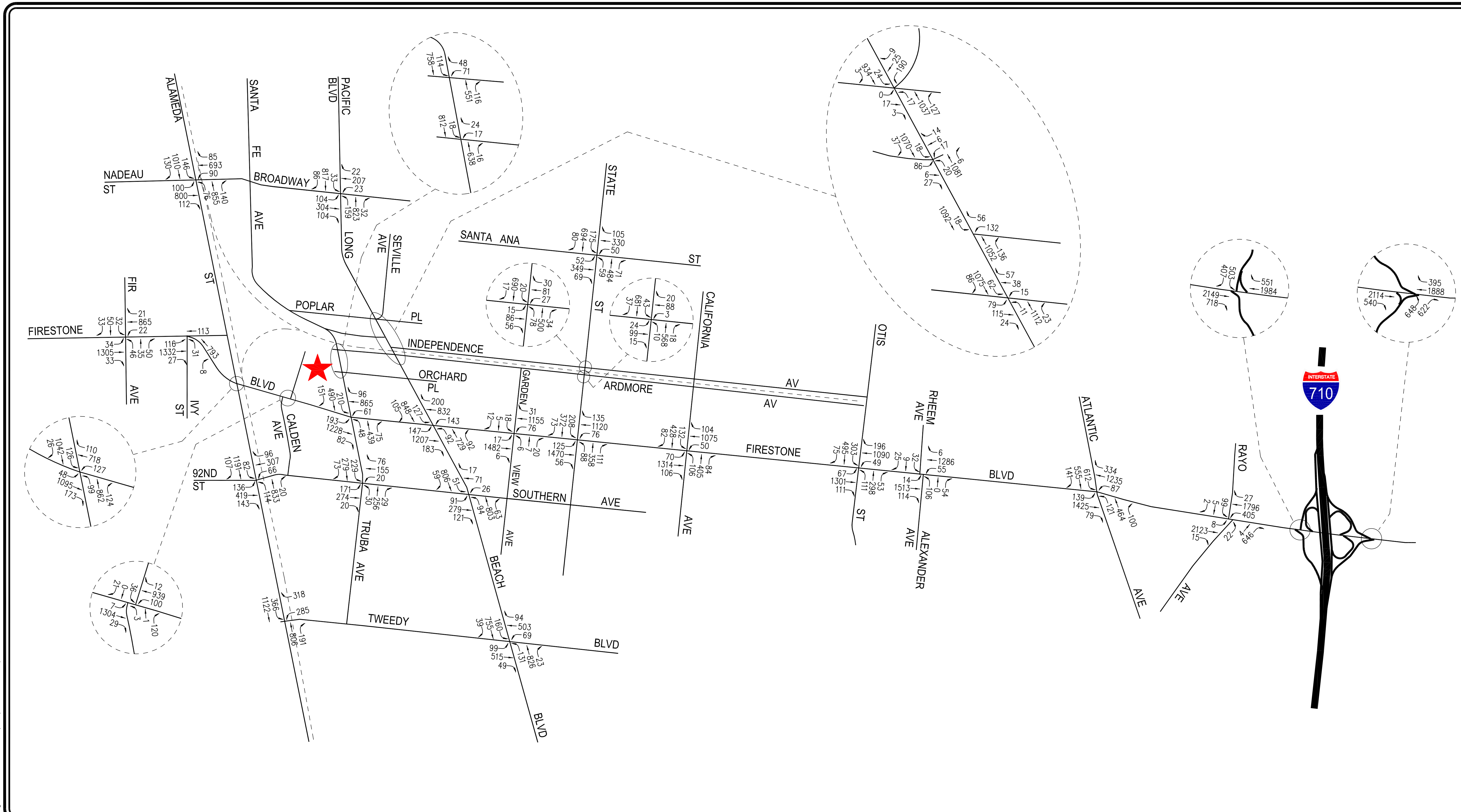

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FIGURE 4-4
EXISTING TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR
2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

valid and is conservative. Therefore, for purposes of establishing existing (baseline) traffic conditions the prior traffic data has been incorporated into the analysis. Summary data worksheets of the supplemental manual traffic counts of the five common study intersections are also contained in *Appendix A* for reference.

4.5 Existing Intersection Operating Conditions

Existing AM and PM peak hour operating conditions for the 31 key study intersections were evaluated using the Intersection Capacity Utilization (ICU) methodology for signalized intersections and the methodologies outlined in Chapters 19 and 20 of the *HCM2010 Highway Capacity Manual* (HCM2010) for unsignalized intersections, based on City of South Gate traffic study guidelines.

4.5.1 *Intersection Capacity Utilization Method of Analysis*

In conformance with the City of South Gate and Los Angeles County Congestion Management Program (CMP) requirements, existing weekday AM and PM peak hour operating conditions for the key signalized study intersections were evaluated using the Intersection Capacity Utilization (ICU) method. The ICU methodology is intended for signalized intersection analyses and estimates the volume-to-capacity (*v/c*) relationship for an intersection based on the individual *v/c* ratios for key conflicting traffic movements.

The ICU numerical value represents the percent signal (green) time, and thus capacity, required by existing and/or future traffic. The ICU value is the sum of the critical volume to capacity ratios at an intersection; it is not intended to be indicative of the LOS of each of the individual turning movements. It should be noted that the ICU methodology assumes uniform traffic distribution per intersection approach lane and optimal signal timing. The ICU value translates to a LOS estimate, which is a relative measure of the intersection performance. The six qualitative categories of Level of Service have been defined along with the corresponding ICU value range and are shown in ***Table 4-4***.

Pursuant to Los Angeles County CMP requirements, the ICU calculations use a lane capacity of 1,600 vehicles per hour (vph) for left-turn, through, and right-turn lanes, and a dual left-turn capacity of 2,880 vph. Additionally, a clearance adjustment factor of 0.10 was added to each Level of Service (LOS) calculation.

TABLE 4-4

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level of Service (LOS)	Intersection Capacity Utilization Value (V/C)	Level of Service Description
A	≤ 0.600	EXCELLENT. No vehicle waits longer than one red light, and no approach phase is fully used.
B	0.601 – 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 – 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 – 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 – 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Potentially very long delays with continuously increasing queue lengths.

4.5.2 *Highway Capacity Manual Method of Analysis (Unsignalized Intersections)*

The HCM2010 unsignalized methodologies for two way stop-controlled (TWSC) and all-way stop-controlled (AWSC) intersections were utilized for the analysis of the unsignalized intersections. These methodologies estimate the average control delay for each of the subject movements and determine the level of service for each constrained movement. Average control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. The overall average control delay is measured in seconds per vehicle, and the level of service is then calculated for AWSC intersections as a whole. For two-way stop-controlled intersections, it should be noted that level of service is not defined for the major-street approaches or the overall TWSC intersection because major-street movements with no delays typically result in a weighted average delay that is extremely low. The six qualitative categories of Level of Service have been defined along with the corresponding HCM control delay value range, as shown in ***Table 4-5***.

TABLE 4-5
LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS[5]

Level of Service (LOS)	Highway Capacity Manual Delay Value (sec/veh)	Level of Service Description
A	≤ 10.0	Little or no delay
B	> 10.0 and ≤ 15.0	Short traffic delays
C	> 15.0 and ≤ 25.0	Average traffic delays
D	> 25.0 and ≤ 35.0	Long traffic delays
E	> 35.0 and ≤ 50.0	Very long traffic delays
F	> 50.0	Severe congestion

4.5.3 *Existing Level of Service Results*

The existing peak hour level of service calculations for the 31 key study intersections based on existing traffic volumes and current street geometry is summarized in ***Table 4-6***. Review of *Table 4-6* indicates that 23 of the 31 key study intersections are currently operating at acceptable Levels of Service (i.e., LOS D or better) during the weekday AM and PM peak hours. The following study intersections are currently operating at LOS E or F during the peak hour(s) shown below under existing conditions:

- Int. No. 4: Alameda Street/Firestone Boulevard

  PM Peak Hour: *v/c* = 0.909, LOS E

- Int. No. 7: Project Driveway-Calden Avenue/Firestone Boulevard

  AM Peak Hour: *Delay* > 50.0 seconds, LOS F

  PM Peak Hour: *Delay* > 50.0 seconds, LOS F

- Int. No. 8: Santa Fe Avenue/Project Driveway-Ardmore Avenue

  AM Peak Hour: *Delay* > 50.0 seconds, LOS F

  PM Peak Hour: *Delay* = 37.7 seconds, LOS E

[5] Source: *HCM2010 Highway Capacity Manual*, Chapter 19 (Two-Way Stop-Controlled Intersections) and Chapter 20 (All-Way Stop-Controlled Intersections).

Table 4-6
EXISTING SUMMARY OF VOLUME TO CAPACITY RATIOS
DELAY AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2012 EXISTING V/C or Delay	LOS
1	Fir Avenue/ Firestone Boulevard [a]	AM PM	0.521 0.494	A A
2	Ivy Street-Manchester Avenue/ Firestone Boulevard [a]	AM PM	0.414 0.484	A A
3	Alameda Street/ Nadeau Street [a]	AM PM	0.830 0.845	D D
4	Alameda Street/ Firestone Boulevard [a] [b]	AM PM	0.874 0.909	D E
5	Alameda Street/ 92nd Street-Southern Avenue [a] [b]	AM PM	0.716 0.847	C D
6	Alameda Street/ Tweedy Boulevard [a] [b]	AM PM	0.759 0.839	C D
7	Project Driveway-Calden Avenue/ Firestone Boulevard [b] [c]	AM PM	> 50.0 > 50.0	F F
8	Santa Fe Avenue/ Project Driveway-Ardmore Avenue [b] [c]	AM PM	> 50.0 37.7	F E
9	Santa Fe Avenue/ Project Driveway-Orchard Place [b] [c]	AM PM	14.2 16.4	B C
10	Santa Fe Avenue/ Firestone Boulevard [b]	AM PM	0.882 0.839	D D
11	Santa Fe Avenue-Truba Avenue/ Southern Avenue [b] [d]	AM PM	29.87 21.98	D C

Table 4-6 (Continued)
EXISTING SUMMARY OF VOLUME TO CAPACITY RATIOS
DELAY AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2012 EXISTING V/C or Delay	LOS
12	Pacific Boulevard/ Broadway [a]	AM PM	0.621 0.751	B C
13	Long Beach Boulevard/ Poplar Place-Seville Avenue [b]	AM PM	0.603 0.561	B A
14	Long Beach Boulevard/ Independence Avenue (West Leg) [b]	AM PM	0.495 0.543	A A
15	Long Beach Boulevard/ Independence Avenue (East Leg) [b]	AM PM	0.625 0.565	B A
16	Long Beach Boulevard/ Ardmore Avenue [b]	AM PM	0.611 0.602	B B
17	Long Beach Boulevard/ Firestone Boulevard [b]	AM PM	0.901 0.979	E E
18	Long Beach Boulevard/ Southern Avenue [b]	AM PM	0.632 0.695	B B
19	Long Beach Boulevard/ Tweedy Boulevard [b]	AM PM	0.779 0.714	C C
20	Garden View Avenue/ Firestone Boulevard [b]	AM PM	0.642 0.644	B B
21	State Street/ Santa Ana Street [b]	AM PM	0.634 0.687	B B
22	State Street/ Independence Avenue [b]	AM PM	0.659 0.624	B B

Table 4-6 (Continued)
EXISTING SUMMARY OF VOLUME TO CAPACITY RATIOS
DELAY AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2012 EXISTING V/C or Delay	LOS
23	State Street/ Ardmore Avenue [b]	AM PM	0.671 0.607	B B
24	State Street/ Firestone Boulevard [b]	AM PM	0.837 0.901	D E
25	California Avenue/ Firestone Boulevard [b]	AM PM	0.839 0.810	D D
26	Otis Street/ Firestone Boulevard [b]	AM PM	0.943 0.871	E D
27	Rheem Avenue-Alexander Avenue/ Firestone Boulevard [b]	AM PM	0.797 0.750	C C
28	Atlantic Avenue/ Firestone Boulevard [b]	AM PM	0.936 0.930	E E
29	Rayo Avenue/ Firestone Boulevard [b]	AM PM	0.744 0.780	C C
30	I-710 Southbound Ramps/ Firestone Boulevard [b]	AM PM	0.807 0.895	D D
31	I-710 Northbound Ramps/ Firestone Boulevard [b]	AM PM	0.820 0.915	D E

[a] County of Los Angeles Intersection.
[b] City of South Gate Intersection.
[c] Two-Way Stop-Controlled Intersection. Reported values represent the delays associated with the most constrained approach of the intersection.
[d] All-Way Stop-Controlled Intersection.

- Int. No. 17: Long Beach Boulevard/Firestone Boulevard

  AM Peak Hour: *v/c* = 0.901, LOS E

  PM Peak Hour: *v/c* = 0.979, LOS E

- Int. No. 24: State Street/Firestone Boulevard

  PM Peak Hour: *v/c* = 0.901, LOS E

- Int. No. 26: Otis Street/Firestone Boulevard

  AM Peak Hour: *v/c* = 0.943, LOS E

- Int. No. 28: Atlantic Avenue/Firestone Boulevard

  AM Peak Hour: *v/c* = 0.936, LOS E

  PM Peak Hour: *v/c* = 0.930, LOS E

- Int. No. 31: I-710 Northbound Ramps/Firestone Boulevard

  PM Peak Hour: *v/c* = 0.915, LOS E

The ICU and HCM data worksheets for the 31 analyzed intersections for the weekday AM and PM peak hours are contained in ***Appendix B***.

5.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the 2013 Firestone Educational Center project, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the proposed project is isolated by comparing operational (i.e., LOS) conditions at selected key intersections using expected future traffic volumes with and without forecast project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated and the significance of the project's impacts identified.

5.1 Project Traffic Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. As discussed in Section 2.4, the proposed Firestone Educational Center facility is planned to accommodate a maximum student enrollment of 9,000 students.

- *Firestone Educational Center Component*

  In preparing vehicular trip generation forecasts for development projects, it is common for traffic engineers to consult trip rates published in the ITE *Trip Generation Manual*[6] publication. The ITE manual contains trip rates for a variety of land uses (including office buildings, shopping centers, universities, etc.), which have been derived based on traffic counts conducted at existing sites. However, the traffic count data submitted to ITE is for free-standing sites generally located in suburban locations, which likely do not reflect the trip generation characteristics for projects located in urban areas such as the City of South Gate. Thus, the trip rates provided in the ITE *Trip Generation Manual* publication (derived from traffic counts at

[6] Institute of Transportation Engineers *Trip Generation Manual*, 9th Edition, 2012.

suburban locations) may substantially overstate the trip generation potential of projects such as the proposed Firestone Educational Center project.

As stated on page 1 of the ITE *Trip Generation Manual, 9th Edition, User's Guide and Handbook*: "Data were primarily collected at suburban locations having little or no transit service, nearby pedestrian amenities, or travel demand management (TDM) programs. At specific sites, the user may wish to modify trip generation rates presented in this document to reflect the presence of public transportation service, ridesharing, or other TDM measures; enhanced pedestrian and bicycle trip-making opportunities; or other special characteristics of the site or surrounding area. When practical, the user is encouraged to supplement the data in this document with local data that have been collected at similar sites." The area adjacent to the project site currently provides public transportation service and the existing SGEC provides shuttle service to further reduce vehicle trips between the main campus and SGEC, however during the conduct of site-specific trip generation surveys the shuttle service had been suspended due to budget constraints. Traffic volumes expected to be generated by the Firestone Educational Center project component were based upon empirical rates derived from weekday manual traffic counts conducted at the existing South Gate Education Center (SGEC) facility. In addition, it is important to note that the project is being designed to enhance overall pedestrian and bicycle connectivity with the surrounding regional and local transportation network/system.

The manual traffic counts were conducted at the existing SGEC site access driveways during the Fall 2012 school session during the weekday AM and PM peak time periods (i.e., 7:00 AM to 9:00 AM, and 4:00 PM to 6:00 PM). Based on coordination with the City of South Gate, the manual traffic counts were conducted during a typical Tuesday condition and a typical Thursday condition. Wednesday surveys were rejected by the City due to on-street parking restrictions along the west side of Calden Avenue. It is important to note that observations of school-related trips utilizing on-street public parking near the SGEC facility (i.e., along both sides of Calden Avenue, Beaudine Avenue, Firestone Plaza, Glenwood Place, and Southern Avenue) were included in the manual traffic counts so as to capture AM and PM peak period trip generation associated with students, faculty and/or staff who were observed to park on-street versus parking on-site. Furthermore, the manual traffic counts also included the site access driveways of the two remote parking lots located at the northeast and northwest corners of the Calden Avenue/Southern Avenue intersection. Summaries of the existing SGEC peak period manual driveway traffic counts conducted during the two weekday conditions are provided in ***Appendix C***.

Based on student attendance information provided by LACCD, the existing SGEC facility typically experiences peak student attendance on Wednesdays. As a result, the traffic count data compiled for Tuesday/Thursday conditions were reviewed and adjusted upward accordingly in order to develop Firestone Educational Center-specific trip generation rates for the weekday AM and PM peak hours, as well as on a daily basis. The following weekday trip generation rates for the Firestone Educational Center were developed based on existing traffic characteristics observed at the SGEC facility and adjusted to reflect typical peak day conditions:

- Weekday AM Peak Hour Trip Rate: 0.079 trips per student (76% inbound and 24% outbound)

- Weekday PM Peak Hour Trip Rate: 0.066 trips per student (56% inbound and 44% outbound)

- Weekday Daily Trip Rate: 0.790 trips per student (50% inbound and 50% outbound)

As discussed previously, the free inter-campus shuttle service provided between the ELAC main campus and the existing SGEC facility was cancelled in the Fall Semester of 2012 due to budget cuts. As a result, the above SGEC trip rates (developed on a per student basis) do not reflect any trip reductions due to the free shuttle service which has since been reinstated in the Spring Semester of 2013. In addition, based on information provided by LACCD, approximately 53% of the existing 4,912 SGEC students attend all their classes at the existing SGEC facility only while approximately 47% of the existing SGEC students attend classes at both the SGEC facility as well as other ELAC locations. Therefore, due to the satellite nature of the existing and proposed facility, the above trip rates are recommended for use in the determination of the 2013 Firestone Educational Center project traffic generation. These rates would not be appropriate for use in developing trip generation forecasts for the ELAC main campus or other junior/community college main campuses.

As college satellite campus trip generation rates are not specifically provided in the ITE *Trip Generation Manual* publication, a review was conducted of the ITE Land Use Code 540, Junior/Community College trip generation rates. On a comparative basis, the observed SGEC trip rates are 34%, 45% and 36% lower than the applicable ITE Junior/Community College trip rates for the AM peak hour, PM peak hour, and daily conditions, respectively. This difference in the observed rates versus the ITE rates is representative of the satellite nature of the project, the urban location of SGEC which includes public transit service, as well as existing pedestrian and bicycle trip-making opportunities provided at the facility and surrounding areas.

