May 2018| Draft Environmental Impact Report

SAN PEDRO HIGH SCHOOL

Comprehensive Modernization Project

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Abbreviations and Acronyms

AAQS ambient air quality standards

AB Assembly Bill

ACM Asbestos Containing Materials

ADA Americans with Disabilities Act

APN Assessor Parcel Number

AQMP air quality management plan

BMP best management practices

BOE Board of Education

CalEPA California Environmental Protection Agency

CALGreen California Green Building Code

Caltrans California Department of Transportation

CAPCOA California Air Pollution Control Officers Association

CARB California Air Resources Board

CBC California Building Code

CCR California Code of Regulations

CDE California Department of Education

CDFM Character-Defining Features Memorandum (CDFM)

CDFW California Department of Fish and Wildlife

CEQA California Environmental Quality Act

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

CFR Code of Federal Regulations

CHPS Collaborative for High Performance Schools

CHR California Historic Register

CNDDB California Natural Diversity Database

CNEL community noise equivalent level

CNPS California Native Plant Society

CO carbon monoxide

COC Contaminant of Concern

CO_2e carbon dioxide equivalent

dBA decibels

CPA Los Angeles Community Plan Area

DPM diesel particulate matter

DSA Division of the State Architect (under the California Department of General Services)

DTSC Department of Toxic Substances Control

EIR Environmental Impact Report

EOP Emergency Operations Plan

FEMA Federal Emergency Management Agency

FETU Facilities Environmental Technical Unit

FHWA Federal Highway Administration

FTA Federal Transit Administration

GHG greenhouse gases

HAPs Hazardous Air Pollutants

HCP Habitat Conservation Plan

HFCs hydrofluorocarbons

HRA health risk assessment

IS Initial Study

LACM Natural History Museum of Los Angeles County

LACSD Los Angeles County Sanitation District

LADOT City of Los Angeles Department of Transportation

LADPW Los Angeles Department of Public Works

LADWP City of Los Angeles Department of Water and Power

LAFD Los Angeles Fire Department

LAPD City of Los Angeles Police Department

LAPL Los Angeles Public Library

LASPD Los Angeles School Police Department

LAUSD Los Angeles Unified School District

LBP Lead-based Paint

LID Low Impact Development

LST localized significance thresholds

MBTA Migratory Bird Treaty Act

MCD Modified Consent Decree

mgd million gallons per day

MMT million metric tons

MMTCO_2e million metric tons of CO_2e

MND Mitigated Negative Declaration

MTCO_2e metric ton of CO_2e

N_2O nitrous oxide

NAAQS National Ambient Air Quality Standards

NAHC Native American Heritage Commission

ND Negative Declaration

NOI Notice of Intent

NPDES National Pollutant Discharge Elimination System

O_3 Ozone

OCPs Organochlorine pesticides

OEHS Office of Environmental Health and Safety

OHP Office of Historic Preservation

OPSC California Office of Public School Construction

OSHA Occupational Safety and Health Administration

PCBs Polychlorinated biphenyls

PDF project design features

PFCs perfluorocarbons

PM Particulate Matter

ppm parts per million

ppv peak particle velocity

PRC Public Resources Code

PSHA pipeline safety hazard assessment

RAW Removal Action Workplan

RCRA Resource Conservation and Recovery Act

RMS Root mean square

RTP/SCS Regional Transportation Plan/Sustainable Communities Strategy

RWQCB regional water quality control board

SAB State Allocation Board

SCAG Southern California Association of Governments

SCAQMD South Coast Air Quality Management District

SCGC Southern California Gas Company

SCS sustainable communities strategy

SCs Standard Conditions of Approval

SEA Significant Ecological Areas

SF Square Feet

SF6 sulfur hexafluoride

SoCAB South Coast Air Basin

SUP School Upgrade Program

SWPPP stormwater pollution prevention plan

SWRCB State Water Resources Control Board

TAC Toxic Air Contaminants

USFWS United States Fish and Wildlife Service

USGS United States Geologic Survey

TPH petroleum hydrocarbons

UWMP Urban Water Management Plan

UST underground storage tank

VMT vehicle miles traveled

VOC volatile organic compounds

EXECUTIVE SUMMARY

ES.1 Introduction

To comply with the California Environmental Quality Act (CEQA), the Los Angeles Unified School District (LAUSD or District) has prepared the San Pedro High School Comprehensive Modernization Project (proposed Project) Draft Environmental Impact Report (EIR). The proposed Project would include renovations, modernizations, and new construction at San Pedro High School (San Pedro HS). LAUSD, as the Lead Agency, has prepared this Draft EIR to provide the public and local agencies with information about the potential effects on the local and regional environment associated with implementation of the proposed Project. This Draft EIR has been prepared in compliance with the CEQA of 1970 (as amended), codified at California Public Resources Code Sections 21000 et. Seq. and the *CEQA Guidelines* in the Code of Regulations, Title 14, Division 6, Chapter 3.