- *Existing Uses To Be Removed/Vacated*

  The project trip generation forecasts also include trip generation credits for both the existing SGEC (to be vacated) and the existing warehouse Building 4 which will be demolished in order to accommodate the proposed project. As stated above, traffic volume forecasts for the existing SGEC were based on driveway traffic counts and on-street observations conducted at the SGEC facility. Traffic volume forecasts for the warehouse use trip generation credit were developed based on the AM and PM peak period traffic counts conducted at the existing project driveway located along the north side of Firestone Boulevard (just east of Calden Avenue) and the two existing project driveways located along the west side of Santa Fe Avenue (between Orchard Place and Laurel Place). Trip rates per thousand square feet of floor area derived from the currently occupied floor area in Buildings 1, 3, and 4 were then subsequently applied to the floor area of Building 4 to determine the existing use trip generation credit associated with Building 4.

By comparing the trip rates provided in the ITE *Trip Generation Manual* publication (ITE Land Use Code 150, Warehousing) with the observed (derived) warehouse trip rates, it can be concluded that the observed trip rates are 49%, 36%, and 43% lower than the applicable ITE trip rates for the AM peak hour, PM peak hour, and daily conditions, respectively. The difference in the observed rates versus the ITE rates is likely attributable to the current economy and the urban context of the site. As a result, use of the observed trip rates in general will result in a more conservative (lower) trip generation credit for the warehouse use.

The traffic generation forecast for the 2013 Firestone Educational Center project is summarized in ***Table 5–1***. As presented in *Table 5–1*, the proposed project is expected to generate 289 net new vehicle trips (225 inbound trips and 64 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 224 net new vehicle trips (141 inbound trips and 83 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 2,780 net new daily trip ends during a typical weekday (1,390 inbound trips and 1,390 outbound trips).

5.2 Project Traffic Distribution and Assignment

Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic corridors (i.e., Firestone Boulevard, Santa Fe Avenue);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Ingress/egress availability at the project site (existing and future); and
- Existing South Gate Education Center student population zip code data.

The forecast project traffic distribution percentages at the 31 study intersections are displayed in ***Figures 5-1*** and ***5-2***, respectively, for the proposed Firestone Educational Center and the existing South Gate Education Center which will be vacated. The forecast project traffic distribution

Table 5-1
PROJECT TRIP GENERATION

LAND USE	SIZE	DAILY TRIP ENDS [1] VOLUMES	AM PEAK HOUR VOLUMES [1] IN	OUT	TOTAL	PM PEAK HOUR VOLUMES [1] IN	OUT	TOTAL
Proposed Project								
Firestone Educational Center [2]	9,000 Students	7,110	540	171	711	333	261	594
Existing Uses to be Removed/Vacated								
Existing South Gate Education Center [3]	(4,912) Students	(3,880)	(293)	(95)	(388)	(183)	(142)	(325)
Warehouse (Building 4) [4]	(220,550) GSF	(450)	(22)	(12)	(34)	(9)	(36)	(45)
Subtotal		(4,330)	(315)	(107)	(422)	(192)	(178)	(370)
NET INCREASE		**2,780**	**225**	**64**	**289**	**141**	**83**	**224**

Notes:

[1] Trips are one-way traffic movements, entering or leaving.

[2] Traffic volume forecasts for the proposed project were developed based on the AM and PM peak period traffic counts conducted at the existing South Gate Education Center located across from the project site at 2340 Firestone Boulevard (with 4,912 students). The traffic counts were conducted on Tuesday, November 13, 2012 and Thursday, November 15, 2012 from 7:00 to 9:00 am and from 4:00 to 6:00 pm and also included observations of nearby on-street usage as well as the driveways at the two remote parking lots near Southern Avenue. The traffic counts were then adjusted upward to reflect a typical peak attendance day (i.e., occurs on Wednesdays). Daily trips are calculated based on the assumption that the number of peak hour (AM) trips represents 10% of the daily traffic volumes. Refer to Appendix C for the detail traffic count data collection. Thus, the following trip generation rates are determined for the Firestone Educational Center:
- Daily Trip Rate: 0.790 trips/student; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.079 trips/student; 76% inbound/24% outbound
- PM Peak Hour Trip Rate: 0.066 trips/student; 56% inbound/44% outbound

[3] Based on driveway and on-street traffic counts conducted at the existing South Gate Education Center (see also footnote [2]).

[4] Building 4 is proposed to be demolished as part of the proposed project. Traffic volume forecasts were developed based on the AM and PM peak period traffic counts conducted at the existing site driveways serving the tenants in Buildings 1, 3, and 4 (i.e., located on the north side of Firestone Boulevard and the west side of Santa Fe Avenue). The traffic counts were conducted on a typical weekday from 7:00 to 9:00 am and from 4:00 to 6:00 pm. Based on tenant information provided by the project applicant, a total of 504,878 square feet of floor area is currently leased/occupied. Daily trips are calculated based on the assumption that the number of peak hour (PM) trips represents 10% of the daily traffic volumes. Refer to Appendix C for the detail traffic count data collection. Thus, based on the current building occupancy, the following trip generation rates are determined for warehousing use:
- Daily Trip Rate: 2.040 trips/1,000 square feet; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.153 trips/1,000 square feet; 66% inbound/34% outbound
- PM Peak Hour Trip Rate: 0.204 trips/1,000 square feet; 20% inbound/80% outbound

★ PROJECT SITE

N

NOT TO SCALE

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 5-1

PROJECT TRIP DISTRIBUTION

PROPOSED FIRESTONE EDUCATION CENTER

2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

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PROJECT SITE

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FIGURE 5-2
PROJECT TRIP DISTRIBUTION
EXISTING SOUTH GATE EDUCATION CENTER
2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

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percentages at the 31 study intersections are displayed in ***Figure 5-3*** for the existing Building 4 warehouse component which will be demolished.

The forecast net new weekday AM and PM peak hour project traffic volumes at the study intersections are presented in ***Figures 5-4*** and ***5-5***, respectively. The net new project traffic volume assignments presented in *Figures 5-4* and *5-5* reflect the traffic distribution characteristics shown in *Figures 5-1* to *5-3*, the project traffic generation forecasts presented in *Table 5-1*, and the existing and proposed site generation and access characteristics.

PROJECT SITE

NOT TO SCALE

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FIGURE 5-3
PROJECT TRIP DISTRIBUTION
EXISTING WAREHOUSE USE

2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

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PROJECT SITE

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FIGURE 5-4

NET NEW PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

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PROJECT SITE

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FIGURE 5-5

NET NEW PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

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6.0 FUTURE TRAFFIC CONDITIONS

The forecast of future pre-project conditions was prepared in accordance with procedures outlined in Section 15130 of the California Environmental Quality Act (CEQA) Guidelines. Specifically, the CEQA Guidelines provides two options for developing the future traffic volume forecast:

> "(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or
>
> (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency."

Accordingly, the traffic analysis provides a highly conservative estimate of future pre-project traffic volumes as it incorporates both the "A" and "B" options outlined in the CEQA Guidelines for purposes of developing the forecast. In general, a review of cumulative impacts must address approved related projects under construction, approved related projects not yet under construction, and unapproved projects under environmental review with related impacts or which result in significant cumulative impacts.

In addition, the related projects analysis also includes potential redevelopment of the adjacent HON site in which a formal planning application has not yet been filed with the City of South Gate. This related project was considered since conceptual site plans have previously been prepared for the site. It was therefore concluded that future development on the site is "reasonably foreseeable". Land use information for the potential redevelopment of the HON site was obtained based on initial coordination between LACCD and the potential HON developer and while it is considered to be speculative in the short term, it has been considered as part of the year 2031 future cumulative analysis conditions. Furthermore, this traffic impact study conservatively assumes traffic associated with the potential redevelopment of the HON site in the cumulative analysis conditions, but does not include any potential mitigation measures that are likely to be required for the HON redevelopment project (except for its main project access driveway on Firestone Boulevard, as discussed in the following paragraph).

Pursuant to the Conditions of Approval of the nearby Calden Court Apartments project, a traffic signal has been approved for installation at the intersection of Calden Avenue and Firestone Boulevard. In addition, it is assumed that if and when the HON site is redeveloped in the long-term conditions the City will require the HON project Applicant to tie into this intersection and align the access point directly opposite Calden Avenue. As such, the HON project Applicant would be required to construct the fourth leg of the intersection (i.e., the north leg) and modify the traffic signal accordingly. The intersection would accommodate all turning movements at all four approaches. In this scenario, the necessary right-of-way is assumed to be dedicated by the HON project Applicant and that three exiting southbound travel lanes (i.e., one left-turn only lane, one combination left/through lane and one right-turn only lane) would be provided at the intersection. The signal is also assumed to provide overlap traffic signal phasing for the eastbound left-turn traffic movement to be operated concurrently with the southbound (exiting driveway) right-turn traffic movement in order to better facilitate the anticipated future traffic volumes to/from the HON site as well as along the Firestone Boulevard corridor. The above measures therefore are appropriately reflected in this traffic study under the year 2031 analysis conditions. In addition, consistent with the other study intersections, the General Plan 2035 Mobility Element improvements (i.e., three through travel lanes in both the eastbound and westbound directions along Firestone Boulevard) have not been assumed at this location in the year 2031 analysis conditions. It is anticipated that the City-approved signalization of the Calden Avenue/Firestone Boulevard intersection and the expected operating conditions would further improve when the General Plan improvements are completed and implemented. Further discussion of the City of South Gate General Plan 2035 is provided in Section 11.1.

6.1 Ambient Traffic Growth

Horizon year, background traffic growth estimates have been calculated by using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown related projects in the study area, as well as account for typical growth in traffic volumes due to the development of projects outside the study area. The existing traffic volumes were increased at an annual rate of 0.85 percent (0.85%) per year to the year 2031 (i.e., the anticipated year where the proposed maximum of 9,000 student enrollment will be attained). The ambient growth factor was based on review of the background traffic growth estimates for South Gate (included as part of Regional Statistical Area No. 21) published in the *2010 Congestion Management Program*, which indicate that existing traffic volumes would be expected to increase at an annual rate of approximately 0.85% between years 2010 and 2030. Therefore, use of the 0.85% annual growth factor is appropriate in the forecast of future traffic volumes in the area. Further, it is noted that the CMP manual's traffic growth rate is intended to anticipate future traffic generated by development projects in the project vicinity. Thus, the inclusion in this traffic analysis of both a forecast of traffic generated by known related projects plus the use of an ambient traffic growth factor based on CMP traffic model data results in a conservative estimate of future traffic volumes at the study intersections.

6.2 Related Projects Traffic Characteristics

A forecast of on-street traffic conditions prior to occupancy of the project was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area. With this information, the potential impact of the project can be evaluated within the context of the cumulative impact of all ongoing development. The list of related projects was based on research conducted at the Cities of South Gate, Lynwood, Downey, Huntington Park, Los Angeles Departments of Transportation and Planning, the County of Los

Angeles, as well as recently approved traffic impact analysis reports prepared for projects in the vicinity of the project. The related projects research was conducted in December 2012, coinciding with the issuance of the Notice of Preparation by the Lead Agency. However, based on additional information provided by the City of South Gate in May 2013, the related projects list has been updated so as to include additional development projects in the project vicinity.

It should be noted that at the time when the traffic counts were conducted at the study intersections in late 2010, a total of 320,397 square feet of Buildings 1, 3, and 4 were occupied. As a result, the remaining 722,473 square feet of vacant floor areas associated with Buildings 1, 3, and 4 were assumed to be re-occupied as potential warehousing use in the future and are thus considered as a related project for analysis purposes. However, although Building 2 is currently vacant, at the time when the existing traffic counts were conducted at the study intersections in late 2010, Building 2 was occupied by LAUSD as an adult education facility. As traffic associated with Building 2 was already included in the baseline traffic counts, separate traffic generation to reflect re-occupancy of Building 2 (as an adult education facility or similar use) is not necessary. In addition, as discussed previously, the potential redevelopment of the adjacent HON site as a shopping center has been considered as a related project for the future year 2031 conditions, although no formal planning application has yet been submitted to the City of South Gate.

Based on current research, a total of 46 related projects are located in the project vicinity that have been built, but not yet fully occupied, are being processed for approval, or are reasonably foreseeable. These 46 related projects have been included as part of the cumulative background setting in the Year 2031 analysis conditions. The location of the related projects and a brief description for each of the 46 related projects is described in ***Table 6-1***. The location of the related projects is graphically illustrated in ***Figure 6-1***. These related projects are expected to generate vehicular traffic in the future, which may affect the operating conditions of the key study intersections.

Traffic volumes expected to be generated by the related projects were determined: 1) as calculated using rates provided in the ITE *Trip Generation Manual* publication, or 2) as provided within other available environmental documents (e.g., EIR, MND) prepared for specific projects. The related projects respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in *Table 6-1*. The assignment of the related projects traffic volumes to the study intersections during the weekday AM and PM peak hours are displayed in ***Figures 6-2*** and ***6-3***, respectively.

Table 6-1
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/ PROJECT NUMBER	ADDRESS/ LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
				LAND USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
City of South Gate													
SG1	Built/ Not Occupied		2525 Firestone Boulevard	Warehouse	722,473 GSF	[3]	2,572	171	46	217	58	173	231
SG2	Built/ Not Occupied		2340 Firestone Boulevard	Light Industrial	51,020 GSF	[4]	356	41	6	47	6	43	49
SG3	Proposed	South Gate Shopping Center	Northeast Corner of Firestone Boulevard and Alameda Street	Shopping Center Walk-In Reduction (10%) Pass-By Reduction (30%)	264,750 GSF	[5] [6] [7]	11,305 (1,131) (3,052)	157 (16) (42)	97 (10) (26)	254 (25) (69)	471 (47) (127)	511 (51) (138)	982 (98) (265)
SG4	Completed	South Region Elementary School #9	2777 Willow Place	Elementary School	650 Students	[8]	839	161	132	293	48	50	98
SG5	Completed	South Region High School #9	5225 Tweedy Boulevard	High School Adult Evening School	1,431 Students 450 Students	[9]	770	301	257	588	314	116	430
SG6	Proposed	Southeast Los Angeles Courthouse Project	4070-4100 Ardmore Avenue 4095-4101 Firestone Boulevard	Courthouse Existing Manufacturing/Retail	9 Courtrooms (124,623) GSF	[10]	949 (660)	115 (95)	16 (28)	131 (123)	15 (44)	71 (78)	86 (122)
SG7	Under Construction	South Gate Gateway Project	Northwest Corner of Firestone Boulevard and Atlantic Avenue	Movie Theater Retail	2,200 Seats 550,000 GSF	[11]	19,503	250	164	414	770	872	1,642
SG8	Under Construction	Atlantic Park Plaza Project	9923 Atlantic Boulevard	Retail	50,000 GSF	[5]	2,135	30	18	48	89	97	186
SG9	Approved	Calden Court Apartments	2405 Southern Avenue	Apartment	225 DU	[12]	1,302	23	92	115	91	49	140
SG10	Under Construction	Azteca Market and Deli	9020 Long Beach Boulevard	Supermarket	11,230 GSF	[13]	1,148	24	14	38	54	52	106
SG11	Built/ Not Occupied	Firestone Village	3125 Firestone Boulevard	Condominium Retail	47 DU 15,000 GSF	[14] [5]	273 641	4 9	17 5	21 14	16 27	8 29	24 56
City of Lynwood													
L1	Completed	Habitat for Humanity	4237 Imperial Highway	Affordable Housing	10 DU	[15]	95	2	6	8	6	4	10
L2	Under Construction	Park Place Project	Corner of Atlantic Avenue and Carlin Avenue	Apartment	99 DU	[16]	658	10	40	50	40	21	61
L3	Proposed	Northgate Markets	East side of Long Beach Boulevard between Josephine Street and the I-105 Freeway	Commercial	60,820 GSF	[5]	2,597	36	22	58	108	118	226
L4	Approved		Southwest Corner of Long Beach Boulevard and Pluma Street	Supermarket	10,550 GSF	[13]	1,079	22	14	36	51	49	100
L5	Approved		11833 Atlantic Avenue	Retail	7,843 GLSF	[5]	335	5	3	8	14	15	29
L6	Proposed		2600 Imperial Highway	Distribution Center	200,007 GSF	[3]	712	47	13	60	16	48	64
City of Downey													
D1	Under Construction	Downey Gateway	Corner of Downey Avenue and Firestone Boulevard	Restaurant	25,000 GSF	[17]	3,179	149	121	270	148	98	246
D2	Proposed	Tierra Luna Specific Plan	Bounded by Lakewood Boulevard, Bellflower Boulevard, and Congressman Steve Horn Way	Condominium Hotel General Office Shopping Center Remove Existing Downey Studios	1,500 DU 450 Rooms 675,000 GSF 1,200,000 GSF	[18]	32,118	1,052	662	1,714	1,363	1,735	3,098