San Pedro HS is an operational high school serving students in grades 9 through 12. The Campus sits on a multi-tiered hillside overlooking the Los Angeles harbor with the highest elevation on the southwest. The San Pedro HS Campus is adjacent to the Dana Middle School campus. On March 10, 2015, LAUSD's Board of Education (Board) approved pre-design and due diligence activities necessary to develop a Project definition for a Comprehensive Modernization Project at San Pedro High School (San Pedro HS).[1] The Project is intended to provide facilities that are safe, secure, and aligned with the instructional program. On December 8, 2015, the Board approved the Project definition for San Pedro HS (Project site or Campus).[2] This approval authorizes LAUSD's Facilities Services Division to proceed with Project design and the completion of related technical and regulatory processes including those required under the CEQA.

ES.2 Project Objectives

The objectives for the proposed Project are as follows:

- Objective #1: Increase the safety and security of the staff and students through the campus modifications and configuration

1 LAUSD Board of Education Report. March 10, 2015. Report Number 373 – 14/15. Subject: Identification of 11 School Sites for the Development of Comprehensive Modernization Projects.

2 LAUSD Board of Education Report. December 8, 2015. Report Number 182-15/16. Subject: Amendment to the Facilities Services Division Strategic Execution Plan to Approve Project Definitions for Six Comprehensive Modernization Projects and Cancel Two Critical School Repair and Safety Projects.

- Objective #2: Repair and seismically retrofit aging facilities while also bringing buildings into compliance with the Americans with Disabilities Act (ADA) programmatic access requirements
- Objective #3: Upgrade buildings to include modern classroom spaces that can accommodate the California Department of Education's and District's standard classroom space of 960 square feet and modern technology and efficiencies to meet San Pedro HS's priority and specialty campus programs
- Objective #4: Promote a healthier environment through the use of green technology
- Objective #5: Design buildings and facilities that align with the current programmatic and operational needs of the campus while retaining or enhancing opportunities for future planning
- Objective #6: Respect the history of the campus through the rehabilitation, retention and reuse of features that have been established as character-defining or otherwise relevant to the school community (i.e., current and former students, alumni, staff, etc.) to the extent feasible, while modernizing the campus to address the current needs of the campus
- Objective #7 Eliminate reliance on portable classrooms.

ES.3 Project Location

San Pedro HS is located on a 22.90-acre site in the community of San Pedro, approximately 22 miles southwest from downtown Los Angeles and approximately 1.45 miles north of the Pacific Ocean (Figure 2-1, Project Vicinity). Specifically, the Campus is located at 1001 West 15th Street in the community of San Pedro in the southwest portion of the City of Los Angeles. The Campus comprises two city blocks and is bound by West 15th Street to the north, Dana Middle School immediately to the east, West 17th Street to the south, and South Leland Street to the west (Figure 2-2, Project Location). The Assessor's Parcel Number (APN) for the Project site is 7458-024-918. Project implementation would not occur across the entire school Campus, but on selected areas undergoing renovation. Figure 2-3, Existing Site Plan shows the existing site plan and buildings. Various buildings and landscapes on the Project site are shown in Figure 2-4, Character Defining Features.

ES.4 Project Description

The proposed Project would include renovations, modernizations, and new construction at San Pedro HS; including demolition of the Industrial Arts Building, the Shop Building, Food Service Unit, and Lunch Shelter, and removal of four portable (relocatable) buildings and one modular building. The Project would include construction of a new Band and Industrial Arts Building; Administration, Food Service, and Classroom Building to house general and specialty classrooms, administration, kitchen, dining, and support spaces; Central Plant; and Lunch Shelters. The new buildings would house approximately twelve new general and specialty classrooms, and support spaces. The Project includes modifications and/or upgrades to the existing Administration Building, the Old Gymnasium (this includes voluntary seismic retrofit and new wood floor in the main court), the Home Economics Building (repurposed as classrooms), Classroom Building #1, and Classroom Building # 2 (Science Building). Upon

completion of Project construction, San Pedro HS would have 69 classrooms, consisting of 23 existing classrooms, 34 remodeled classrooms, and 12 new classrooms.

The Campus currently includes a staff and visitor parking lot on the southwest corner of the Campus off Leland Street and a staff and student parking lot in the northeast portion of the Campus off South Alma Street. The Campus currently includes 248 parking stalls. The proposed Project would result in a decrease of onsite parking spaces from 248 parking stalls to 184 parking stalls (128 parking stalls in the northeast and 56 stalls in the southwest). The number of spaces being provided would still exceed the District standard of 2.5 parking spaces per high school classroom, which would be 173 spaces for the 69 classrooms. The staff and visitor parking lot would be reconfigured, but would remain on the southwestern corner of the Campus.

ES.5 Summary of Impacts

Table ES-1 presents a summary of the impacts and mitigation measures identified in the Draft EIR. The complete impact statements and mitigation measures are presented in Chapter 3. The level of significance for each impact was determined using significance criteria (thresholds) developed for each category of impacts; these criteria are presented in the appropriate sections of Chapter 3. Significant impacts are those adverse environmental impacts that meet, or exceed, the significance thresholds; less than significant impacts would not exceed the thresholds. Table ES-1 indicates the measures that would avoid, minimize, or otherwise reduce significant impacts to less than significant levels.

The proposed Project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and would not result in potentially significant, or cumulatively considerable, hazard impacts to the public or the environment. Potential significant impacts to cultural resources and noise have been identified. Mitigation measures have been incorporated in this Draft EIR to avoid or minimize impacts associated with these resources to less than significant levels.

ES.6 Areas of Known Controversy

Pursuant to Section 15123(b)(2) of the *CEQA Guidelines,* a lead agency is required to include areas of controversies raised by agencies and the public during the public scoping process in the EIR. Areas of controversy have been identified for the EIR based on comments made during the 30-day public review period in response to information published in the NOP. Commenting parties have expressed concern for visual impacts, traffic, and historical resources. These issues have been considered during preparation of this Draft EIR.

TABLE ES-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE SAN PEDRO HS COMPREHENSIVE MODERNIZATION PROJECT

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
3.1 Air Quality			
Project-Specific Impacts			
Impact 3.1-1: The Project would not conflict with or obstruct implementation of the applicable air quality plan.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 3.1-2: The Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 3.1-3: The Project would not 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).	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 3.1-4: The Project would not expose sensitive receptors to substantial pollutant concentrations.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 3.1-5: The Project would not create objectionable odors affecting a substantial number of people.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Cumulative Impacts			
The Project would have less than cumulatively considerable effects on implementation of an applicable air quality plan.	Less Than Significant	No mitigation measures are required.	Less Than Significant
The Project would have less than cumulatively considerable effects and would not violate an air quality standard or contribute substantially to an existing or projected air quality violation.	Less Than Significant	No mitigation measures are required.	Less Than Significant
The Project would result in less than cumulatively considerable effects associated with the exposure of sensitive receptors to substantial pollutant concentrations.	Less Than Significant	No mitigation measures are required.	Less Than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
The Project would result in less than cumulatively considerable effects from the creation of objectionable odors affecting a substantial number of people.	Less Than Significant	No mitigation measures are required.	Less Than Significant
3.2 Cultural Resources			
Project-Specific Impacts			
Impact 3.2-1: The Project would not cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 3.2-2: The Project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 3.2-3: The Project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Potentially Significant	**CUL-1:** The Qualified Paleontologist shall conduct the initial construction worker paleontological resources sensitivity training prior to the start of ground disturbing activities (including vegetation removal, pavement removal, etc.). In the event construction crews are phased, additional trainings shall be conducted for new construction personnel. Subsequent training sessions may be provided by a District approved representative or in a video format. The content of the training materials provided by a District approved representative or in a video shall require approval by the Qualified Paleontologist before being used in a training session. The training session shall focus on the recognition of the types of paleontological resources that could be encountered within the Project site and the procedures to be followed if they are found. Documentation shall be retained demonstrating that all construction personnel attended the training. **CUL-2:** Paleontological monitoring of previously undisturbed sediments (both the Valmonte Diatomite and the Altamira Shale) shall be conducted full-time by a qualified paleontological monitor (SVP, 2010) under the supervision of the Qualified Paleontologist. Previous geotechnical studies of the site by Group Delta Consultants, Inc. (2016) identified depths of fill at boreholes across the site, which can be used as a guide for identifying sediments that have been previously disturbed. Monitors shall have the authority to temporarily halt or divert work away from exposed fossils in order to recover the fossil specimens. Any significant fossils collected during Project-related excavations shall be prepared to the point of identification and curated into an accredited repository with retrievable storage. Monitors shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The Qualified Paleontologist shall prepare a final monitoring and mitigation report to document the results of the monitoring effort.	Less Than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		CUL-3: If construction or other Project personnel discover any potential fossils during construction, regardless of the depth of work or location, OEHS must be notified immediately and work at the discovery location shall cease in a 50-foot radius of the discovery until the Qualified Paleontologist has assessed the discovery and made recommendations as to the appropriate treatment. If the find is deemed significant, it should be salvaged following the standards of the SVP (SVP, 2010) and curated with a certified repository.	
Impact 3.2-4: The Project could disturb any human remains, including those interred outside of dedicated cemeteries.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Cumulative Impacts			
The Project could have cumulatively considerable effects on historical resources.	Less Than Significant	No mitigation measures are required	Less Than Significant
The Project could have cumulatively considerable effects on archaeological resources.	Less Than Significant	No mitigation measures are required.	Less Than Significant
The Project could have cumulatively considerable effects on paleontological resources.	Potentially Significant	**CUL-1:** The Qualified Paleontologist shall conduct construction worker paleontological resources sensitivity training prior to the start of ground disturbing activities (including vegetation removal, pavement removal, etc.). In the event construction crews are phased, additional trainings shall be conducted for new construction personnel. The training session shall focus on the recognition of the types of paleontological resources that could be encountered within the Project site and the procedures to be followed if they are found. Documentation shall be retained demonstrating that all construction personnel attended the training. **CUL-2:** Paleontological monitoring of previously undisturbed sediments (both the Valmonte Diatomite and the Altamira Shale) shall be conducted full-time by a qualified paleontological monitor (SVP, 2010) under the supervision of the Qualified Paleontologist. Previous geotechnical studies of the site by Group Delta Consultants, Inc. (2016) identified depths of fill at boreholes across the site, which can be used as a guide for identifying sediments that have been previously disturbed. Monitors shall have the authority to temporarily halt or divert work away from exposed fossils in order to recover the fossil specimens. Any significant fossils collected during Project-related excavations shall be prepared to the point of identification and curated into an accredited repository with retrievable storage. Monitors shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The Qualified Paleontologist shall prepare a final monitoring and mitigation report to document the results of the monitoring effort. **CUL-3:** If construction or other Project personnel discover any potential fossils during construction, regardless of the depth of work or location, work at the discovery location shall cease in a 50-foot radius of the	Less Than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		discovery until the Qualified Paleontologist has assessed the discovery and made recommendations as to the appropriate treatment. If the find is deemed significant, it should be salvaged following the standards of the SVP (SVP, 2010) and curated with a certified repository.	