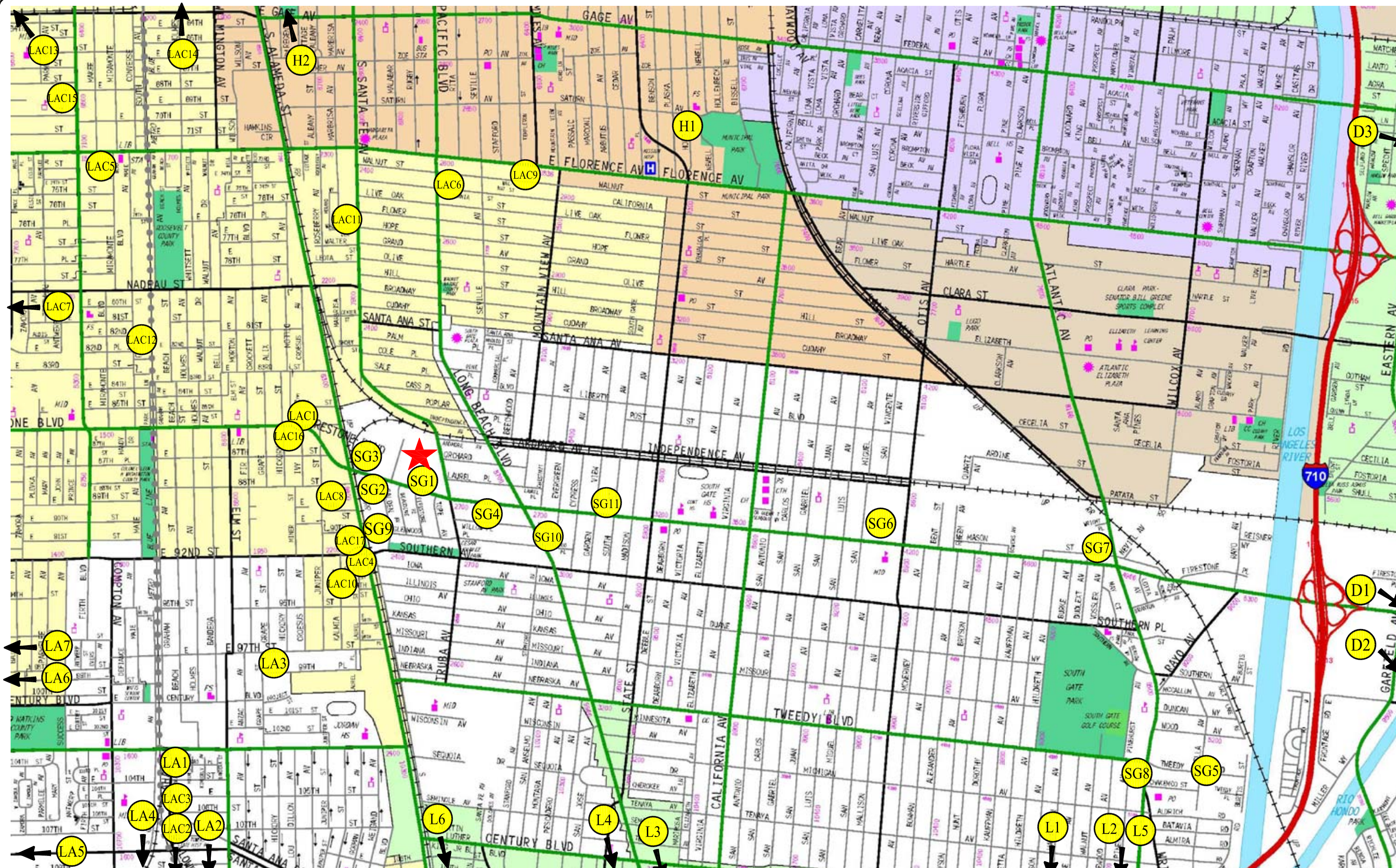
Table 6-1 (Continued)
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/ PROJECT NUMBER	ADDRESS/ LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
				LAND USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
D3	Proposed		Northeast Corner of Gallatin Road and Lakewood Boulevard	Condominium	46 DU	[14]	267	3	17	20	16	8	24
				City of Huntington Park									
H1	Under Construction	South Region Elementary School #5	3232 Saturn Avenue	Elementary School Existing Single-Family Residential Existing Multi-Family Residential	950 Students (25) DU (70) DU	[19], [8] [19], [15] [19], [16]	1,226 (238) (466)	209 (5) (7)	200 (14) (29)	409 (19) (36)	70 (16) (28)	73 (9) (15)	143 (25) (43)
H2	Under Construction	South Region High School #7	6361 Cottage Street	High School Existing Single-Family Residential Existing Apartment Existing Light Industrial	1,620 Students (3) DU (15) DU (28,156) GSF	[20]	2,770	314	281	595	272	(11)	261
				City of Los Angeles									
LA1	Proposed	Watts Cinema & Education Center ZA-2010-2684	10341 Graham Avenue	Movie Theater with Matinee Education Center	1,040 Seats 12,000 GSF	[21] [22]	730 406	Nom. 17	Nom. 8	Nom. 25	28 16	45 17	73 33
LA2	Proposed	HRB08-005	11300 Monitor Avenue	High School	500 Students	[23]	855	146	69	215	31	34	65
LA3	Proposed	Jordan Downs Redevelopment Master Plan - HRB10-003	9800 Grape Street	Mixed-Use		[24]	14,150	525	640	1,166	671	594	1,265
LA4	Built	Amino Watts #2 at Flourney ES	1630 E. 111th Street	High School	125 Students	[23]	214	37	17	54	8	8	16
LA5	Built	South Region High School #12	8880 S. San Pedro Street	High School Adult Evening School Sports Field	2,025 Students 450 Students 3 Fields	[25]	2,878	275	344	619	188	54	242
LA6	Proposed	Alliance Heritage Middle School	9719 S. Main Street	Middle School	400 Students	[26]	648	119	97	216	31	33	64
LA7	Proposed		9402 S. Broadway	Senior Housing Retail	49 DU 25,000 GLSF	[27] [5]	169 1,068	3 15	7 9	10 24	6 45	6 48	12 93
				County of Los Angeles									
LAC1	Proposed	R2004-00142	2121 Firestone Boulevard	Banquet Hall Existing Retail/Commercial	7,722 GSF (7,722) GSF	[22] [5]	261 (330)	11 (4)	5 (3)	16 (7)	10 (14)	11 (15)	21 (29)
LAC2	Proposed	Martin Luther King, Jr. Medical Center Campus Redevelopment	12021 Wilmington Avenue	Hospital Commercial/Retail Single-Family Residential Medical Office General Office	784,910 GSF 80,000 GSF 100 DU 300,000 GSF 150,000 GSF	[28]	19,677	921	319	1,240	568	1,185	1,753
LAC3	Proposed	R2006-00769	1717 E. 61st Street	Apartment	30 DU	[16]	200	3	12	15	12	7	19
LAC4	Proposed	R2008-00065	9201 S. Alameda Street	Auto/Body Parts Sales	318 GSF	[29]	20	1	0	1	1	1	2
LAC5	Proposed	R2008-00739	1560 E. Florence Avenue	Pawn Shop	5,880 GSF	[30]	261	Nom.	Nom.	Nom.	7	9	16
LAC6	Proposed	R2008-01396	7312 Pacific Boulevard	Tattoo Parlour	5,376 GSF	[30]	238	Nom.	Nom.	Nom.	7	8	15
LAC7	Approved	R2008-01423	1226 Nadeau Street	Used Auto Sales	5,000 GSF	[31]	162	8	2	10	5	8	13
LAC8	Proposed	R2008-01463	2241 E. 89th Street	Recycling Center	41,857 GSF	[4]	292	34	5	39	5	36	41
LAC9	Proposed	R2009-00744	2808 E. Florence Avenue	Used Auto Sales	6,340 GSF	[31]	205	9	3	12	7	10	17
LAC10	Proposed	R2009-01038	9301 Laurel Street	Outdoor Storage Yard	30,375 GSF	[3]	108	7	2	9	3	7	10

Table 6-1 (Continued)
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/ PROJECT NUMBER	ADDRESS/ LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
				LAND USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
LAC11	Proposed	R2009-01441	7641 Santa Fe Avenue	Used Auto Sales	3,306 GSF	[31]	107	5	1	6	4	5	9
LAC12	Proposed	R2011-01147	8122 Maie Avenue	Light Manufacturing	8.3 Acres	[32]	323	58	4	62	37	32	69
LAC13	Proposed	R2012-00157	1208 E. 59th Street	Apartment	10 DU	[16]	67	1	4	5	4	2	6
LAC14	Proposed	R2012-00881	1842 E. 58th Place	Dance Hall	15,305 GSF	[22]	518	20	11	31	21	21	42
LAC15	Proposed	R2012-01264	6719 Compton Avenue	Used Auto Sales	3,500 GSF	[31]	113	5	2	7	4	5	9
LAC16	Proposed	R2012-01925	2100 Firestone Boulevard	Used Auto Sales	11,804 GSF	[31]	381	17	6	23	12	19	31
LAC17	Proposed		9113 Alameda Street	Light Industrial	33,395 GSF	[4]	232	27	4	31	4	28	32
TOTAL							**121,871**	**5,230**	**3,704**	**8,934**	**5,522**	**6,156**	**11,678**

[1] Sources: City of South Gate Community Development Department, City of Lynwood Redevelopment Department, City of Downey Community Development Department, City of Huntington Park Department of Planning, City of Los Angeles Departments of Transportation and City Planning, Los Angeles County Department of Regional Planning, and Los Angeles Unified School District, except as noted below. Trip generation for the related projects are based on ITE "Trip Generation", 9th Edition, 2012 (as referenced in the Project Data Source column).
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 150 (Warehouse) trip generation average rates.
[4] ITE Land Use Code 110 (Light Industrial) trip generation average rates.
[5] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
[6] Walk-in trip reduction based on a review of the project land use characteristics and the characteristics of the surrounding project area.
[7] Pass-by trips are made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the site. Pass-by trip reduction adjustment factors were derived based on data provided in Chapter 5 of the ITE "Trip Generation Handbook", 2nd Edition, June 2004.
[8] ITE Land Use Code 520 (Elementary School) trip generation average rates.
[9] Source: South Region High School No. 9 Environmental Impact Report, February 2009. Daily trip ends based on ITE Land Use Code 530 (High School) trip generation average rates.
[10] Source: New Southeast Los Angeles Courthouse Project Memorandum for Traffic Study Scope of Work, March 2011.
[11] Source: "Traffic Impact Analysis for the South Gate Gateway Project", prepared by LLG Engineers, November 2007.
[12] Source: "2405 Southern Avenue Draft Traffic Impact Study", prepared by Fehr & Peers, June 2012.
[13] ITE Land Use Code 850 (Supermarket) trip generation average rates.
[14] ITE Land Use Code 230 (Residential Condominium/Townhouse) trip generation average rates.
[15] ITE Land Use Code 210 (Single Family Detached Housing) trip generation average rates.
[16] ITE Land Use Code 220 (Apartment) trip generation average rates.
[17] ITE Land Use Code 932 (High Turnover [Sit-Down] Restaurant) trip generation average rates.
[18] Source: Tierra Luna Environmental Impact Report, July 2009.
[19] Source: South Region Elementary School No. 5 Environmental Impact Report, March 2008.
[20] Source: South Region High School No. 7 Environmental Impact Report, November 2008. Daily trip ends based on ITE Land Use Code 530 (High School) trip generation average rates.
[21] ITE Land Use Code 444 (Movie Theater w/ Matinee) trip generation average rates. Daily trips ends estimated based on the assumption that the higher of the AM or PM total peak hour traffic volumes typically represents 10 percent of the daily traffic volumes.
[22] ITE Land Use Code 495 (Recreational Community Center) trip generation average rates.
[23] ITE Land Use Code 530 (High School) trip generation average rates.
[24] Source: "Jordan Downs Specific Plan Traffic Impact Study", prepared by Iteris, September 2010.
[25] Source: South Region High School No. 12 Environmental Impact Report, February 2008.
[26] ITE Land Use Code 522 (Middle School/Junior High School) trip generation average rates.
[27] ITE Land Use Code 252 (Senior Adult Housing-Attached) trip generation average rates.
[28] Source: Martin Luther King, Jr. Medical Center Campus Redevelopment Project Draft Environmental Impact Report Appendix H, August 2010.
[29] ITE Land Use Code 843 (Automobile Parts Sales) trip generation average rates.
[30] ITE Land Use Code 826 (Specialty Retail Center) trip generation average rates.
[31] ITE Land Use Code 841 (Automobile Sales) trip generation average rates.
[32] ITE Land Use Code 140 (Manufacturing) trip generation average rates.



MAP SOURCE: RAND MCNALLY & COMPANY

PROJECT SITE

N

NOT TO SCALE

FIGURE 6-1
LOCATION OF RELATED PROJECTS

LINSCOTT, LAW & GREENSPAN, engineers

2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

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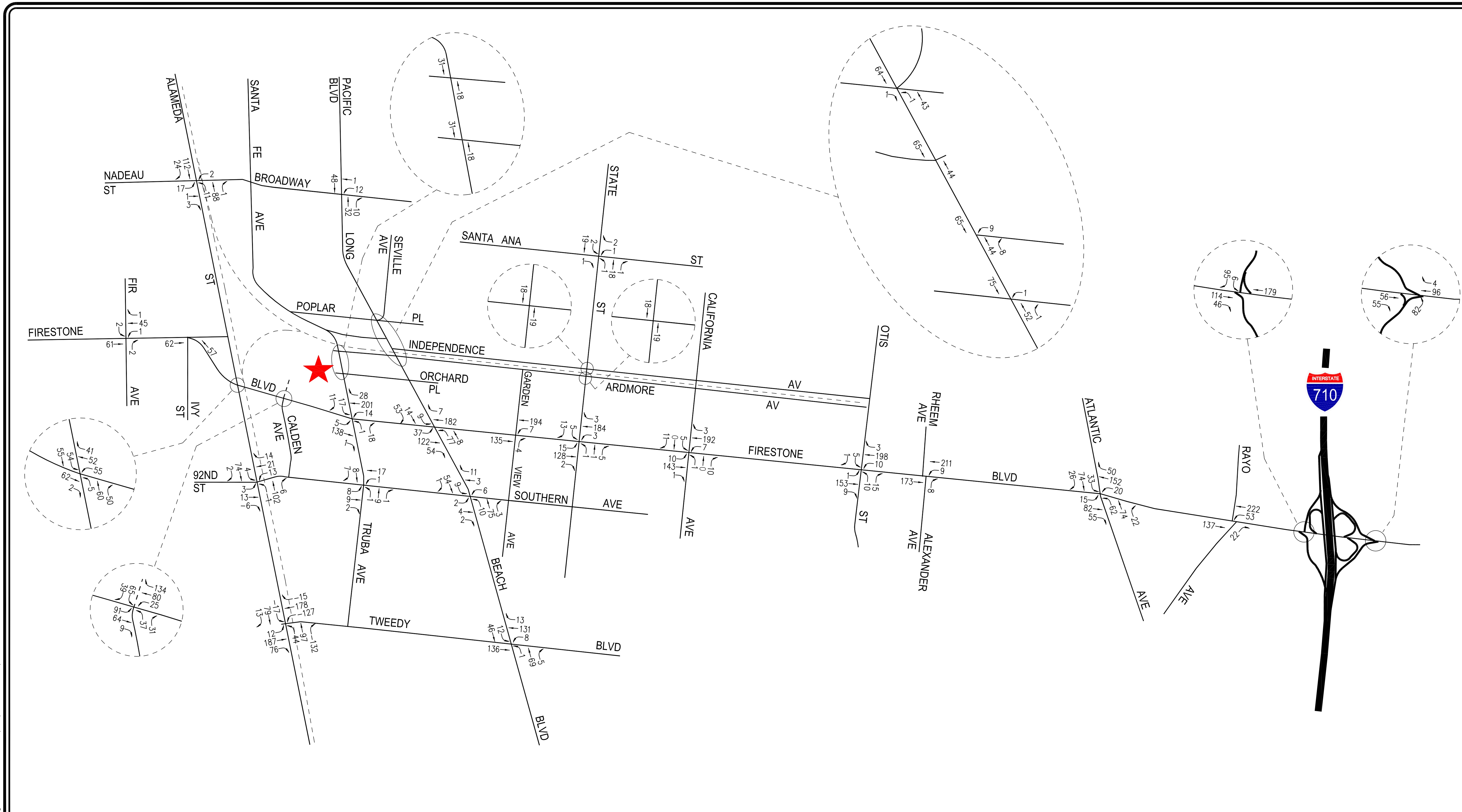

★ PROJECT SITE

N
NOT TO SCALE

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 6-2
RELATED PROJECTS TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

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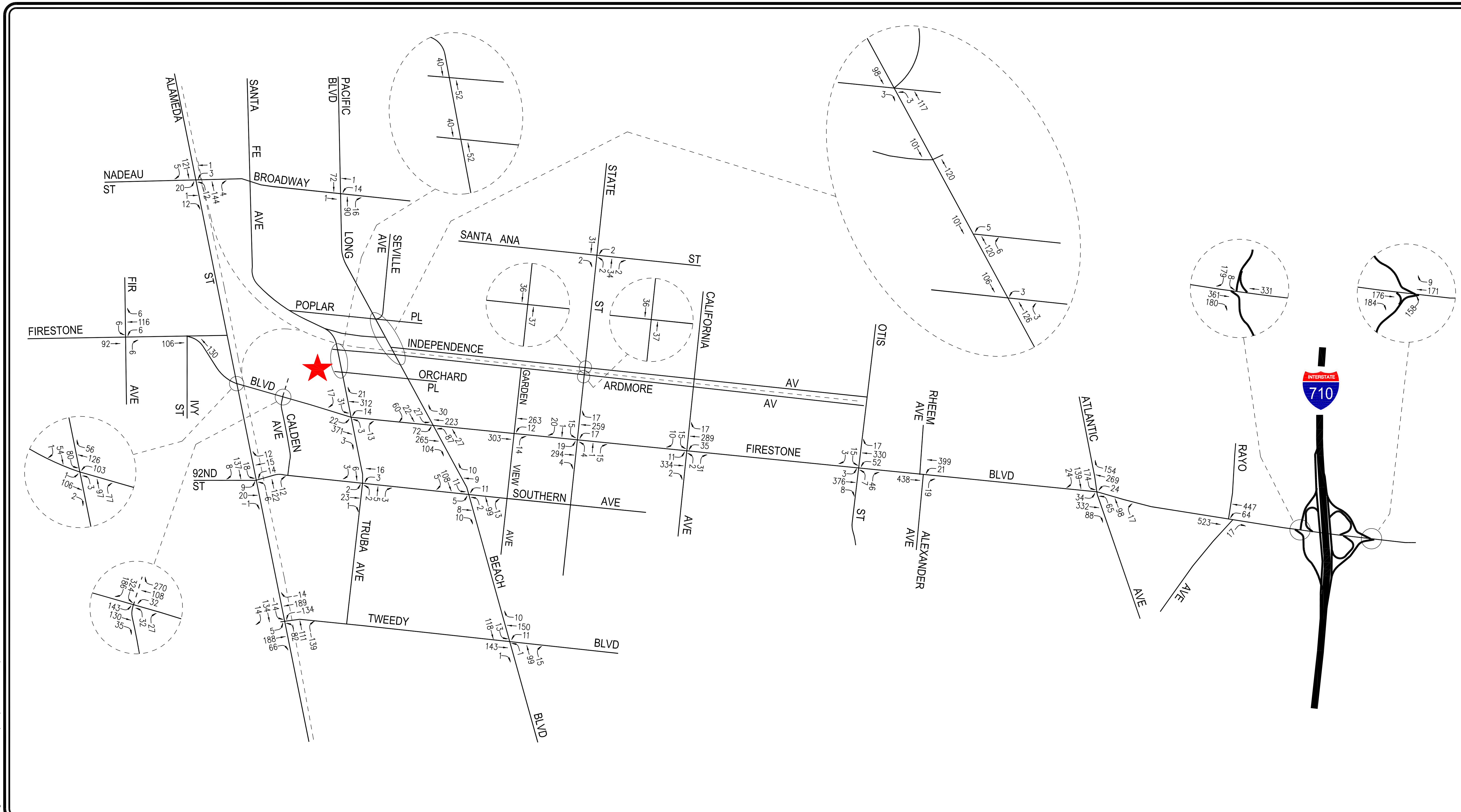

PROJECT SITE

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LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 6-3
RELATED PROJECTS TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR
2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

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7.0 TRAFFIC IMPACT ANALYSIS METHODOLOGY

7.1 City of South Gate Analysis Methodology

As discussed in Section 4.5, the AM and PM peak hour operating conditions for the 31 key study intersections were evaluated using the Intersection Capacity Utilization (ICU) methodology for signalized intersections and the methodologies outlined in Chapters 19 and 20 of the *HCM2010 Highway Capacity Manual* (HCM2010) for unsignalized intersections, based on City of South Gate traffic study guidelines. Descriptions of the signalized and unsignalized Level of Service criteria are provided in *Tables 4-4* and *4-5*, respectively.