The Project could have cumulatively considerable effects on human remains.	Less Than Significant	No mitigation measures are required.	Less Than Significant
3.3 Energy			
Project-Specific Impacts			
Impact 3.3-1: The Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 3.3-2: The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Cumulative Impacts			
The Project would result in less than cumulatively considerable impacts regarding energy demand.	Less Than Significant	No mitigation measures are required.	Less Than Significant
The Project would result in less than cumulatively considerable impacts related to conflicts with adopted energy conservation plans.	Less Than Significant	No mitigation measures are required.	Less Than Significant
3.4 Greenhouse Gas Emissions			
Project-Specific Impacts			
Impact 3.4-1: The Project would not generate greenhouse gas emissions, either directly or indirectly, and would not have a significant impact on the environment.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 3.4-2: The Project would not conflict with any applicable plan, policy, regulation, or recommendation of an agency adopted for the purpose of reducing the emissions of GHGs.	Less Than Significant	No mitigation measures are required.	Less Than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Cumulative Impacts			
The Project would result in less than cumulatively considerable effects regarding the generation of greenhouse gas emissions, either directly or indirectly.	Less Than Significant	No mitigation measures are required.	Less Than Significant
The Project would result in less than cumulatively considerable impacts regarding applicable plans, policies, regulations, or recommendations of an agency adopted for the purpose of reducing the emissions of GHGs.	Less Than Significant	No mitigation measures are required.	Less Than Significant
3.5 Noise			
Project-Specific Impacts			
Impact 3.5-1: The Project would not result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 3.5-2:.The Project could result in exposure of persons to, or generation of, excessive ground-borne vibration.	Potentially Significant	**NOISE-1**: To avoid structural damage, when the construction equipment is within 15 feet of existing school buildings, large construction equipment (greater than 300 horsepower), such as large bulldozer and loaded trucks, should be replaced with smaller equipment (less than 300 horsepower) when feasible. **NOISE-2**: In the event that construction activity would occur within 30 feet of occupied classrooms, large construction equipment (greater than 300 horsepower), such as large bulldozer and loaded trucks, should be replaced with smaller equipment (less than 300 horsepower) when feasible.	Less Than Significant
Impact 3.5-3: The Project would not result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 3.5-4: The Project would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the Project.	Less Than Significant	No mitigation measures are required.	Less Than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Cumulative Impacts			
The Project would result in less than cumulatively considerable impacts to noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Less Than Significant	No mitigation measures are required.	Less Than Significant
The Project would result in less than cumulatively considerable impacts regarding excessive ground-borne vibration.	Less Than Significant	No mitigation measures are required.	Less Than Significant
The Project would result in less than cumulatively considerable impacts regarding substantial permanent increase in ambient noise levels.	Less Than Significant	No mitigation measures are required.	Less Than Significant
The Project would result in less than cumulatively considerable impacts regarding temporary or periodic increase in ambient noise levels.	Less Than Significant	No mitigation measures are required.	Less Than Significant
3.6 Transportation and Traffic			
Project-Specific Impacts			
Impact 3.6-1: The Project would not 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.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 3.6-2: The Project would not 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.	No Impact	No mitigation measures are required.	No Impact
Impact 3.6-3: The Project would not substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment).	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 3.6-4: The Project would not result in inadequate emergency access.	Less Than Significant	No mitigation measures are required.	Less Than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.6-5: The Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities	Less Than Significant	No mitigation measures are required.	Less Than Significant
Cumulative Impacts			
The Project could result in cumulatively considerable impacts regarding the confliction 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.	Less Than Significant	No mitigation measures are required.	Less Than Significant
The Project would not result in cumulatively considerable impacts regarding the confliction 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.	No Impact	No mitigation measures are required.	No Impact
The Project would not result in cumulatively considerable impacts regarding hazards due to a design feature.	Less Than Significant	No mitigation measures are required.	Less Than Significant
The Project would not result in cumulatively considerable impacts regarding inadequate emergency access.	Less Than Significant	No mitigation measures are required.	Less Than Significant
The Project would not result in cumulatively considerable impacts regarding the confliction with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities	Less Than Significant	No mitigation measures are required.	Less Than Significant

ES.7 Significant Irreversible Environmental Changes

CEQA Guidelines 21100(b)(2) and 15126.2(b) require that any significant effect on the environment that would be irreversible if the proposed Project is implemented must be identified. Construction and operation of the proposed Project would require the use and consumption of nonrenewable resources, such as steel and other metals. Renewable resources, such as lumber and other wood byproducts, would also be used. Unlike renewable resources, nonrenewable resources cannot be regenerated over time. Construction of high school facilities would require the commitment of a relatively small amount of building materials. The small quantity of building materials used during implementation of proposed Project would result in a less than significant impact because these types of resources are anticipated to be in adequate supply into the foreseeable future.