7.1.1 *City of South Gate Intersection Impact Criteria and Thresholds*

The relative impact of the added project traffic volumes to be generated by the 2013 Firestone Educational Center project during the weekday AM and PM peak hours was evaluated based on analysis of future operating conditions at the study intersections, without and with the proposed project. The previously discussed capacity analysis procedures were utilized to evaluate the future *v/c* or *delay* relationships and service level characteristics at each study intersection.

The significance of the potential impacts of project-generated traffic at each study intersection was identified using guidelines provided by the City of South Gate. According to the City of South Gate's methodology for calculating the level of impact due to traffic generated by the proposed project, a significant transportation impact is determined based on the criteria presented in ***Table 7–1***.

Table 7–1
CITY OF SOUTH GATE
INTERSECTION IMPACT THRESHOLD CRITERIA

Final *v/c*	**Level of Service**	**Project Related Increase in *v/c***
> 0.900	E or F	Equal to or greater than 0.02

The City's method requires mitigation of project traffic impacts whenever traffic generated by the proposed development causes an increase of the analyzed intersection *v/c* ratio by an amount equal to or greater than the values shown above. For unsignalized study intersections, the City of South Gate utilizes the HCM method to determine the Level of Service and the ICU method to determine the increase in the *v/c* ratio.

The ICU calculations use a lane capacity of 1,600 vehicles per hour (vph) for left-turn, through and right-turn lanes, and a dual left-turn lane capacity of 2,880 vph. A clearance interval of 0.10 is also included in the ICU calculations.

7.1.2 *City of South Gate Traffic Impact Analysis Scenarios*

Traffic impacts at the study intersections for proposed project were analyzed for the following conditions:

[a] Existing conditions.

[b] Existing With Project conditions.

[c] Year 2031 Without Project conditions.

[d] Condition [c] with completion and full occupancy of proposed project.

[e] Condition [d] with implementation of project mitigation measures, where necessary.

The traffic volumes for each new condition were added to the volumes in the prior condition to determine the change in capacity utilization at the study intersections. The proposed project ICU and HCM data worksheets for the analyzed intersections are contained in *Appendix B*.

7.2 County of Los Angeles Analysis Methodology

As discussed in Section 1.0, all 31 study intersections were evaluated using the City of South Gate's ICU/HCM analysis methods. In addition, for the seven study intersections located either partially or solely within the County of Los Angeles, the County of Los Angeles' ICU method of analysis was also conducted.

7.2.1 *County of Los Angeles Intersection Impact Criteria and Thresholds*

For the seven study intersections located either partially or solely within the County of Los Angeles, the significance of the potential project generated traffic impacts was identified using the traffic impact analysis guidelines set forth in the Los Angeles County Department of Public Works' *Traffic Impact Analysis Report Guidelines*[7]. According to the County's published guidelines, the impact is considered significant if the project-related increase in the *v/c* ratio equals or exceeds the threshold criteria presented in ***Table 7-2***.

Table 7-2

COUNTY OF LOS ANGELES

INTERSECTION IMPACT THRESHOLD CRITERIA

Pre-Project *v/c*	Level of Service	Project Related Increase in *v/c*
0.71 to 0.80	C	equal to or greater than 0.04
0.81 to 0.90	D	equal to or greater than 0.02
0.91 or more	E / F	equal to or greater than 0.01

[7] *Traffic Impact Analysis Report Guidelines*, County of Los Angeles Department of Public Works, January 1997.

According to the County of Los Angeles requirements, the ICU calculations utilize a lane capacity of 1,600 vehicles per hour (vph) per lane for left-turn, through, and right-turn lanes, and 2,880 vph for dual left-turn lanes. Additionally, a clearance factor of 0.10 is included in the ICU calculations. The County's Sliding Scale method requires mitigation of project traffic impacts whenever traffic generated by the proposed development causes an increase of the analyzed intersection *v/c* ratio by an amount equal to or greater than the values shown above.

7.2.2 *County of Los Angeles Traffic Impact Analysis Scenarios*

For the County of Los Angeles study intersections, LOS calculations have been prepared for the following scenarios:

(a) Existing conditions.

(b) Condition (a) plus 0.85% ambient traffic growth up through Year 2031.

(c) Condition (b) with completion and full occupancy of proposed project.

(d) Condition (c) with implementation of project mitigation measures where necessary.

(e) Condition (d) with cumulative traffic of other related projects.

(f) Condition (e) with implementation of cumulative mitigation measures where necessary.

The traffic volumes for each new condition were added to the volumes in the prior condition to determine the change in capacity utilization at the study intersections. The proposed project ICU data worksheets for the County of Los Angeles study intersections are contained in ***Appendix D***.

8.0 CITY OF SOUTH GATE TRAFFIC ANALYSIS

The results of the traffic impact analysis prepared using the ICU methodology (for signalized intersections) and the HCM methodology (for unsignalized intersections) and application of the City of South Gate significant traffic impact criteria is summarized in ***Table 8-1***. The ICU/HCM data worksheets for the analyzed intersections are contained in *Appendix B*.

8.1 Existing Conditions

As indicated in column [1] of *Table 8-1*, 23 of the 31 study intersections are presently operating at LOS D or better during the weekday AM and PM peak hours under existing conditions. The remaining eight study intersections are currently operating at LOS E or F during the peak hours shown in *Table 8-1*. The existing conditions ICU and HCM data worksheets for the 31 study intersections during the weekday AM and PM peak hours are contained in *Appendix B*. As previously mentioned, the existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figures 4-3* and *4-4*, respectively.

8.2 Existing With Project Conditions

As shown in column [2] of *Table 8-1*, application of the City of South Gate's significant impact threshold criteria in the existing with project scenario indicates that the proposed project is expected to result in significant impacts at three of the 31 study intersections during weekday conditions. Incremental but not significant impacts are noted at the remaining 28 study intersections as presented in *Table 8-1*. The following three study intersections are expected to be significantly impacted during the AM and/or PM peak hours in the existing with project conditions:

- Int. No. 4: Alameda Street/Firestone Boulevard (PM peak hour)
- Int. No. 8: Santa Fe Avenue/Project Driveway-Ardmore Avenue (AM/PM peak hours)
- Int. No. 10: Santa Fe Avenue/Firestone Boulevard (AM peak hour)

The existing with project conditions ICU and HCM data worksheets for the study intersections during the weekday AM and PM peak hours are contained in *Appendix B*. The ICU data worksheets for the unsignalized study intersections (analyzed for purposes of determining the incremental *v/c* increases) are also contained in *Appendix B*. The existing with project traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figures 8-1*** and ***8-2***, respectively.

8.3 Year 2031 Without Project Conditions

The *v/c* ratios and delay values at the study intersections are incrementally increased with the addition of ambient growth plus traffic generated by the related projects shown in *Figure 6-1* and listed in *Table 6-1*. As presented in column [3] of *Table 8-1*, 13 of the 31 study intersections are expected to continue operating at LOS D or better during the year 2031 weekday AM and PM

Table 8-1
CITY OF SOUTH GATE SUMMARY OF VOLUME TO CAPACITY RATIOS DELAY AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
PROJECT BUILDOUT CONDITIONS

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2012 EXISTING V/C or Delay	[1] LOS	[2] YEAR 2012 EXISTING W/ PROJECT BUILDOUT V/C or Delay	[2] LOS	[2] CHANGE V/C [(2)-(1)]	[2] SIGNIF. IMPACT	[3] YEAR 2031 FUTURE PRE-PROJECT W/ AG & REL. PROJECTS V/C or Delay	[3] LOS	[4] YEAR 2031 FUTURE WITH PROJECT BUILDOUT V/C or Delay	[4] LOS	[4] CHANGE V/C [(4)-(3)]	[4] SIGNIF. IMPACT	[5] YEAR 2031 FUTURE WITH PROJECT MITIGATION V/C or Delay	[5] LOS	[5] CHANGE V/C [(5)-(3)]	MITIGATED
1	Fir Avenue/	AM	0.521	A	0.524	A	0.003	NO	0.600	A	0.603	B	0.003	NO	0.603	B	0.003	---
	Firestone Boulevard [a]	PM	0.494	A	0.500	A	0.006	NO	0.588	A	0.594	A	0.006	NO	0.594	A	0.006	---
2	Ivy Street-Manchester Avenue/	AM	0.414	A	0.417	A	0.003	NO	0.477	A	0.479	A	0.002	NO	0.479	A	0.002	---
	Firestone Boulevard [a]	PM	0.484	A	0.490	A	0.006	NO	0.568	A	0.574	A	0.006	NO	0.574	A	0.006	---
3	Alameda Street/	AM	0.830	D	0.830	D	0.000	NO	0.986	E	0.987	E	0.001	NO	0.987	E	0.001	---
	Nadeau Street [a]	PM	0.845	D	0.847	D	0.002	NO	1.018	F	1.020	F	0.002	NO	1.020	F	0.002	---
4	Alameda Street/	AM	0.874	D	0.888	D	0.014	NO	1.096	F	1.110	F	0.014	NO	1.110	F	0.014	---
	Firestone Boulevard [a] [b]	PM	0.909	E	0.929	E	0.020	YES	1.241	F	1.262	F	0.021	YES	1.262	F	0.021	NO
5	Alameda Street/	AM	0.716	C	0.719	C	0.003	NO	0.855	D	0.857	D	0.002	NO	0.857	D	0.002	---
	92nd Street-Southern Avenue [a] [b]	PM	0.847	D	0.847	D	0.000	NO	1.027	F	1.028	F	0.001	NO	1.028	F	0.001	---
6	Alameda Street/	AM	0.759	C	0.762	C	0.003	NO	0.844	D	0.848	D	0.004	NO	0.848	D	0.004	---
	Tweedy Boulevard [a] [b]	PM	0.839	D	0.841	D	0.002	NO	0.954	E	0.957	E	0.003	NO	0.957	E	0.003	---
7	Project Driveway-Calden Avenue/	AM	> 50.0	F	> 50.0	F	0.019	NO	0.892	D	0.911	E	0.019	NO	0.911	E	0.019	---
	Firestone Boulevard [b] [c]	PM	> 50.0	F	> 50.0	F	-0.064	NO	0.969	E	0.910	E	-0.059	NO	0.910	E	-0.059	---
		AM	0.623		0.642													
		PM	0.679		0.615													
8	Santa Fe Avenue/	AM	> 50.0	F	> 50.0	F	0.128	YES	> 50.0	F	> 50.0	F	0.127	YES	0.814	D	0.218	YES
	Project Driveway-Ardmore Avenue	PM	37.7	E	> 50.0	F	0.144	YES	> 50.0	F	> 50.0	F	0.134	YES	0.813	D	0.286	YES
	[b] [c]	AM	0.522		0.650				0.596		0.723							
		PM	0.454		0.598				0.527		0.661							
9	Santa Fe Avenue/	AM	14.2	B	21.6	C	0.077	NO	17.0	C	30.2	D	0.077	NO	30.2	D	0.050	---
	Project Driveway-Orchard Place [b] [c]	PM	16.4	C	24.5	C	0.047	NO	21.3	C	36.9	E	0.047	YES	36.9	E	0.034	NO
		AM	0.374		0.451				0.424		0.501				0.474			
		PM	0.385		0.432				0.443		0.490				0.477			
10	Santa Fe Avenue/	AM	0.882	D	0.956	E	0.074	YES	1.099	F	1.173	F	0.074	YES	1.028	F	-0.071	YES
	Firestone Boulevard [b]	PM	0.839	D	0.886	D	0.047	NO	1.108	F	1.142	F	0.034	YES	1.110	F	0.002	YES

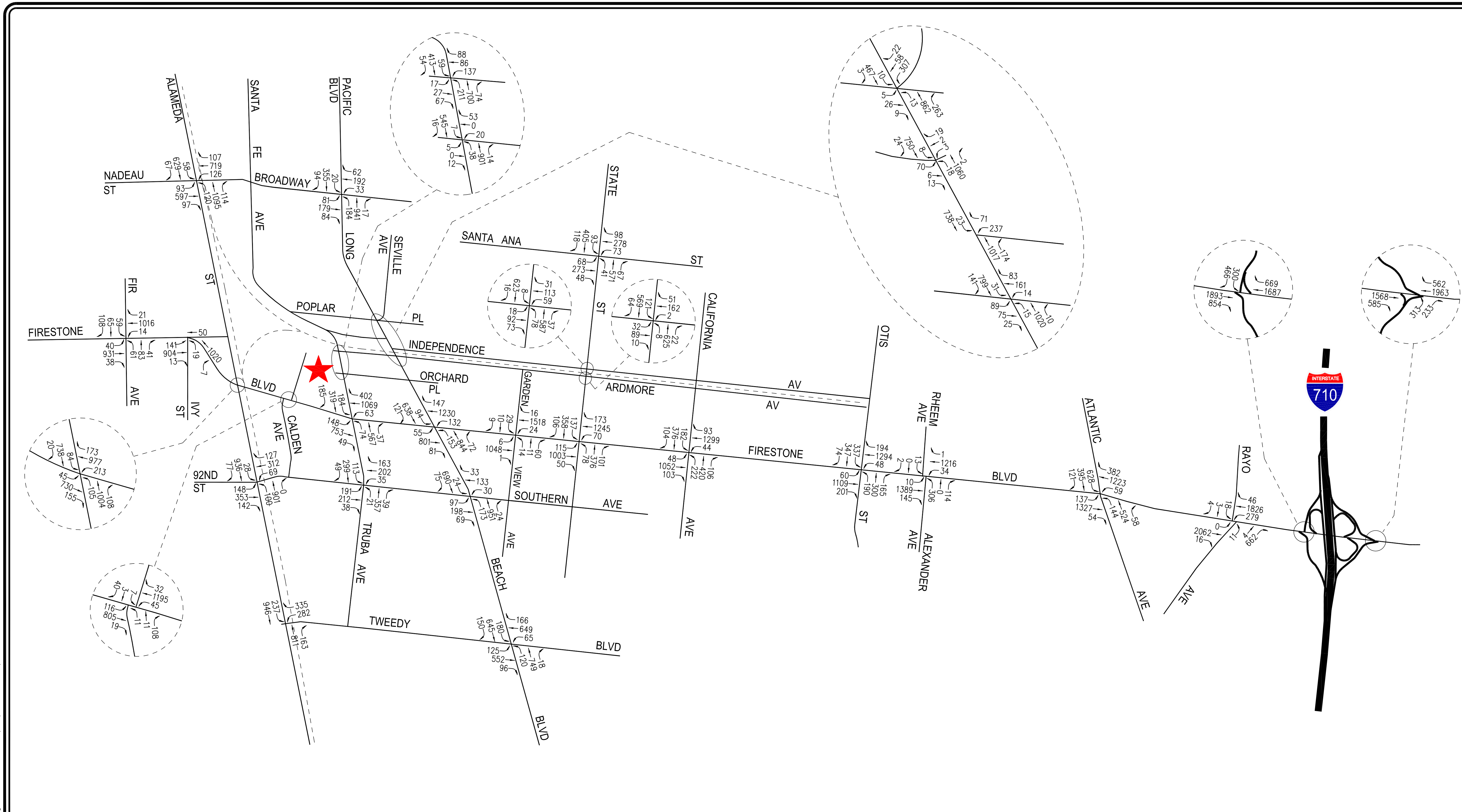
Table 8-1 (Continued)
CITY OF SOUTH GATE SUMMARY OF VOLUME TO CAPACITY RATIOS DELAY AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
PROJECT BUILDOUT CONDITIONS

			[1]		[2]				[3]		[4]				[5]			
NO.	INTERSECTION	PEAK HOUR	YEAR 2012 EXISTING V/C or Delay	LOS	YEAR 2012 EXISTING W/ PROJECT BUILDOUT V/C or Delay	LOS	CHANGE V/C [(2)-(1)]	SIGNIF. IMPACT	YEAR 2031 FUTURE PRE-PROJECT W/ AG & REL. PROJECTS V/C or Delay	LOS	YEAR 2031 FUTURE WITH PROJECT BUILDOUT V/C or Delay	LOS	CHANGE V/C [(4)-(3)]	SIGNIF. IMPACT	YEAR 2031 FUTURE WITH PROJECT MITIGATION V/C or Delay	LOS	CHANGE V/C [(5)-(3)]	MITIGATED
11	Santa Fe Avenue-Truba Avenue/	AM	29.87	D	31.21	D	0.004	NO	> 50.00	F	> 50.00	F	0.005	NO	> 50.00	F	0.005	---
	Southern Avenue [b] [d]	PM	21.98	C	22.47	C	0.003	NO	44.02	E	45.73	E	0.003	NO	45.73	E	0.003	---
		AM	0.673		0.677				0.787		0.792				0.792			
		PM	0.644		0.647				0.749		0.752				0.752			
12	Pacific Boulevard/	AM	0.621	B	0.621	B	0.000	NO	0.719	C	0.719	C	0.000	NO	0.719	C	0.000	---
	Broadway [a]	PM	0.751	C	0.753	C	0.002	NO	0.888	D	0.888	D	0.000	NO	0.888	D	0.000	---
13	Long Beach Boulevard/	AM	0.603	B	0.604	B	0.001	NO	0.699	B	0.699	B	0.000	NO	0.699	B	0.000	---
	Poplar Place-Seville Avenue [b]	PM	0.561	A	0.562	A	0.001	NO	0.674	B	0.675	B	0.001	NO	0.675	B	0.001	---
14	Long Beach Boulevard/	AM	0.495	A	0.496	A	0.001	NO	0.573	A	0.573	A	0.000	NO	0.573	A	0.000	---
	Independence Avenue (West Leg) [b]	PM	0.543	A	0.545	A	0.002	NO	0.647	B	0.648	B	0.001	NO	0.648	B	0.001	---
15	Long Beach Boulevard/	AM	0.625	B	0.635	B	0.010	NO	0.732	C	0.741	C	0.009	NO	0.741	C	0.009	---
	Independence Avenue (East Leg) [b]	PM	0.565	A	0.573	A	0.008	NO	0.683	B	0.690	B	0.007	NO	0.690	B	0.007	---
16	Long Beach Boulevard/	AM	0.611	B	0.649	B	0.038	NO	0.710	C	0.749	C	0.039	NO	0.749	C	0.039	---
	Ardmore Avenue [b]	PM	0.602	B	0.624	B	0.022	NO	0.724	C	0.745	C	0.021	NO	0.745	C	0.021	---
17	Long Beach Boulevard/	AM	0.901	E	0.910	E	0.009	NO	1.164	F	1.176	F	0.012	NO	1.176	F	0.012	---
	Firestone Boulevard [b]	PM	0.979	E	0.986	E	0.007	NO	1.316	F	1.323	F	0.007	NO	1.323	F	0.007	---
18	Long Beach Boulevard/	AM	0.632	B	0.633	B	0.001	NO	0.749	C	0.750	C	0.001	NO	0.750	C	0.001	---
	Southern Avenue [b]	PM	0.695	B	0.697	B	0.002	NO	0.846	D	0.848	D	0.002	NO	0.848	D	0.002	---
19	Long Beach Boulevard/	AM	0.779	C	0.785	C	0.006	NO	0.965	E	0.970	E	0.005	NO	0.970	E	0.005	---
	Tweedy Boulevard [b]	PM	0.714	C	0.718	C	0.004	NO	0.907	E	0.911	E	0.004	NO	0.911	E	0.004	---
20	Garden View Avenue/	AM	0.642	B	0.654	B	0.012	NO	0.793	C	0.805	D	0.012	NO	0.805	D	0.012	---
	Firestone Boulevard [b]	PM	0.644	B	0.647	B	0.003	NO	0.843	D	0.846	D	0.003	NO	0.846	D	0.003	---
21	State Street/	AM	0.634	B	0.635	B	0.001	NO	0.729	C	0.730	C	0.001	NO	0.730	C	0.001	---
	Santa Ana Street [b]	PM	0.687	B	0.688	B	0.001	NO	0.793	C	0.795	C	0.002	NO	0.795	C	0.002	---
22	State Street/	AM	0.659	B	0.662	B	0.003	NO	0.761	C	0.763	C	0.002	NO	0.763	C	0.002	---
	Independence Avenue [b]	PM	0.624	B	0.628	B	0.004	NO	0.732	C	0.736	C	0.004	NO	0.736	C	0.004	---