Energy would be consumed during both construction and operation of the proposed Project. Nonrenewable resources and energy would also be consumed during the manufacturing and transportation of building materials, preparation of the site, and construction and site restoration activities. The proposed Project would not result in the wasteful, inefficient or unnecessary consumption of energy during construction or operation. The proposed Project would result in the irretrievable and irreversible commitment of energy resources in the form of diesel fuel, gasoline and electricity during construction and operation. However, these types of resources are anticipated to be in adequate supply into the foreseeable future. Further, the proposed Project's new buildings and structures would be designed to reduce energy use below current levels by incorporating modernized and energy-efficient features, which may include lighting, windows, electrical transformers, building insulation, or installation of irrigation smart controllers, etc. The roofing of the new buildings would meet "cool roof" building certification requirements. All new construction would exceed by 10 percent or more the California Title 24, Part 6 energy efficient standards. These energy management systems, and project design features, would reduce potential significant impacts regarding energy use to less than significant levels. Therefore, impacts due to these irretrievable and irreversible commitments of resources are considered less than significant.

ES.8 Project Alternatives

The No Project Alternative and was selected for detailed analysis. The goal for evaluating this alternative is to identify ways to avoid, or lessen, the significant environmental effects resulting from implementation of the proposed Project, while attaining most of the Project objectives. The following provides a summary of each of the alternatives analyzed.

- **Alternative 1: No Project/No Build Alternative,** in which no Project or Project alternative would be adopted. The Project site would remain as it is in existing conditions. The site would remain in its current condition and no modifications to the San Pedro HS Campus would be developed.
- **Alternative 2: No Demolition and No New Building Construction.** Under this alternative, permanent buildings would not be demolished, or removed, and new buildings would not be constructed. This alternative would consist of the modernization and/or upgrades of the Home Economics Building, Administration Building, Classroom Building 1, and Physical Education Building (Old Gymnasium). Upgrades entail seismic retrofits, retrofits in

compliance with American with Disabilities Act (ADA), exterior architectural features, and infrastructure upgrades such as electrical, storm drain, gas, sewer, and water.

- **Alternative 3: Reduced Project.** Under this alternative, only portable buildings would be demolished and one new building would be constructed in the former location of the portables. This alternative would include the modernization and/or upgrades of the Home Economics Building, Administration Building, Classroom Building 1, and Physical Education Building (Old Gymnasium). Upgrades entail seismic retrofits, retrofits in compliance with American with Disabilities Act (ADA), exterior architectural features, and infrastructure upgrades such as electrical, storm drain, gas, sewer, and water.

Section 5.8 provides a comparative summary of the alternative, including a summary of the ability of the alternative to meet the Project objectives and a summary comparison of the potential impacts associated with the alternative and the proposed Project.

ES.9 Organization of this EIR

This Draft EIR is organized into the following chapters and appendices:

S. Executive Summary. The summary provides a synopsis of the Project's potential impacts. It identifies, in an overview fashion, the Project under consideration and its objectives. The section also summarizes the Project's impacts and mitigation measures and contains a summary analysis of the alternatives to the Project.

1. **Introduction.** The introduction includes the purpose of an EIR and procedural information.
2. **Project Description.** The Project description includes the Project background, Project location and setting, site characteristics, Project objectives, and the characteristics of the Project. The section also includes a summary of the necessary permits and approvals for the Project.
3. **Environmental Setting, Impacts, and Mitigation Measures.** This chapter describes the environmental setting and identifies impacts of the proposed Project for each of the following environmental resource areas: Air Quality; Cultural Resources, Energy, Greenhouse Gas Emissions, Noise, and Transportation and Traffic. Mitigation measures to reduce significant impacts of the proposed Project to the lowest level feasible are presented for each resource area. This section also provides an analysis of the cumulative impacts for each issue area analyzed in the Draft EIR.
4. **Other CEQA Considerations.** This chapter provides an analysis of the extent to which the Project's primary and secondary effects would commit resources to uses that future generations would probably be unable to reverse. This chapter also discusses the resource areas determined to have no impact with implementation of the Project.
5. **Alternatives Analysis.** This chapter presents an overview of the alternatives development process and describes and analyzes the alternatives to the Project, including the No Project Alternative.
6. **Report Preparation.** This chapter provides a list of the individuals who contributed to the preparation of the Draft EIR.

7. **Appendices.** The appendices contain important information used to support the analyses and conclusions made in the EIR. Appendices are provided documenting the scoping process, air emissions modeling results, biological resources, cultural resources assessment, greenhouse gas emissions estimate, geotechnical evaluation, Phase I Environmental Site Assessment, noise and vibration modeling results, traffic and pedestrian safety, and energy consumption modeling results.