Table 8-1 (Continued)
CITY OF SOUTH GATE SUMMARY OF VOLUME TO CAPACITY RATIOS DELAY AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
PROJECT BUILDOUT CONDITIONS

			[1]		[2]				[3]		[4]				[5]			
NO.	INTERSECTION	PEAK HOUR	YEAR 2012 EXISTING V/C or Delay	LOS	YEAR 2012 EXISTING W/ PROJECT BUILDOUT V/C or Delay	LOS	CHANGE V/C [(2)-(1)]	SIGNIF. IMPACT	YEAR 2031 FUTURE PRE-PROJECT W/ AG & REL. PROJECTS V/C or Delay	LOS	YEAR 2031 FUTURE WITH PROJECT BUILDOUT V/C or Delay	LOS	CHANGE V/C [(4)-(3)]	SIGNIF. IMPACT	YEAR 2031 FUTURE WITH PROJECT MITIGATION V/C or Delay	LOS	CHANGE V/C [(5)-(3)]	MITIGATED
23	State Street/ Ardmore Avenue [b]	AM PM	0.671 0.607	B B	0.693 0.623	B B	0.022 0.016	NO NO	0.774 0.711	C C	0.797 0.727	C C	0.023 0.016	NO NO	0.797 0.727	C C	0.023 0.016	--- ---
24	State Street/ Firestone Boulevard [b]	AM PM	0.837 0.901	D E	0.850 0.906	D E	0.013 0.005	NO NO	1.028 1.148	F F	1.041 1.153	F F	0.013 0.005	NO NO	1.041 1.153	F F	0.013 0.005	--- ---
25	California Avenue/ Firestone Boulevard [b]	AM PM	0.839 0.810	D D	0.854 0.816	D D	0.015 0.006	NO NO	1.029 1.071	F F	1.044 1.076	F F	0.015 0.005	NO NO	1.044 1.076	F F	0.015 0.005	--- ---
26	Otis Street/ Firestone Boulevard [b]	AM PM	0.943 0.871	E D	0.958 0.876	E D	0.015 0.005	NO NO	1.151 1.172	F F	1.166 1.177	F F	0.015 0.005	NO NO	1.166 1.177	F F	0.015 0.005	--- ---
27	Rheem Avenue-Alexander Avenue/ Firestone Boulevard [b]	AM PM	0.797 0.750	C C	0.801 0.755	D C	0.004 0.005	NO NO	0.969 1.005	E F	0.973 1.010	E F	0.004 0.005	NO NO	0.973 1.010	E F	0.004 0.005	--- ---
28	Atlantic Avenue/ Firestone Boulevard [b]	AM PM	0.936 0.930	E E	0.950 0.943	E E	0.014 0.013	NO NO	1.162 1.261	F F	1.176 1.273	F F	0.014 0.012	NO NO	1.176 1.273	F F	0.014 0.012	--- ---
29	Rayo Avenue/ Firestone Boulevard [b]	AM PM	0.744 0.780	C C	0.746 0.781	C C	0.002 0.001	NO NO	0.884 1.004	D F	0.886 1.005	D F	0.002 0.001	NO NO	0.886 1.005	D F	0.002 0.001	--- ---
30	I-710 Southbound Ramps/ Firestone Boulevard [b]	AM PM	0.807 0.895	D D	0.818 0.896	D D	0.011 0.001	NO NO	0.984 1.129	E F	0.995 1.134	E F	0.011 0.005	NO NO	0.995 1.134	E F	0.011 0.005	--- ---
31	I-710 Northbound Ramps/ Firestone Boulevard [b]	AM PM	0.820 0.915	D E	0.822 0.916	D E	0.002 0.001	NO NO	0.995 1.155	E F	0.997 1.156	E F	0.002 0.001	NO NO	0.997 1.156	E F	0.002 0.001	--- ---

[a] County of Los Angeles Intersection.
[b] City of South Gate Intersection.
[c] Two-Way Stop-Controlled Intersection. Reported values represent the delays associated with the most constrained approach of the intersection.
[d] All-Way Stop-Controlled Intersection.



★ PROJECT SITE

N

NOT TO SCALE

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 8-1

EXISTING WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

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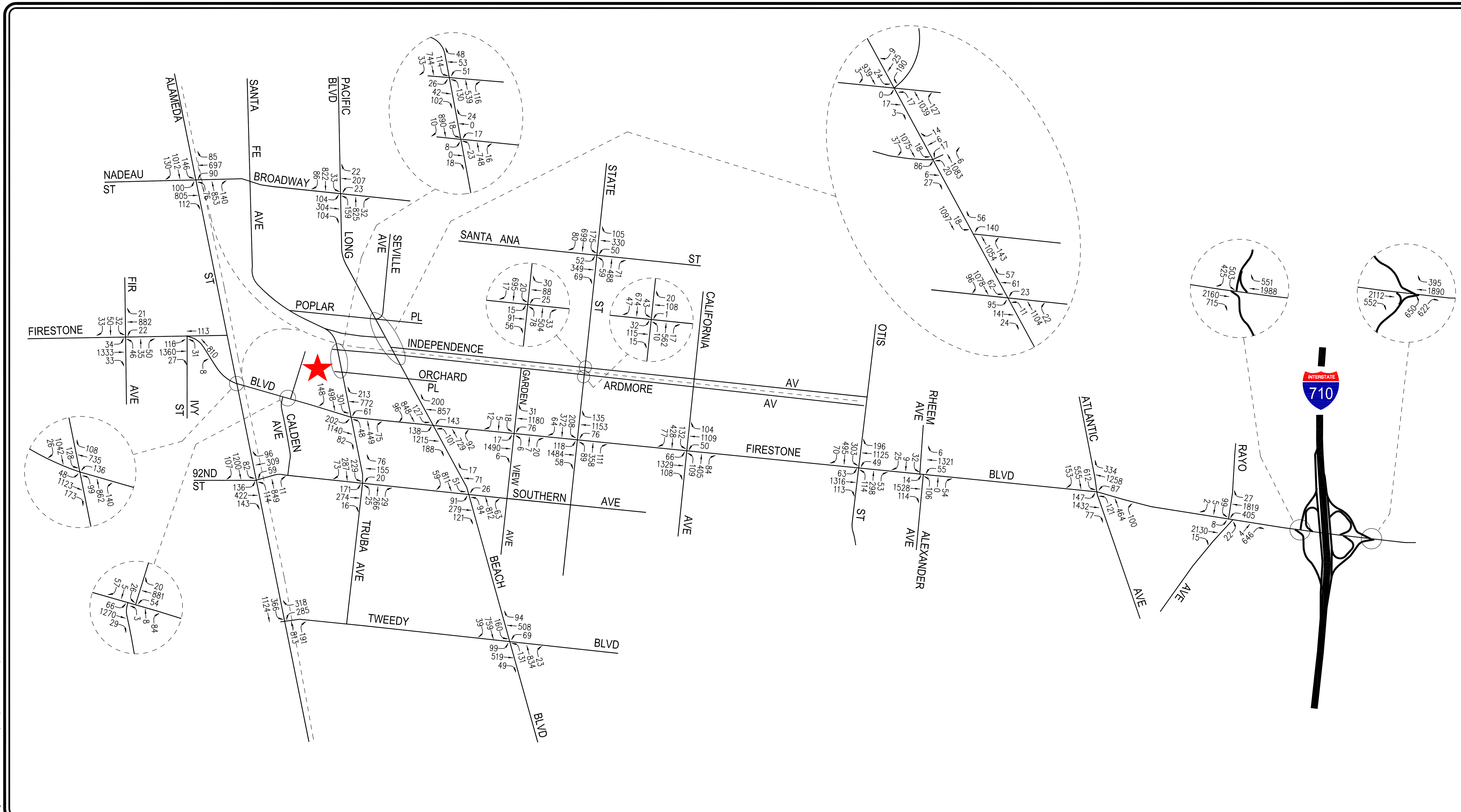

PROJECT SITE

NOT TO SCALE

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FIGURE 8-2
EXISTING WITH PROJECT TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR
2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

peak hours with the addition of ambient traffic growth and traffic due to the related projects. The remaining 18 study intersections are expected to operate at LOS E or F during the peak hours shown in *Table 8-1* with the addition of ambient traffic and traffic due to the related projects.

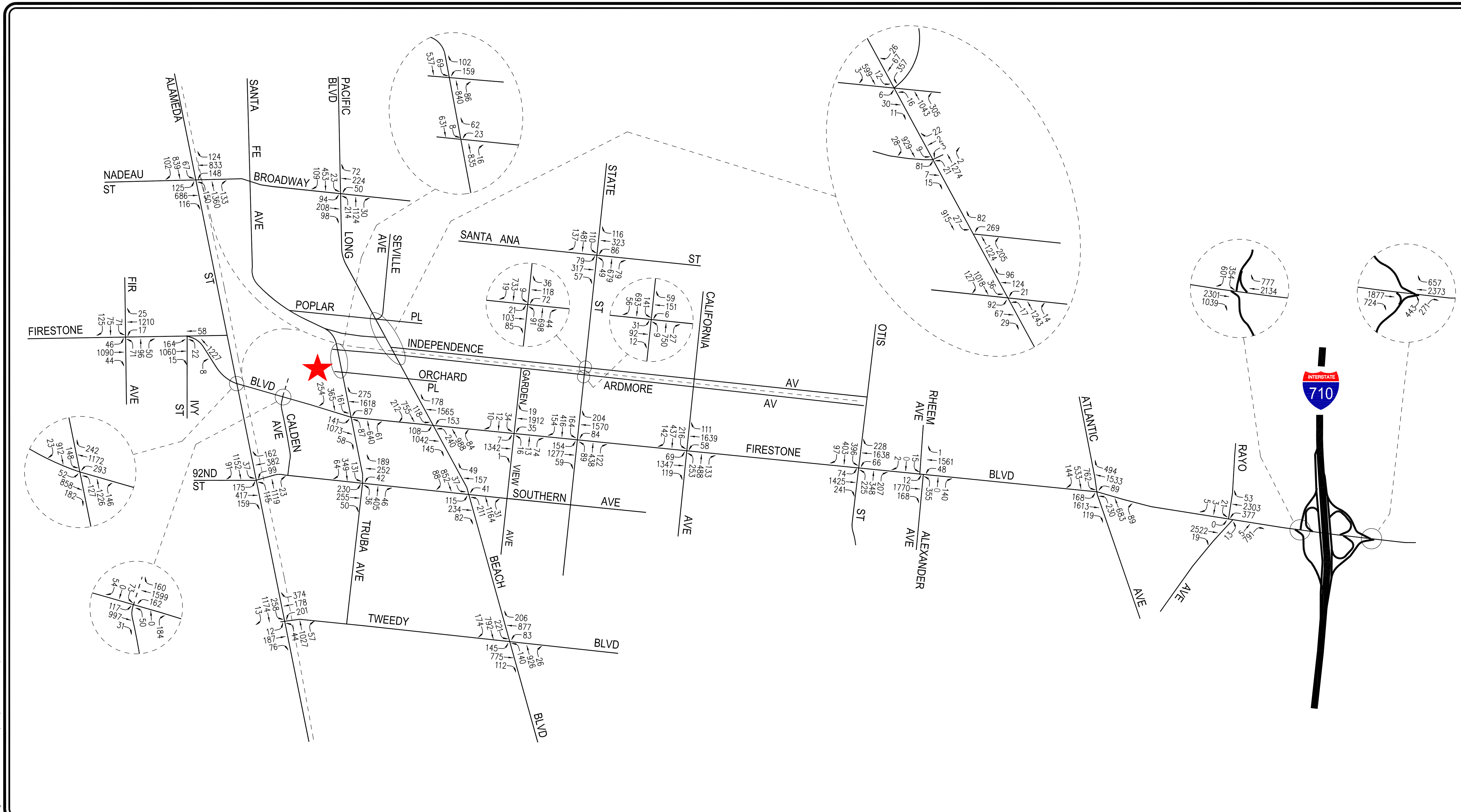
The year 2031 without project (existing, ambient growth and related projects) conditions ICU and HCM data worksheets for the study intersections during the weekday AM and PM peak hours are contained in *Appendix B*. The ICU data worksheets for the unsignalized study intersections (analyzed for purposes of determining the incremental *v/c* increases) are also contained in *Appendix B*. The year 2031 without project traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in ***Figures 8-3*** and ***8-4***, respectively.

8.4 Year 2031 With Project Conditions

As shown in column [4] of *Table 8-1*, application of the City of South Gate's significant impact threshold criteria in the year 2031 with project scenario indicates that the proposed project is expected to result in significant impacts at four of the 31 study intersections during weekday conditions. Incremental but not significant impacts are noted at the remaining 27 study intersections as presented in *Table 8-1*. The four study intersections anticipated to be significantly impacted during the AM and/or PM peak hours in the year 2031 with project condition are as follows:

- Int. No. 4: Alameda Street/Firestone Boulevard (PM peak hour)
- Int. No. 8: Santa Fe Avenue/Project Driveway-Ardmore Avenue (AM & PM peak hours)
- Int. No. 9: Santa Fe Avenue/Project Driveway-Orchard Place (PM peak hour)
- Int. No. 10: Santa Fe Avenue/Firestone Boulevard (AM & PM peak hours)

The year 2031 with project conditions ICU and HCM data worksheets for the study intersections during the weekday AM and PM peak hours are contained in *Appendix B*. The ICU data worksheets for the unsignalized study intersections (analyzed for purposes of determining the incremental *v/c* increases) are also contained in *Appendix B*. The year 2031 with project traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figures 8-5*** and ***8-6***, respectively.



PROJECT SITE

NOT TO SCALE

FIGURE 8-3
YEAR 2031 WITHOUT PROJECT TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

LINSCOTT, LAW & GREENSPAN, engineers

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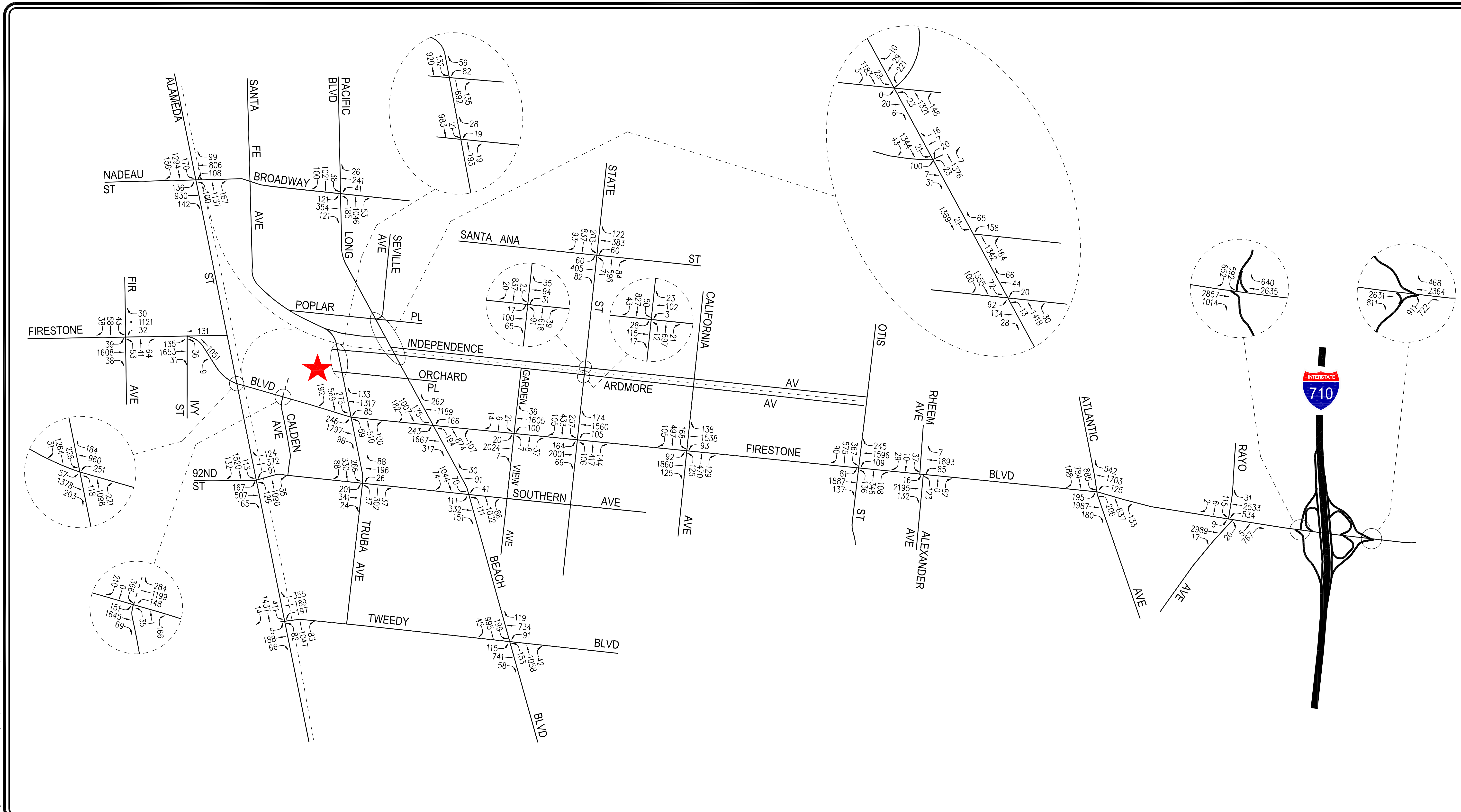

★ PROJECT SITE

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NOT TO SCALE

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FIGURE 8-4
YEAR 2031 WITHOUT PROJECT TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR
2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

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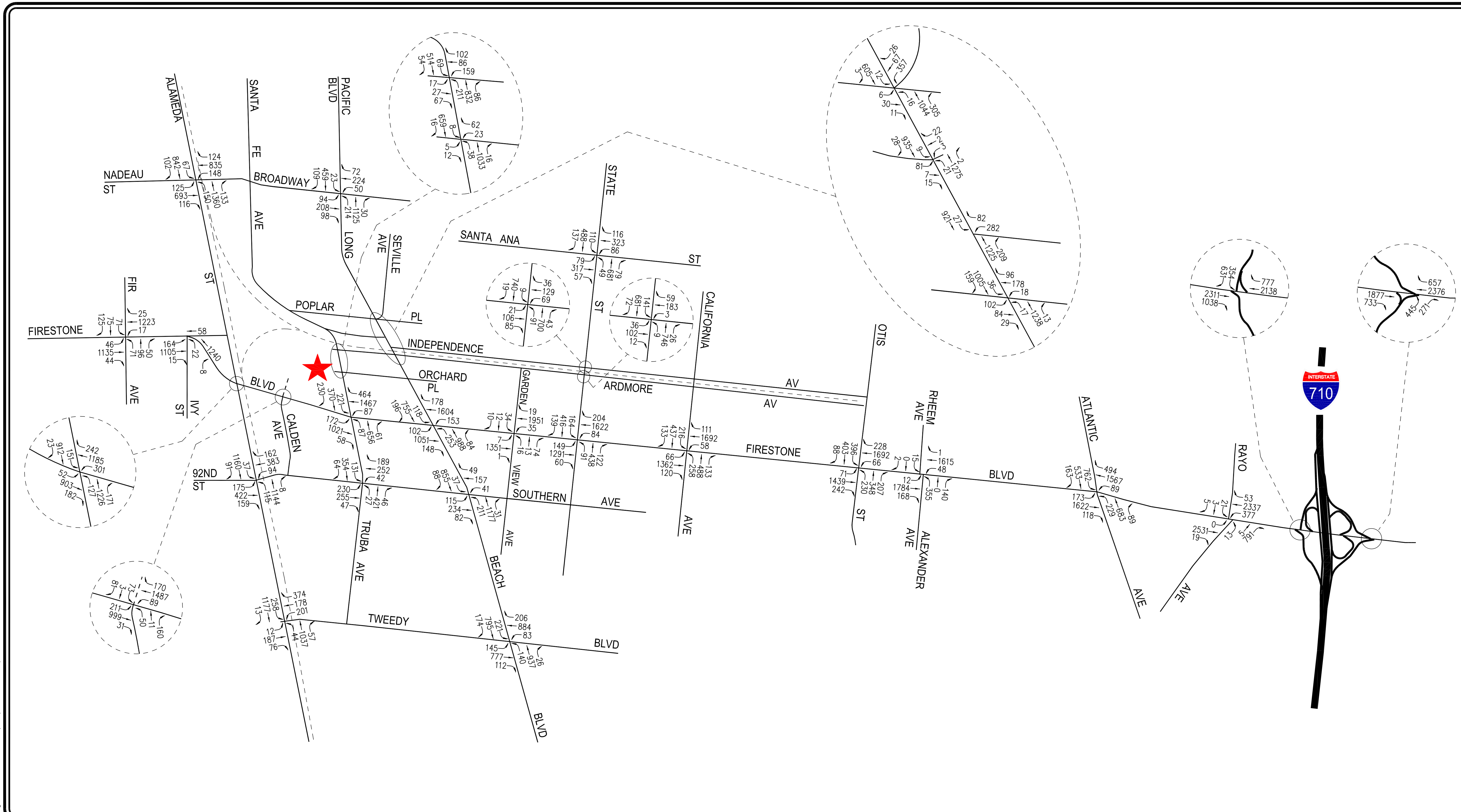

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N

NOT TO SCALE

★ PROJECT SITE

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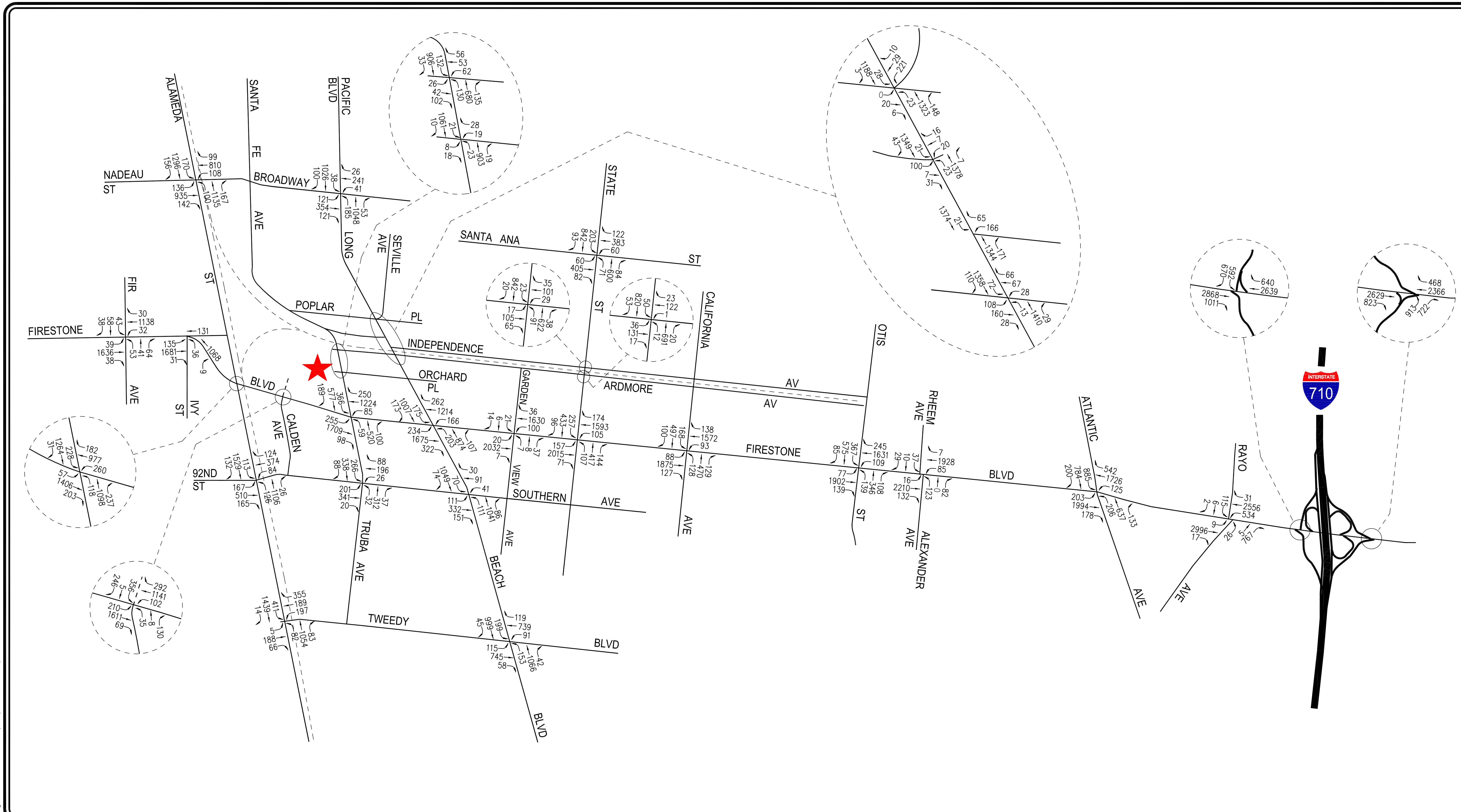
FIGURE 8-5

YEAR 2031 WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN



PROJECT SITE

NOT TO SCALE

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FIGURE 8-6
YEAR 2031 WITH PROJECT TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR
2013 FIRESTONE EDUCATIONAL CENTER MASTER PLAN

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9.0 County of Los Angeles Traffic Analysis

As discussed previously, an analysis was prepared using the County of Los Angeles ICU method for the seven study intersections located either partially or solely within the County of Los Angeles. The traffic impact analysis prepared for the County of Los Angeles study intersections using the ICU methodology and application of the County of Los Angeles significant traffic impact criteria is summarized in ***Table 9-1***. The corresponding weekday AM and PM peak hour ICU data worksheets are contained in *Appendix D*.

9.1 Existing Conditions

As indicated in column [1] of *Table 9-1*, six of the seven County of Los Angeles study intersections are presently operating at LOS D or better during the weekday AM and PM peak hours under existing conditions. The intersection of Alameda Street and Firestone Boulevard is currently operating at LOS E during the PM peak hour as shown in *Table 9-1*. The existing conditions ICU data worksheets for the County of Los Angeles study intersections during the weekday AM and PM peak hours are contained in *Appendix D*. As previously mentioned, the existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figures 4-3* and *4-4*, respectively.

9.2 Year 2031 With Ambient Growth Conditions

Growth in traffic due to the combined effects of continuing development, intensification of existing development, and other factors, were assumed to be 0.85% per year through year 2031 resulting in a 16.15 percent increase in background ambient traffic growth. This ambient growth incrementally increases the *v/c* ratios at the County of Los Angeles study intersections. As presented in column [2] of *Table 9-1*, three of the seven County of Los Angeles study intersections are expected to continue operating at LOS D or better during the weekday AM and PM peak hours. The remaining four intersections are expected to operate at LOS E or F during the AM and/or PM peak hours as shown in *Table 9-1*. The year 2031 with ambient growth conditions ICU data worksheets for the County of Los Angeles study intersections during the weekday AM and PM peak hours are contained in *Appendix D*.

9.3 Year 2031 With Project Conditions

As presented in column [3] of *Table 9-1*, application of the County of Los Angeles' threshold criteria to the year 2031 with project scenario indicates that one County study intersection is anticipated to be significantly impacted by the proposed project during the weekday AM and PM peak hours. The project is forecast to significantly impact the following County of Los Angeles study intersection based on application of the County impact criteria:

- Int. No. 4: Alameda Street/Firestone Boulevard (AM & PM peak hours)

As indicated in *Table 9-1*, incremental but not significant changes in *v/c* ratios are noted at the remaining six County of Los Angeles study intersections due to the proposed project.

Table 9-1
COUNTY OF LOS ANGELES SUMMARY OF VOLUME TO CAPACITY RATIOS AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
PROJECT BUILDOUT CONDITIONS

			[1]		[2]		[3]				[4]				[5]				[6]			
			YEAR 2012 EXISTING		YEAR 2031 W/ AMBIENT GROWTH		YEAR 2031 W/ PROJECT BUILDOUT		CHANGE V/C	SIGNIF. IMPACT	YEAR 2031 W/ PROJECT MITIGATION		CHANGE V/C	MITI-GATED	YEAR 2031 W/ RELATED PROJECTS		CHANGE V/C	SIGNIF. IMPACT	YEAR 2031 W/ REGIONAL MITIGATION		CHANGE V/C	MITI-GATED
NO.	INTERSECTION	PEAK HOUR	V/C	LOS	V/C	LOS	V/C	LOS	[(3)-(2)]		V/C	LOS	[(4)-(2)]		V/C	LOS	[(5)-(2)]		V/C	LOS	[(6)-(2)]	
1	Fir Avenue/	AM	0.521	A	0.590	A	0.592	A	0.002	NO	0.592	A	0.002	---	0.603	B	0.013	NO	0.603	B	0.013	---
	Firestone Boulevard	PM	0.494	A	0.558	A	0.564	A	0.006	NO	0.564	A	0.006	---	0.594	A	0.036	NO	0.594	A	0.036	---
2	Ivy Street-Manchester Avenue/	AM	0.414	A	0.465	A	0.468	A	0.003	NO	0.468	A	0.003	---	0.479	A	0.014	NO	0.479	A	0.014	---
	Firestone Boulevard	PM	0.484	A	0.546	A	0.552	A	0.006	NO	0.552	A	0.006	---	0.574	A	0.028	NO	0.574	A	0.028	---
3	Alameda Street/	AM	0.830	D	0.948	E	0.948	E	0.000	NO	0.948	E	0.000	---	0.987	E	0.039	YES	0.987	E	0.039	NO
	Nadeau Street	PM	0.845	D	0.965	E	0.968	E	0.003	NO	0.968	E	0.003	---	1.020	F	0.055	YES	1.020	F	0.055	NO
4	Alameda Street/	AM	0.874	D	0.999	E	1.012	F	0.013	YES	1.012	F	0.013	NO	1.110	F	0.111	YES	1.110	F	0.111	NO
	Firestone Boulevard	PM	0.909	E	1.040	F	1.060	F	0.020	YES	1.060	F	0.020	NO	1.262	F	0.222	YES	1.262	F	0.222	NO
5	Alameda Street/	AM	0.716	C	0.816	D	0.818	D	0.002	NO	0.818	D	0.002	---	0.857	D	0.041	YES	0.857	D	0.041	NO
	92nd Street-Southern Avenue	PM	0.847	D	0.967	E	0.967	E	0.000	NO	0.967	E	0.000	---	1.028	F	0.061	YES	1.028	F	0.061	NO
6	Alameda Street/	AM	0.759	C	0.865	D	0.868	D	0.003	NO	0.868	D	0.003	---	0.848	D	-0.017	NO	0.848	D	-0.017	---
	Tweedy Boulevard	PM	0.839	D	0.958	E	0.961	E	0.003	NO	0.961	E	0.003	---	0.957	E	-0.001	NO	0.957	E	-0.001	---
12	Pacific Boulevard/	AM	0.621	B	0.705	C	0.705	C	0.000	NO	0.705	C	0.000	---	0.719	C	0.014	NO	0.719	C	0.014	---
	Broadway	PM	0.751	C	0.856	D	0.858	D	0.002	NO	0.858	D	0.002	---	0.888	D	0.032	YES	0.888	D	0.032	NO

[a] According to the County of Los Angeles Department of Public Works' "Traffic Impact Analysis Report Guidelines, " January 1, 1997, Page 6:
"an impact is considered significant if the project related increase in the volume-to-capacity ratio (v/c) equals or exceeds the thresholds shown below:

Level of Service	Pre-Project ICU	Project-Related Increase in V/C
C	> 0.700 - 0.800	equal to or greater than 0.040
D	> 0.800 - 0.900	equal to or greater than 0.020
E/F	> 0.900	equal to or greater than 0.010

9.4 Year 2031 Cumulative Conditions

The *v/c* ratios at the County of Los Angeles study intersections are incrementally increased with the addition of traffic generated by the related projects listed in *Table 6-1*. As shown in Column [5] of *Table 9-1*, application of the County's threshold criteria to the year 2031 with related projects scenario indicates that the cumulative developments in the project vicinity are expected to result in significant cumulative impacts at the following four County of Los Angeles study intersections:

- Int. No. 3: Alameda Street/Nadeau Street (AM & PM peak hours)
- Int. No. 4: Alameda Street/Firestone Boulevard (AM & PM peak hours)
- Int. No. 5: Alameda Street/92nd Street-Southern Avenue (AM & PM peak hours)
- Int. No. 12: Pacific Boulevard/Broadway (PM peak hour)

As indicated in *Table 9-1*, incremental but not significant changes in *v/c* ratios are noted at the remaining three County of Los Angeles study intersections due to the cumulative developments in the project vicinity. The year 2031 cumulative (existing, ambient growth, project and related projects) traffic volumes at the study intersections during the AM and PM peak hours are presented in *Figures 8-5* and *8-6*, respectively.

10.0 ANALYSIS OF INTERIM FIRESTONE BOULEVARD ACCESS SCHEME

As previously discussed in Section 3.2, due to the offset between the existing shared access driveway and Calden Avenue, the lack of LACCD ownership to the west of the site's westerly property line (i.e., the area across from Calden Avenue), and the approved Calden Avenue/Firestone Boulevard traffic signal installation, this traffic study includes an analysis of an interim condition in which the existing shared access point along the north side of Firestone Boulevard will remain and be signalized and operated in conjunction with the Calden Avenue/Firestone Boulevard traffic signal (i.e., in an offset configuration). Based on coordination with the City, under the interim condition, all vehicular turning movements will continue to be allowed at the joint traffic signal and the existing shared access driveway will accommodate both LACCD-related traffic as well as traffic associated with the potential reuse of the adjacent HON site (i.e., as manufacturing/ warehousing uses under near-term conditions).

Since a breakdown of floor area associated with the potential re-occupancy of the HON site cannot be determined at this time, for purposes of the near-term analysis conditions it is assumed that half of the HON building floor area will be re-occupied as manufacturing use and the remaining half as warehousing use. In addition, the interim analysis condition focuses on year 2019 (i.e., approximately one year after the completion of project construction) but conservatively assumes project-related traffic based on the maximum student enrollment which is highly unlikely. As previously discussed in Section 2.4, the new FEC facility is envisioned to initially have approximately 5,000 students in year 2019 and the maximum enrollment of 9,000 students would likely not be achieved until year 2031. Thus, incorporating project-related traffic based on the maximum student enrollment by year 2019 provides a very conservative assessment of traffic operations at this location. It should be noted that under the interim analysis condition, two exiting travel lanes (i.e., one left-turn only lane and one right-turn only lane) would be provided at the existing shared access point (i.e., southbound approach). This interim Firestone Boulevard access scheme analysis is provided for informational purposes only.

The ICU data worksheets for the Project Driveway-Calden Avenue/Firestone Boulevard intersection for the year 2019 future with project conditions are contained in ***Appendix E***. The traffic generation forecast for the potential re-occupancy of the HON site and the traffic signal warrant analysis worksheets for the year 2019 future with project conditions are also contained in *Appendix E*. The following provides a summary of the anticipated intersection Level of Service employing the ICU methodology:

Year 2019 Future With Project and Interim Firestone Boulevard Access Conditions:

AM Peak Hour: *v/c* = 0.891, LOS D

PM Peak Hour: *v/c* = 0.846, LOS D

In addition to the intersection capacity analysis, this interim condition analysis also includes an operational evaluation of the subject Project Driveway-Calden Avenue/Firestone Boulevard intersection given signalization in the proposed offset configuration. The operational analysis has been prepared using the *Synchro 8* software. Specific elements such as the proposed lane configurations, lane widths, offset distance between the shared access driveway and Calden Avenue, storage lengths, crosswalk locations, posted speed limits, recommended traffic signal phasing, signal cycle length, traffic volumes, etc., have all been coded as part of the year 2019 future with project AM and PM peak hour Synchro networks.