CHAPTER 1
Introduction

1.1 Purpose of the EIR

The Los Angeles Unified School District (LAUSD) is proposing a comprehensive modernization of San Pedro High School (San Pedro HS) (Project). The proposed Project would include renovations, modernizations, and new construction at San Pedro HS; including demolition of the Industrial Arts Building, the Shop Building, and Lunch Shelter/Food Service Unit, and removal of approximately 10 classrooms located in four portable (relocatable) buildings and one modular building. The Project would include construction of a new Band and Industrial Arts Building, Lunch Shelters, a Central Plant, and an Administration, Food Service, and Classroom Building to house general and specialty classrooms, administration, kitchen, dining, and support spaces. The new buildings would house approximately twelve new general and specialty classrooms, and support spaces. The Project includes modifications and/or upgrades to the existing Administration Building, the Old Gymnasium (this includes voluntary seismic retrofit and new wood floor in the main court), the Home Economics Building (repurposed as classrooms), Classroom Building #1, and Classroom Building #2 (Science Building). Upon completion of Project construction, San Pedro HS would have 69 classrooms, consisting of 23 existing classrooms, 34 remodeled classrooms, and 12 new classrooms. To implement the proposed Project, certification of this Environmental Impact Report (EIR) and Project approval would be required. LAUSD, as the lead agency, has prepared this Draft EIR to provide the public, state, and local agencies with information about the potential effects on the local environment associated with the implementation of the proposed Project.

1.2 Intended Use of this EIR

This EIR is an information document that is intended to inform public agency decision makers and the public of the environmental effects of the proposed Project and potential mitigation for those effects. This EIR analyzes the environmental effects of the proposed Project at a project level. In addition, this EIR describes a reasonable range of alternatives to the Project. As described in the California Environmental Quality Act (CEQA) Guidelines Section 15161, a project EIR is used to examine the impacts of a specific development project, focusing on changes to the environment that would result from the development project. The EIR shall examine all phases of the Project including planning, construction, and operation. Accordingly, this EIR has been prepared as a project-level EIR and analyzes the specific environmental impacts that could be associated with construction and operation of the proposed Project.

1.3 CEQA Environmental Review Process

1.3.1 CEQA Process Overview

This Draft EIR has been prepared in compliance with CEQA (as amended), codified as California Public Resources Code Sections 21000 et seq. and the State CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3. The basic purposes of CEQA are to: (1) inform decision makers and the public about the potential, significant environmental effects of proposed activities, (2) identify the ways that environmental effects can be avoided, or significantly reduced, (3) prevent significant, avoidable environmental effects by requiring changes in projects through the use of alternatives, or mitigation measures, when feasible, and (4) disclose to the public the reasons why an implementing agency may approve a project even if significant unavoidable environmental effects are involved.

An EIR uses a multidisciplinary approach, applying social and natural sciences to make a qualitative and quantitative analysis of all the foreseeable environmental impacts that a proposed project would exert on the surrounding area. As stated in CEQA Guidelines Section 15151:

> *An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible.*

As described in Section 15121(a) of the CEQA Guidelines, this Draft EIR is intended to serve as an informational document for public agency decision makers. Accordingly, this Draft EIR has been prepared to identify and disclose the significant environmental effects of the proposed Project, identify mitigation measures to minimize significant effects, and consider reasonable Project alternatives. The environmental impact analyses in this Draft EIR are based on a variety of sources, including agency consultation, technical studies, and field surveys. LAUSD will consider the information presented in this Draft EIR, along with other factors, prior to approving the proposed Project.

1.3.2 Notice of Preparation and Public Scoping

Pursuant to Section 15082 of the CEQA Guidelines, the lead agency is required to send a Notice of Preparation (NOP) stating that a Draft EIR will be prepared to the state Office of Planning and Research (OPR), responsible and trustee agencies, and federal agencies involved in funding or approving the Project. The NOP must provide sufficient information for responsible agencies to make a meaningful response. At a minimum, the NOP must include a description of the project, location of the project, and probable environmental effects of the project (CEQA Guidelines Section 15082(a)(1)). Within 30 days after receiving the NOP, responsible and trustee agencies and the OPR shall provide the lead agency with specific detail about the scope and content of the environmental information related to that agency's area of statutory responsibility that must be included in the Draft EIR (CEQA Guidelines Section 15082(b)).

On September 29, 2017, in accordance with Sections 15063 and 15082 of the CEQA Guidelines, LAUSD published a NOP for the Draft EIR and circulated it to government agencies, elected officials, organizations, and persons who may be interested in the proposed Project, including nearby landowners, student parents and/or legal guardians, homeowners, and tenants. The NOP requested comments on the scope of the Draft EIR and asked that those agencies with regulatory authority over any aspect of the Project to describe that authority. The comment period went through October 28, 2017. The NOP provided a general description of the proposed actions, a description of the Project area, and a preliminary list of potential environmental impacts.