The HCM Level of Service criteria for signalized intersections is contained in *Appendix E*. The Synchro analysis worksheets for the Project Driveway-Calden Avenue/Firestone Boulevard intersection for the year 2019 future with project conditions are also contained in *Appendix E*. The following provides a summary of the anticipated intersection operations based on the Synchro analysis:

<u>Year 2019 Future With Project and Interim Firestone Boulevard Access Conditions:</u>

AM Peak Hour: Delay = 26.3 seconds/vehicle, LOS C

PM Peak Hour: Delay = 25.7 seconds/vehicle, LOS C

Based on the above analyses, it is determined that the interim Firestone Boulevard access scheme (i.e., joint signalization of the Project Driveway-Calden Avenue/Firestone Boulevard intersection under an offset configuration) would accommodate the traffic volume forecasts under the year 2019 future with project conditions. Furthermore, it is important to note that the above interim access scheme analyses also do not assume the General Plan 2035 Mobility Element improvements (i.e., three through travel lanes in both the eastbound and westbound directions along Firestone Boulevard) which is consistent with the analysis prepared under year 2031 analysis conditions, however they do reflect attainment by 2019 of the maximum student enrollment of 9,000 students. The intersection operations would further improve during the weekday AM and PM peak hours when the General Plan improvements are completed and implemented.

11.0 TRANSPORTATION IMPROVEMENT MEASURES

The following sections provide an overview of transportation improvement measures that are anticipated to address, to the extent feasible, the significant traffic impacts to the local roadway network associated with the proposed project. Sections 8.0 and 9.0, above, summarized the expected significant weekday traffic impacts within the City of South Gate and the County of Los Angeles, respectively. It is important to note that the traffic analysis has been based on a conservative approach with respect to the analysis of potential project-related and cumulative traffic impacts.

There are generally two approaches in developing potential measures to mitigate a project's potentially significant traffic impact at a study intersection. One approach is to identify measures to increase the capacity of an intersection (e.g., through the addition of travel lanes, changes in traffic signal operations, etc.) such that the intersection would be able to accommodate the additional vehicular traffic generated by the project. Such potential capacity enhancement measures have been identified herein for the study intersections determined to be significantly impacted by the project. It is noted that the study intersections are under the jurisdiction of the City of South Gate, the County of Los Angeles, or both. Thus, while the measures proposed herein can be considered reasonable and feasible, the Lead Agency (i.e., LACCD) cannot control the actual implementation of these measures as the permitting and construction is under the jurisdiction of another agency (i.e., City of South Gate, County of Los Angeles) and/or right-of-way does not currently exist. Thus, should the other jurisdictions not permit the implementation of the measures identified herein; a significant and unavoidable impact at the affected intersection(s) would result. In these instances the conclusions with respect to significance are appropriately outlined in the following sections.

The second approach to mitigating a project's potentially significant traffic impact is through the development and implementation of demand management measures to limit or reduce the project's potential contribution of vehicular traffic to a study intersection. Commonly outlined in a Transportation Demand Management or TDM plan, such measures are designed to reduce the amount of vehicular traffic that would be generated by a project as compared to an unmanaged condition. For the TDM plan measures outlined herein, most if not all are under the jurisdiction of the Lead Agency (e.g., developing a parking permit rate structure to create disincentives to driving) while other measures are outside the control of the Lead Agency (e.g., providing additional bike lanes as outlined in the City of South Gate General Plan). Lastly, specific trip reductions due to TDM measures have not been assumed or quantified in this analysis, as it is not certain at this time which elements could or would be implemented by the LACCD for this campus.

11.1 Overview of the City of South Gate General Plan 2035

The City of South Gate General Plan 2035 Mobility Element sets forth the plan for mobility and circulation within the City. It is subsequently based on the overall vision and guiding principles identified in the General Plan. One of these visions for the City is to put people first by calming traffic where appropriate, encouraging alternative modes of transportation such as walking, bicycling and use of public transit. This traffic analysis takes into account all of the key concepts of the City's Mobility Element. It is also recognized that while not all improvements and enhancements to the transportation system outlined in the City's Mobility Element can be expected to be in place near term, it is envisioned that the system goals will be achieved by year 2035.

Specifically as it relates to the East Los Angeles Community College Firestone Educational Center project site and immediate vicinity, the following key elements of the Mobility Plan are noted:

Roadway Classifications

As previously discussed in Section 4.1 of this study, the General Plan roadway classifications for streets surrounding the project site are as follows:

- Firestone Boulevard is classified as a Boulevard (Primary Arterial) and ultimately will be constructed to provide a right-of-way cross section width of between 104 and 116 feet. In the case of Firestone Boulevard, an overall right-of-way width of between 104 and 116 feet (i.e., between 52-foot and 58-foot ½ right-of-way width) is envisioned which ultimately would require between two-feet and eight-feet of dedication along both sides. Once the roadway dedications occur, three travel lanes in each direction with associated raised median islands and left-turn lanes could be constructed.

  As discussed more fully in the following section of this report (i.e., Section 11.2), right-of-way outside of the ELAC FEC ownership (e.g., the adjoining existing HON site as well as other sites and frontages along Firestone Boulevard) cannot be assumed to be acquired by the future year conditions analysis scenarios (e.g., by year 2031). Thus, this study conservatively assumes that any mitigation measures involving the need for three travel lanes in either direction along Firestone Boulevard cannot be implemented prior to Year 2035 (i.e., the future horizon year of the General Plan).

- Santa Fe Avenue is classified as a Street (Collector) and ranges from between 80 and 84 feet of overall right-of-way (with roadway width ranges between 56 and 60 feet). As noted in the Mobility Element this cross section provides for two lanes in each direction along with installation of bicycle lanes in lieu of on-street parking where appropriate (i.e., Santa Fe Avenue is designated for implementation of a Class II – Bike Lane between Independence/Ardmore Avenues and Southern Avenue). Based on discussion with the City of South Gate, the existing on-street parking along the east side of Santa Fe Avenue will likely remain while a bicycle lane may be installed on the west side of Santa Fe Avenue along the FEC project frontage. It should be noted that the existing roadway width along the Santa Fe Avenue project frontage is approximately 74 feet which significant exceeds the Mobility Element roadway standard.

Bicycle Hub

As shown in Figure ME 5 of the City's General Plan 2035 Mobility Element, the project site is designated as a future bicycle hub. Given the educational nature of the proposed project, the focus on the encouragement of students to utilize public transportation and alternative modes of transportation (e.g., bicycling), and the design team's effort to make the project consistent with and in support of the principles of the City's General Plan, bicycle integration has been carefully considered in the project's design.

Transit

Another key concept and component of the City General Plan is the introduction and operation of a local bus transit service with convenient bus transfer points that would circulate around the City connecting residential neighborhoods to key commercial, institutional, and recreational destinations. Transit service is currently provided along the project frontages as previously discussed in Section 4.2 of this report. Although cancelled in the Fall 2012 semester due to budget cuts, the shuttle between the main ELAC campus and the Firestone Educational Center has been reinstated in the Spring 2013 semester and is expected to continue to serve the existing and future student enrollment. In addition, as shown in Figure ME4 of the City's General Plan 2035 Mobility Element, Firestone Boulevard is also designated as a Primary Transit Street.

11.2 City of South Gate Transportation Improvement (Mitigation) Measures

The following paragraphs provide an overview of the transportation improvement mitigation measures reviewed and considered for intersections within the City of South Gate that are expected to be significantly impacted by the proposed project, as previously summarized in Section 8.0 of this report.

Intersection No. 4: Alameda Street/Firestone Boulevard

This intersection is under joint jurisdiction between the City of South Gate and County of Los Angeles. The proposed project is expected to result in a significant weekday PM peak hour impact under the existing with project conditions and the year 2031 with project conditions. Since the Alameda Corridor grade-separated rail line runs along the east side of the intersection and precludes options for roadway widening, the opportunities for potential physical measures are limited. While Firestone Boulevard is designated as a Boulevard (Primary Arterial) in the City's General Plan 2035 and is planned to ultimately provide three travel lanes in each direction, the future widening and dedication that is planned within the City's jurisdiction (i.e., along the east leg of the intersection) does not extend into the County's jurisdiction (i.e., along the west leg of the intersection). This jurisdictional boundary and transition issue, the immediate proximity of the Alameda Corridor grade separated rail line, and the lack of additional available right-of-way all pose significant challenges to the formulation of any mitigation measure.

- Conversion of Eastbound Right-turn Only Lane to a Combination Through/Right-turn Lane

  While it has been determined from a calculation standpoint that the conversion of the eastbound right-turn only lane to a combination through-right turn lane would be anticipated to reduce the project's significant impact during the PM peak hour to less than significant levels, it cannot be constructed without additional right-of-way beyond that which is currently available given the proximity of the Alameda Corridor.

- Installation of a Westbound Right-turn Only Lane

  Another option considered for potential mitigation consisted of the installation of a westbound right-turn only lane. Since the critical movements of the intersection during the PM peak hour do not include the westbound through movement, this measure did not address the project's PM peak hour impacts.

For all of the above reasons, the project's significant impacts during the PM peak hour under the existing with project conditions and the year 2031 with project conditions remain significant and unavoidable.

Intersection No. 7: Project Driveway-Calden Avenue/Firestone Boulevard

As stated in previous sections, this location serves as one of three access points for students, faculty, staff and visitors of the FEC project. The driveway is currently 32 feet wide, is a shared access point for two entities (LACCD which owns the project site on the east side of the driveway and HON which owns the adjoining property to the west of the driveway) and is offset to the east of Calden Avenue. As shown previously in *Table 8-1*, application of the City of South Gate's significant impact threshold criteria indicates that the proposed project is expected to result in incremental but not significant impacts at this intersection under the existing with project conditions and the year 2031 with project conditions.

However, due to the City approved installation of a traffic signal at the Calden Avenue/Firestone Boulevard intersection as part of the Calden Court Apartments project and the City's requirement against restricting any vehicular turning movements, the City has directed that the shared access point (between LACCD and HON) at Firestone Boulevard also be signalized and integrated into the Calden Avenue/Firestone Boulevard traffic signal under a single signal controller. The City and LACCD have agreed that LACCD's fair share contribution to the joint traffic signal design and installation is 50 percent. As discussed and analyzed in Section 10.0, the near-term operation under the signalized offset configuration is anticipated to accommodate existing and future traffic, including the new FEC facility at maximum enrollment, the Calden Court Apartments project at buildout, the reuse of the HON site (as manufacturing/warehousing uses under interim conditions), other related development projects in the area, and regional traffic growth. Even though this study intersection is not anticipated to be significantly impacted by the proposed project utilizing the City of South Gate's significant impact threshold criteria, the City and LACCD have agreed to implement the joint traffic signal. Depending on the construction timing of the FEC project, the Calden Court Apartments, and the potential redevelopment of the HON site, one of the following options will apply:

- Option 1: If the proposed FEC project is constructed in advance of the Calden Court Apartments project, the joint traffic signal shall be designed and constructed by LACCD in order to facilitate all turning movements with the signal in an offset configuration. Appropriate roadway restriping and signage will be incorporated into the design. One left-turn only lane and one right-turn only lane will be provided at the joint LACCD/HON access point (i.e., southbound approach of the offset intersection). Based on the fair share negotiations between the City of South Gate and LACCD, LACCD would receive a 50 percent reimbursement of the total design and construction costs from either the Calden Court Apartments project Applicant and/or the City of South Gate.

- Option 2: If the Calden Court Apartments project proceeds in advance of the proposed FEC project, the joint traffic signal will be designed and constructed by either the Calden Court Apartments project Applicant or the City of South Gate in order to facilitate all turning movements with the signal in an offset configuration. Appropriate roadway restriping and signage will be incorporated into the design. One left-turn only lane and one right-turn only lane will be provided at the joint LACCD/HON access point (i.e., southbound approach of the offset intersection). Under this option, LACCD will be responsible for up to 50 percent of the total design and construction costs associated with the joint traffic signal installation at such time as the proposed FEC project moves forward.

- Option 3: In the unlikely event that the HON site is redeveloped in advance of the proposed FEC project and the Calden Court Apartments project, it is assumed that the existing joint LACCD/HON access point would be signalized and relocated westerly to align opposite Calden Avenue (refer to ***Appendix F*** for the traffic signal warrant analysis worksheets). Under this option, LACCD would be responsible for up to 50 percent of the cost of the traffic signal. However, LACCD is not responsible for any potential property acquisition costs and/or any other improvements that may be required as part of the HON redevelopment project.

<u>Intersection No. 8: Santa Fe Avenue/Project Driveway-Ardmore Avenue</u>

This primary access point is located along the west side of Santa Fe Avenue, opposite Ardmore Avenue. The proposed project is expected to result in significant project impacts during the weekday AM and PM peak hours under the existing with project conditions and the year 2031 with project conditions. Mitigation for this location consists of the installation of a traffic signal (refer to *Appendix F* for the traffic signal warrant analysis worksheets) as well as the construction of two inbound travel lanes and two outbound travel lanes and associated roadway restriping and signage. The outbound (i.e., exiting FEC traffic) travel lanes would be configured to provide a shared left/through lane and an exclusive right-turn only lane while two inbound travel lanes would be provided. In addition, adequate northbound left-turn storage along Santa Fe Avenue for entering (northbound) FEC motorists would be provided. This design is expected to facilitate traffic flow along Santa Fe Avenue as well as to minimize any potential vehicle queuing into and out of the proposed parking structure. This improvement is expected to reduce the project's significant impact to less than significant levels.

It should be noted that should the proposed project be approved, this mitigation would need to be formally designed and constructed prior to occupancy of the project. At such time as the formal signal design process is initiated, the necessary coordination with the California Public Utilities Commission (CPUC) and/or Union Pacific Railroad (UPRR) will occur and details (i.e., such as the need for and design of traffic signal preemption given the proximity of the existing Santa Fe Avenue railroad crossing gates and control) will be discussed and addressed as part of the traffic signal pre-design coordination effort.

Intersection No. 9: Santa Fe Avenue/Project Driveway-Orchard Place

This proposed access point is located along the west side of Santa Fe Avenue, opposite Orchard Place. The proposed project is expected to result in a significant project impact during the weekday PM peak hour under the year 2031 with project conditions. Mitigation for this location consists of restriping the northbound and southbound approaches on Santa Fe Avenue to provide a northbound left-turn lane and a southbound left-turn lane. This improvement can be accommodated within the existing Santa Fe Avenue roadway width. As discussed previously, the existing Santa Fe Avenue project frontage is approximately 74 feet wide which significantly exceeds the General Plan Mobility Element roadway width standards of between 56 and 60 feet for a Street (Collector) classification.

It should be noted that the City of South Gate requires that the level of service for one-way stop-controlled and two-way stop-controlled intersections be based solely on the worst case delays experienced on the minor street approach, regardless of whether a project would directly contribute traffic to that approach or not. For the subject intersection, the worst case minor street approach delay is expected to occur on westbound Orchard Place. Therefore, although the proposed northbound and southbound left-turn improvement can be considered feasible and appropriate in providing additional vehicular capacities to the intersection, from the City of South Gate's unsignalized intersection calculation standpoint, it does not reduce the project's significant traffic impact in the PM peak hour to a less than significant level (i.e., the delays for the westbound Orchard Place approach would remain the same with or without the recommended improvement).

Another option considered for potential mitigation at this location consists of improving the westbound Orchard Place approach. Orchard Place currently provides one through travel lane in each direction with parking permitted on both sides of the street. The potential mitigation would consist of restriping the westbound Orchard Place approach at Santa Fe Avenue to provide one shared left/through lane and one right-turn only lane. In order to accommodate this measure, two on-street parking spaces along the north side of Orchard Place immediately east of Santa Fe Avenue would require removal. In addition, based on the existing roadway and sidewalk widths available on Orchard Place, this measure would likely result in the installation of 9-foot or 10-foot travel lanes at the westbound Orchard Place approach which would likely be considered as sub-standard widths by the City. Therefore, although this measure is anticipated to improve the westbound approach delay operations (and therefore reduces the project's traffic impact to a less than significant level), it is not recommended for the above reasons.

Another option considered for potential mitigation at this location consists of the installation of a traffic signal (refer to *Appendix F* for the traffic signal warrant analysis worksheets). Based on the traffic signal warrant analysis, the Peak Hour Warrant is not met under the future year 2031 with project conditions. Thus, even though a traffic signal installation at this location is expected to reduce the project's traffic impact to a less than significant level during the weekday PM peak hour, it is not recommended for consideration.

For all the above reasons, it has been conservatively determined that the project's significant weekday PM peak hour traffic impact would remain significant and unavoidable at the Santa Fe Avenue/Project Driveway-Orchard Place intersection.

<u>Intersection No. 10: Santa Fe Avenue/Firestone Boulevard</u>

The proposed project is expected to result in significant project impacts during the weekday AM peak hour under the existing with project conditions and during the weekday AM and PM peak hours under the year 2031 with project conditions. Mitigation for this intersection consists of the installation of eastbound and westbound exclusive right-turn only lanes. This improvement is expected to reduce the project's significant traffic impacts to less than significant levels. Based on field measurements, the existing eastbound and westbound combination through-right turn lanes are 22 feet in width and thus, could be restriped to provide a 10-foot through lane with a 12-foot wide right-turn only lane for both the eastbound and westbound approaches. Up to two on-street parking spaces would likely require removal along the north and south sides of Firestone Boulevard. It is also recommended that the City of South Gate consider relocation of the existing eastbound near-side bus stop to a far-side bus stop.

11.3 County of Los Angeles Transportation Improvement (Mitigation) Measures

The following paragraphs provide an overview of the transportation improvement (mitigation) measures reviewed and considered for intersections either partially or fully within the County of Los Angeles that are expected to be significantly impacted based on County of Los Angeles analysis methodology, as previously summarized in Section 7.2 of this report.

<u>Intersection No. 3: Alameda Street/Nadeau Street</u>

Since the Alameda Corridor grade-separated rail line runs along the east side of the intersection and precludes options for roadway widening, the opportunities for potential physical measures are quite limited at this location. The installation of an eastbound right-turn only lane is expected to only partially mitigate the significant cumulative PM peak hour traffic impact. This measure is not expected to reduce the significant cumulative AM and PM peak hour traffic impacts to less than significant levels. As the additional right-of-way for the eastbound right-turn only lane improvement is beyond the control of the Applicant and likely to extend beyond the cumulative analysis year of the project (i.e., year 2031), these cumulative impacts are anticipated to remain as significant and unavoidable for purposes of this analysis. No other mitigation has been determined to be feasible without the acquisition of significant additional right-of-way which currently does not exist.

Intersection No. 4: Alameda Street/Firestone Boulevard

This intersection is under joint jurisdiction between the City of South Gate and County of Los Angeles. Since the Alameda Corridor grade-separated rail line runs along the east side of the intersection and precludes options for roadway widening, the opportunities for potential physical measures are limited. While Firestone Boulevard is designated as a Boulevard (Primary Arterial) in the City's General Plan 2035 and is planned to ultimately provide three travel lanes in each direction, the future widening and dedication that is planned within the City's jurisdiction (i.e., along the east leg of the intersection) does not extend into the County's jurisdiction (i.e., along the west leg of the intersection). This jurisdictional boundary and transition issue, the immediate proximity of the Alameda Corridor grade separated rail line, and the lack of additional available right-of-way all pose significant challenges to the formulation of any mitigation measure.

- Conversion of Eastbound Right-turn Only Lane to a Combination Through/Right-turn Lane

  While it has been determined from a calculation standpoint that the conversion of the eastbound right-turn only lane to a combination through-right turn lane would be anticipated to reduce the project's significant impact during the PM peak hour to less than significant levels, it cannot be constructed without additional right-of-way beyond that which is currently available given the proximity of the Alameda Corridor.

  In addressing the project's significant cumulative traffic impacts, the above measure was found to only partially mitigate the significant cumulative AM and PM peak hour impacts. The above measure did not reduce the significant cumulative AM and PM peak hour impacts to less than significant levels.

- Installation of a Westbound Right-turn Only Lane

  Another option considered for potential mitigation consisted of the installation of a westbound right-turn only lane. Absent the challenges from a design perspective, from a calculation standpoint this measure did not reduce the significant cumulative AM and PM peak hour impacts to less than significant levels.

- Conversion of Eastbound Right-turn Only Lane to a Combination Through/Right-turn Lane and Installation of a Westbound Right-turn Only Lane

  Another option considered for potential mitigation consisted of a combination of both of the above measures (i.e., the conversion of the eastbound right-turn only lane to a combination through-right turn lane along with the installation of a westbound right-turn only lane). The combination of these measures were found to only partially mitigate the significant cumulative AM and PM peak hour impacts. The combination of these measures did not reduce the significant cumulative AM and PM peak hour impacts to less than significant levels.

For the above reasons, the project's significant AM and PM peak hour and significant cumulative AM and PM peak hour impacts remain significant and unavoidable.

Intersection No. 5: Alameda Street/92nd Street-Southern Avenue

This intersection is also under joint jurisdiction between the City of South Gate and County of Los Angeles (i.e., 92nd Street is under County of Los Angeles jurisdiction while Southern Avenue is under City of South Gate jurisdiction). Since the Alameda Corridor grade-separated rail line runs along the east side of the intersection it precludes several options for roadway widening and thus opportunities for potential physical improvement measures are quite limited. As Southern Avenue is designated as a Collector in the City of South Gate's General Plan 2035 Mobility Element, it has been determined that additional travel lanes along the existing roadway would not be feasible without acquisition of additional right-of-way and a formal re-designation of the roadway.

While installation of an additional southbound through travel lane is anticipated to reduce the significant cumulative traffic impacts expected during the AM and PM peak hours, inadequate right-of-way currently exists. Thus, the cumulative traffic impacts are considered to be significant and unavoidable.

Intersection No. 12: Pacific Boulevard/Broadway

Prior cumulative mitigation recommended for consideration for this intersection consisted of the installation of an eastbound exclusive right-turn only lane. The existing eastbound combination through-right turn lane is approximately 20 feet in width. While this does not provide the ideal width for a right-turn only lane, it was previously recommended for consideration in response to a significant impact and when large size vehicles do not comprise a significant portion of the right-turn traffic volume. Thus, the eastbound approach could have been restriped to provide a 10-foot wide through lane and an exclusive 10-foot wide eastbound right-turn only lane. This improvement was expected to reduce the significant cumulative PM peak hour impact to less than significant levels. Although it was determined that a right-turn only lane width of 10 feet was feasible in that many other examples exist (particularly in urban and/or congested areas), Los Angeles County previously reviewed the measure and concluded that insufficient width was available to accommodate the prevailing traffic and therefore the County did not accept this mitigation measure.

Another option considered as a potential cumulative mitigation measure at this location consisted of providing a fair-share contribution towards an Intelligent Transportation System (ITS) for traffic signal synchronization and optimization upgrades. This is also consistent with one of the key transportation programs outlined in the City of South Gate's General Plan 2035 Mobility Element which notes the importance of effectively managing traffic operations on key streets with a focus to maximize the effective capacity and utilization of the existing street system. This entails, among others, traffic operation procedures such as signal coordination, traffic signal synchronization, the integration of the latest available technologies in traffic detection, and the overall optimum signalization on major thoroughfares. It is estimated that an ITS system upgrade will reduce the critical volume-to-capacity (*v/c*) ratios by between five and seven percent (i.e., a reduction in the reported *v/c* ratio of between 0.05 and 0.07). Thus, by employing a 0.05 reduction in the PM peak hour *v/c* ratio for the future year 2031 cumulative conditions, the significant cumulative impact would be reduced to less than significant levels.

It should be noted that the County of Los Angeles currently has a comprehensive traffic signal synchronization system and information exchange network in place (including the operation of the Los Angeles County Traffic Management Center) and is continuing to expand to incorporate additional areas. However, for traffic study purposes, County of Los Angeles does not typically accept funding contributions from individual projects for purposes of enhancing the County's ITS program (and therefore does not typically accept intersection capacity enhancements to realize the ITS benefits). As a result, it is conservatively concluded that the cumulative PM peak hour traffic impact at this location would remain significant and unavoidable in the year 2031 cumulative analysis conditions.

11.4 Transportation Demand Management Measures

An enhanced Transportation Demand Management (TDM) program is recommended for consideration by the LACCD in conjunction with the proposed project. The TDM measures recommended for consideration are aimed at further decreasing the number of vehicular trips generated by persons traveling to/from the site by offering specific facilities, services and actions designed to increase the use of alternative transportation modes (e.g., transit, rail, walking, bicycling, etc.) and ridesharing. These measures, many of which can continue to be provided and others to be considered for implementation, would be expected to further reduce the project's potential traffic impacts. As it cannot be determined at this time which components of a program could be expanded upon, the following menu of measures is provided for informational purposes only. As such, no formal trip reductions have been incorporated into the traffic analysis.

- *TDM Web Site Information*. Transportation information should continue to be provided in a highly visible and accessible location on the school's web site, including links to local transit providers, area walking, bicycling maps, etc., to inform employees, students and visitors of available alternative transportation modes to access the campuses and travel in the area. The web site should also highlight the environmental benefits of utilization of alternative transportation modes.

- *TDM Promotional Material*. ELAC should continue to provide and exhibit in public places information materials on options for alternative transportation modes and opportunities. In addition, transit fare media and day/month passes should be made available to employees, students and visitors during typical business hours.

- *Transit Welcome Package*. All new students and employees of the college could be provided with a Transit Welcome Package (TWP) in addition to holding a Transportation Fair each semester. The TWP could include information regarding use of the transit system, area bus/rail transit route information, bicycle facilities (including routes, rental and sales locations, on-site bicycle racks, walking and biking maps), and convenient local services and restaurants within walking distance of the ELAC campuses. Depending on financial circumstances, ELAC could consider offering discounted transit passes.

- *Internet-Based/Independent Study Education*. ELAC should continue to offer internet-based and independent study classes which allows for a portion or all of the education activities to occur without students and faculty needing to be physically on-site at an ELAC facility.

- *Public Transit Passes*. To the extent feasible, ELAC could offer free or discounted public transit coordination with various transit providers for all students and staff. The program should allow students to be able to use their ELAC identification card for either free or substantially discounted transit passes.

- *Carpool Program for Employees*. ELAC should continue their current practice of providing preferential parking within the parking garage for employees who commute to work in ELAC registered carpools. An employee who drives to work with at least one other employee to the campus may register as a carpool entitled to preferential parking within the meaning of this provision.

- *Public Transit Stop Enhancements.* Working in cooperation with other transit agencies and the City of South Gate, ELAC can seek to improve existing bus stops with enhanced shelters and transit information within the immediate vicinity of the FEC campus. Enhancements could include weather protection, lighting, benches, telephones, and trash receptacles. These improvements would be intended to make riding the bus a safer and more attractive alternative. This recommendation would not commit ELAC to fund any particular improvements, however.

- *Convenient Parking for Bicycle Riders*. ELAC could provide locations at the site for convenient parking for bicycle commuters for working employees, students attending classes, and visitors. The bicycle parking would be located within the campus and/or in the public right-of-way adjacent to the campus such that long-term and short-term parkers can be accommodated. Bicycle parking may mean bicycle racks, a locked cage, or other similar parking area. ELAC should observe utilization of bicycles at the main campus and the satellite campus each semester and, if necessary, make arrangements for additional bicycle parking if the demand for bicycle parking spaces exceeds the supply.

- *Student Parking Pricing*. ELAC should continue to require that students pay for their own parking.

- *Student Hiring Policies*. To the extent feasible, ELAC should provide preferential consideration to hiring current ELAC students for part-time employment based on satisfaction of other requirements of the available positions.

- *Local Hiring Program*. To the extent feasible, when hiring ELAC should conduct outreach to residents who live within one mile of the campus (or other facility to where the position of employment is offered), based on satisfaction of other requirements of the available positions.

- *Expanded Bicycle Routes*. ELAC should coordinate with the City of South Gate in an effort to enhance and expand the current network of bicycle routes serving the campus.

12.0 CONGESTION MANAGEMENT PROGRAM TRAFFIC IMPACT ASSESSMENT

The Congestion Management Program (CMP) is a state-mandated program that was enacted by the State Legislature with the passage of Proposition 111 in 1990. The program is intended to address the impact of local growth on the regional transportation system.

As required by the 2010 Congestion Management Program for Los Angeles County, a Traffic Impact Assessment (TIA) has been prepared to determine the potential impacts on designated monitoring locations on the CMP highway system. The analysis has been prepared in accordance with procedures outlined in the *2010 Congestion Management Program*, County of Los Angeles Metropolitan Transportation Authority, October 2010.

According to Section D.9.1 (Appendix D, page D-6) of the 2010 CMP manual, the criteria for determining a significant transportation impact is listed below:

> "A significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity ($v/c \geq 0.02$), causing or worsening LOS F ($v/c > 1.00$)."

The CMP impact criteria apply for analysis of both freeway and intersection monitoring locations.

12.1 Intersections

The following CMP intersection monitoring locations in the project vicinity have been identified based on the corresponding forecast project-related trips assigned to the intersection during the AM and PM peak hours as summarized in ***Table 12-1***:

CMP Station	Intersection
• No. 143	Alameda Street/Firestone Boulevard
• No. 144	Atlantic Avenue/Firestone Boulevard

The CMP TIA guidelines require that intersection monitoring locations must be examined if the proposed project will add 50 or more trips during either the AM or PM weekday peak hours. As shown in *Table 12-1*, the proposed project is anticipated to add more than 50 trips at the identified CMP intersections during the AM and/or PM peak hours. A review of potential impacts at the two CMP monitoring intersections has been prepared.

The review of potential impacts at the two CMP monitoring intersections is based on the overall analysis prepared for the proposed project and application of the CMP threshold criteria. As shown in the traffic impact analysis summarized in *Table 8-1*, application of the CMP threshold criteria to CMP Station 143: Alameda Street/Firestone Boulevard (also referred to as study intersection No. 4) indicates that the proposed project is expected to result in a significant impact during the weekday PM peak hour. As indicated in *Table 8-1*, incremental but not significant

Table 12-1
CMP TRAFFIC IMPACT ASSESSMENT [1]

CMP STATION	LOCATION	PEAK HOUR	PROJECT BUILDOUT		
			FORECAST PROJECT TRIPS	CMP TRAFFIC IMPACT ASSESSMENT THRESHOLD	CMP TRAFFIC IMPACT ASSESSMENT REQUIRED?
No. 143	Alameda Street/Firestone Boulevard (Study Intersection No. 4)	AM PM	94 70	50 50	Required Required
No. 144	Atlantic Avenue/Firestone Boulevard (Study Intersection No. 28)	AM PM	65 48	50 50	Required N/A

[1] Based on procedures outlined in the "2010 Congestion Management Program", County of Los Angeles Metropolitan Transportation Authority, October 2010.

impacts are noted at CMP Station 144: Atlantic Avenue/Firestone Boulevard (also referred to as study intersection No. 28) during both the weekday AM and PM peak hours.

As discussed in Section 11.2, the Alameda Street/Firestone Boulevard intersection is under joint jurisdiction between the City of South Gate and County of Los Angeles. Since the Alameda Corridor grade-separated rail line runs along the east side of the intersection and precludes options for roadway widening, the opportunities for potential physical measures are limited. While Firestone Boulevard is designated as a Boulevard (Primary Arterial) in the City's General Plan 2035 and is planned to ultimately provide three travel lanes in each direction, the future widening and dedication that is planned within the City's jurisdiction (i.e., along the east leg of the intersection) does not extend into the County's jurisdiction (i.e., along the west leg of the intersection). This jurisdictional boundary and transition issue, the immediate proximity of the Alameda Corridor grade separated rail line, and the lack of additional available right-of-way all pose significant challenges to the formulation of any mitigation measure.

While it has been determined from a calculation standpoint that the conversion of the eastbound right-turn only lane to a combination through-right turn lane would be anticipated to reduce the project's significant impact during the PM peak hour to less than significant levels, it cannot be constructed without additional right-of-way beyond that which is currently available given the proximity of the Alameda Corridor.

Another option considered for potential mitigation consisted of the installation of a westbound right-turn only lane. Since the critical movements of the intersection during the PM peak hour do not include the westbound through movement, this measure did not address the project's PM peak hour impacts. For all of the above reasons, the project's significant impacts during the PM peak hour remain significant and unavoidable.

12.2 Freeways

The following CMP freeway monitoring locations in the study area have been identified:

- <u>CMP Station</u> <u>Segment</u>

CMP Station	Segment
No. 1043	I-105 Freeway west of I-710 & east of Harris Avenue
No. 1046	I-110 Freeway at Manchester Avenue
No. 1080	I-710 Freeway north of Firestone Boulevard

The CMP TIA guidelines require that freeway monitoring locations must be examined if the proposed project will add 150 or more trips (in either direction) during either the weekday AM or PM peak hours. The 2013 Firestone Educational Center project will not add 150 or more trips (in either direction) during either the weekday AM or PM peak hours to the CMP freeway monitoring locations which is the threshold for preparing a traffic impact assessment, as stated in the CMP manual. Therefore, no further review of potential impacts to freeway monitoring locations that are part of the CMP highway system is required.

12.3 Transit

As required by the *2010 Congestion Management Program*, a review has been made of the CMP transit service. As previously discussed, existing transit service is provided in the vicinity of the proposed project.

The project trip generation, as shown in *Table 5–1*, was adjusted by values set forth in the CMP (i.e., person trips equal 1.4 times vehicle trips, and transit trips equal 3.5 percent of the total person trips) to estimate transit trip generation. Pursuant to the CMP guidelines, the proposed project is forecast to generate demand for 14 new transit trips during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is anticipated to generate demand for 11 new transit trips. Over a 24-hour period, the proposed project is forecast to generate demand for 136 daily transit trips. The calculations are as follows:

- AM Peak Hour = 289 × 1.4 × 0.035 = 14 Transit Trips
- PM Peak Hour = 224 × 1.4 × 0.035 = 11 Transit Trips
- Daily Trips = 2,780 × 1.4 × 0.035 = 136 Transit Trips

As shown in *Table 4-2*, Metro and City of South Gate bus routes are provided in the study area. As outlined in *Table 4-2* under the "No. of Buses/Trains" column, these transit lines provide service for an average (i.e., an average of the directional number of buses during the peak hours) of approximately 94 buses/trains serving the project area during the AM peak hour and approximately 91 buses/trains serving the project area during the PM peak hour. Therefore, based on the above calculated AM and PM peak hour transit trips, this would correspond to an average of less than one new transit rider per bus due to the proposed project. It is anticipated that the existing transit service in the project area will adequately accommodate the project generated transit trips. Thus, given the low number of generated transit trips per bus, no impacts on existing or future transit services in the project area are expected to occur as a result of the proposed project.

13.0 CONCLUSIONS

This traffic impact study has been prepared to identify and evaluate the potential impacts of traffic generated by the proposed 2013 Firestone Educational Center (FEC) Master Plan. The proposed project is planned to accommodate a maximum student enrollment of 9,000 students. The proposed project would consist of the construction of an approximately 105,000 square-foot building, a parking structure, entry drives, potential drop-off/pick-up areas internal to the site, open space as well as surface parking areas for visitors and guests. The existing Building 4 is proposed to be demolished while Buildings 1, 2, and 3 would remain (with no building alterations proposed). The existing South Gate Education Center (SGEC) facility located across from (south) and just west of the project site would continue to operate while the new FEC campus is being constructed. Construction of the proposed project is planned to commence in year 2015 and is anticipated to be completed by year 2018. Upon completion, the new FEC facility is envisioned to initially have approximately 5,000 students in year 2019 (by comparison, the existing SGEC has an enrollment of 4,912 students). The date when maximum student enrollment could occur is dependent upon a number of factors, including the economy, State funding and growth restrictions, as well as the availability of similar educational facilities elsewhere. For analysis purposes, it is assumed that the maximum student enrollment of 9,000 students would be achieved in year 2031.

The proposed project is expected to generate 289 net new vehicle trips (225 inbound trips and 64 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project buildout is expected to generate 224 net new vehicle trips (141 inbound trips and 83 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 2,780 net new daily trip ends during a typical weekday (1,390 inbound trips and 1,390 outbound trips).

In order to evaluate the potential impacts to the local street system, 31 intersections were identified for evaluation to determine changes in operations following occupancy and utilization of the proposed project. As the Los Angeles Community College District (LACCD) is the Lead Agency for the proposed FEC Master Plan and the project site is located in the City of South Gate, each of the 31 study intersections was evaluated for potential traffic impacts using the City of South Gate significant traffic impact thresholds. In addition, the seven study intersections located either partially or solely within the County of Los Angeles were evaluated for potential traffic impacts using the County of Los Angeles significant traffic impact thresholds.

Application of the City of South Gate's significant impact threshold criteria in the existing with project scenario indicates that the proposed project is expected to result in significant traffic impacts at three study intersections. Application of the City of South Gate's significant impact threshold criteria in the year 2031 with project scenario indicates that the proposed project is expected to result in significant traffic impacts at four study intersections. In addition, application of the County of Los Angeles' threshold criteria indicate that one County study intersection would be significantly impacted by the proposed project while four study intersections are expected to be significantly impacted on a cumulative basis in the year 2031 analysis conditions.

Where feasible, roadway improvement measures have been recommended to reduce the respective significant project and cumulative project impacts to less than significant levels. For those locations where opportunities for potential physical measures were limited (i.e., right-of-way constraints, presence of the Alameda Corridor grade-separated rail line, etc.), the project and cumulative project impacts have been reported as significant and unavoidable.