On October 3, 2017, in accordance with CEQA Section 21083.9[1], LAUSD sponsored a public meeting to obtain comments from interested parties on the scope of the Draft EIR. The purpose of the meeting was to present the Project to the public through use of display maps, diagrams, and a presentation describing the Project components and potential environmental impacts. LAUSD staff and members of the local community attended the scoping meeting. Attendees were provided an opportunity to voice comments or concerns regarding potential effects of the Project. The issues addressed by participants are summarized and included in this Draft EIR as part of **Appendix A**. Eight comment letters were received in response to the NOP. Specific environmental concerns that were raised in the comments received on the NOP are discussed in **Table 1-1**, below.

1.3.3 Draft EIR

The Draft EIR has been prepared pursuant to the requirements of CEQA Guidelines Section 15126. The environmental issues addressed in this Draft EIR were established through review of environmental documentation developed for the Project, environmental documentation for nearby projects, and public and agency responses to the NOP. This Draft EIR provides an analysis of reasonably foreseeable impacts associated with the construction and operation of the proposed Project. The environmental baseline for determining potential impacts is the date of publication of the NOP for the proposed Project (CEQA Guidelines Section 15125(a)). Unless otherwise indicated, the environmental setting for each resource assessed in this Draft EIR describes the existing conditions as of October 2017. The impact analysis is based on changes to existing conditions that would result from implementation of the proposed Project.

In accordance with the CEQA Guidelines Section 15126, the Draft EIR describes the proposed Project and the existing environmental setting, identifies environmental impacts associated with Project implementation, identifies mitigation measures for significant impacts, and provides an analysis of alternatives. Significance criteria have been developed for each environmental resource analyzed in this Draft EIR. The significance criteria are defined at the beginning of each impact analysis section.

[1] CEQA Section 21083.9 requires that a lead agency call at least one scoping meeting for a project of statewide, regional, or areawide significance.

TABLE 1-1
SUMMARY OF NOP COMMENTS

Commenter/Date	Summary of Environmental Issues Raised in Comment Letters	Applicable Draft EIR Sections
Notice of Preparation – September 29, 2017		
Agencies		
State Clearinghouse	This is a letter to reviewing agencies that provides a reminder to comment on the proposed Project in a timely manner.	-
South Coast Air Quality Management District October 24, 2017	The commenter makes suggestions as to what elements are to be addressed in air quality studies.	Section 3.1, Air Quality Section 3.4, Greenhouse Gas
Native American Heritage Commission (NAHC) October 5, 2017	Provides AB52 Tribal consultation requirements for CEQA and impacts to Tribal Cultural Resources Provides Native American Heritage Commission (NAHC) recommendations for Cultural Resources Assessments	Section 3.2, Cultural Resources
California Department of Transportation (Caltrans) October 30, 2017	The commenter makes suggestions as to what elements are to be addressed in the EIR. Such as, sustainable transportation features, and clean storm water runoff.	Section 3.6Transportation and Traffic Appendix F, Traffic and Pedestrian Safety Memo
Individuals		
David Greenfader October 11, 2017	Noise during construction and operational noise from the new main driveway entry Lighting facing homes on the west side of S. Leland St. Traffic flow/pedestrian safety Alternatives – Alternative sites Non-compliance with community plans	Section 3.5, Noise Section 3.6, Transportation and Traffic Chapter 4, Other CEQA Considerations
Amy Thornberry October 12, 2017	Hazardous Materials release from soil removal and demolition Removal of trees	Chapter 4, Other CEQA Considerations
Melanie Jones October 23, 2017	Removal of trees along 17th St.	Chapter 4, Other CEQA Considerations
Cordi Koga October 23, 2017	Removal of trees	Chapter 4, Other CEQA Considerations
Jim Pike October 24, 2017	Removal of trees	Chapter 4, Other CEQA Considerations
Scoping Meeting – October 3, 2017		
Individuals		
April Mayher	Concerns regarding plumbing in the older buildings and new water fountains with refillable water bottle stations	
Jacky C.	School involvement in the new murals and new art in the interior of the Administrative Building	

1.3.4 Public Review

In accordance with CEQA Guidelines Section 15105, this Draft EIR is being circulated and made available to local, state, and federal agencies, and to interested organizations and individuals who

may wish to review and comment on the Draft EIR during the 45-day review period. All written comments should be directed to:

Will Meade, Environmental Planning Specialist
Los Angeles Unified School District
Office of Environmental Health and Safety
333 South Beaudry Avenue, 21st Floor
Los Angeles, CA 90017

Comments on the Draft EIR must be received by close of business on the last day of the 45-day review period.

1.3.5 Final EIR Publication and Certification

Written and oral comments received in response to the Draft EIR will be addressed in a Response to Comments document that, together with the Draft EIR, will constitute the Final EIR. The LAUSD Board of Education (Board) will then consider EIR certification (CEQA Guidelines Section 15090). If the EIR is certified, the Board may consider Project approval. Prior to approving the Project, LAUSD must make written findings with respect to each significant environmental effect identified in the Draft EIR in accordance with Section 15091 of the CEQA Guidelines. In addition, LAUSD must adopt a Statement of Overriding Considerations concerning each unmitigated significant environmental effect identified in the Final EIR (if any). The Statement of Overriding Considerations will be included in the record of the Project's approval and mentioned in the Notice of Determination (NOD) following CEQA Guidelines Section 15093(c). Pursuant to Section 15094 of the CEQA Guidelines, LAUSD will file a NOD with the State Clearinghouse and Los Angeles County Clerk within five working days after Project approval.

1.3.6 Mitigation Monitoring and Reporting Program

CEQA requires lead agencies to "adopt a reporting and mitigation monitoring program for the changes to the Project which it has adopted or made a condition of Project approval in order to mitigate or avoid significant effects on the environment" (CEQA Guidelines Section 15097). The mitigation monitoring program will be available to the public at the same time as the Final EIR.

1.3.7 Standard Conditions of Approval

LAUSD Standard Conditions of Approval (SC) are uniformly applied development standards and were adopted by the LAUSD Board in November 2015.[2] The SCs have been updated since the adoption of the 2015 version in order to incorporate and reflect changes in the recent laws, regulations and the LAUSD's standard policies, practices and specifications. The SCs were compiled from established LAUSD standards, guidelines, specifications, practices, plans, policies, and programs, as well as typically applied mitigation measures.

[2] LAUSD. 2015. Program EIR for the SUP. Available at: http://achieve.lausd.net/ceqa. (see Table 4-1 and Appendix F of the Program EIR).

The SCs are divided into the 18 LAUSD CEQA environmental topics (Appendix G of the CEQA Guidelines plus Pedestrian Safety).[3] For each SC, compliance is triggered by factors such as the project type, existing conditions, and type of environmental impact. Compliance with every SC is not required.

3 As of September 2016, an additional environmental topic has since been required by the State Office of Planning and Research (Tribal Cultural Resources). The LAUSD Environmental Checklist now has 19 topics.

CHAPTER 2
Project Description

2.1 Introduction

The purpose of the project description is to describe the Project in a way that will be meaningful to the public, reviewing agencies, and decision makers. This project description provides information pertaining to the San Pedro High School Comprehensive Modernization Project (Project). As described in Section 15124 of the California Environmental Quality Act (CEQA) Guidelines, the project description in an EIR is required to contain the following information: (1) the location of the proposed Project; (2) a statement of Project objectives; (3) a general description of the Project's technical, economic, and environmental characteristics; and (4) a statement briefly describing the intended uses of the EIR. The State CEQA Guidelines state that a project description need not be exhaustive, but should provide the level of detail needed for the evaluation and review of potential environmental impacts.

The proposed Project would include renovations, modernizations, new construction, and demolition at San Pedro HS to address the most critical physical concerns of the school's buildings and grounds.

2.2 Background

On July 31, 2008, the LAUSD Board of Education (BOE or Board) adopted a Resolution Ordering an Election and Establishing Specifications of the Election Order for the purpose of placing Measure Q, a $7 billion bond measure, on the November election ballot to fund the renovation, modernization, construction, and expansion of school facilities. On November 4, 2008, the bond passed. The nationwide economic downturn in 2009 resulted in a decline in assessed valuation of real property, which restricted the District's ability to issue Measure Q bonds and the remaining unissued Measures R and Y funds. Once assessed valuation improved, the BOE could authorize the issuance of bond funds.[1]

On December 10, 2013, the District refined their School Upgrade Program (SUP) to reflect the intent and objectives of Measure Q as well as the updated needs of District school facilities and educational goals.[2] Between July 2013 and November 2015, the SUP was analyzed under CEQA

1 LAUSD Board of Education Report. December 10, 2013. Report Number 143 – 13/14. Subject: SUP.
2 LAUSD Board of Education Report. December 10, 2013. Report Number 143 – 13/14. Subject: SUP.

criteria in a Program Environmental Impact Report (EIR). On November 10, 2015, the BOE certified the Final SUP Program EIR.[3]

On March 10, 2015, LAUSD's Board approved pre-design and due diligence activities necessary to develop a Project definition for a Comprehensive Modernization Project at San Pedro High School (San Pedro HS).[4] The proposed Project is intended to provide facilities that are safe, secure, and aligned with the instructional program. On December 8, 2015, the Board approved the Project definition for San Pedro HS (Project site or Campus).5 This approval authorizes LAUSD's Facilities Services Division to proceed with Project design and the completion of related technical and regulatory processes including those required under the CEQA.

2.3 Project Location

San Pedro High School is located on a 22.90-acre site in the community of San Pedro, approximately 22 miles south of downtown Los Angeles and approximately 1.45 miles north of the Pacific Ocean (**Figure 2-1,** Project Vicinity). Specifically, the Campus is located at 1001 West 15th Street within the southern portion of the City of Los Angeles. The Campus comprises two city blocks and is bound by West 15th Street to the north, Dana Middle School immediately to the east, West 17th Street to the south, and South Leland Street to the west (**Figure 2-2,** Project Location). The Assessor's Parcel Number (APN) for the Project site is 7458-024-918. Project implementation would not occur across the entire school Campus, but on selected areas undergoing renovation.

2.4 Existing Setting

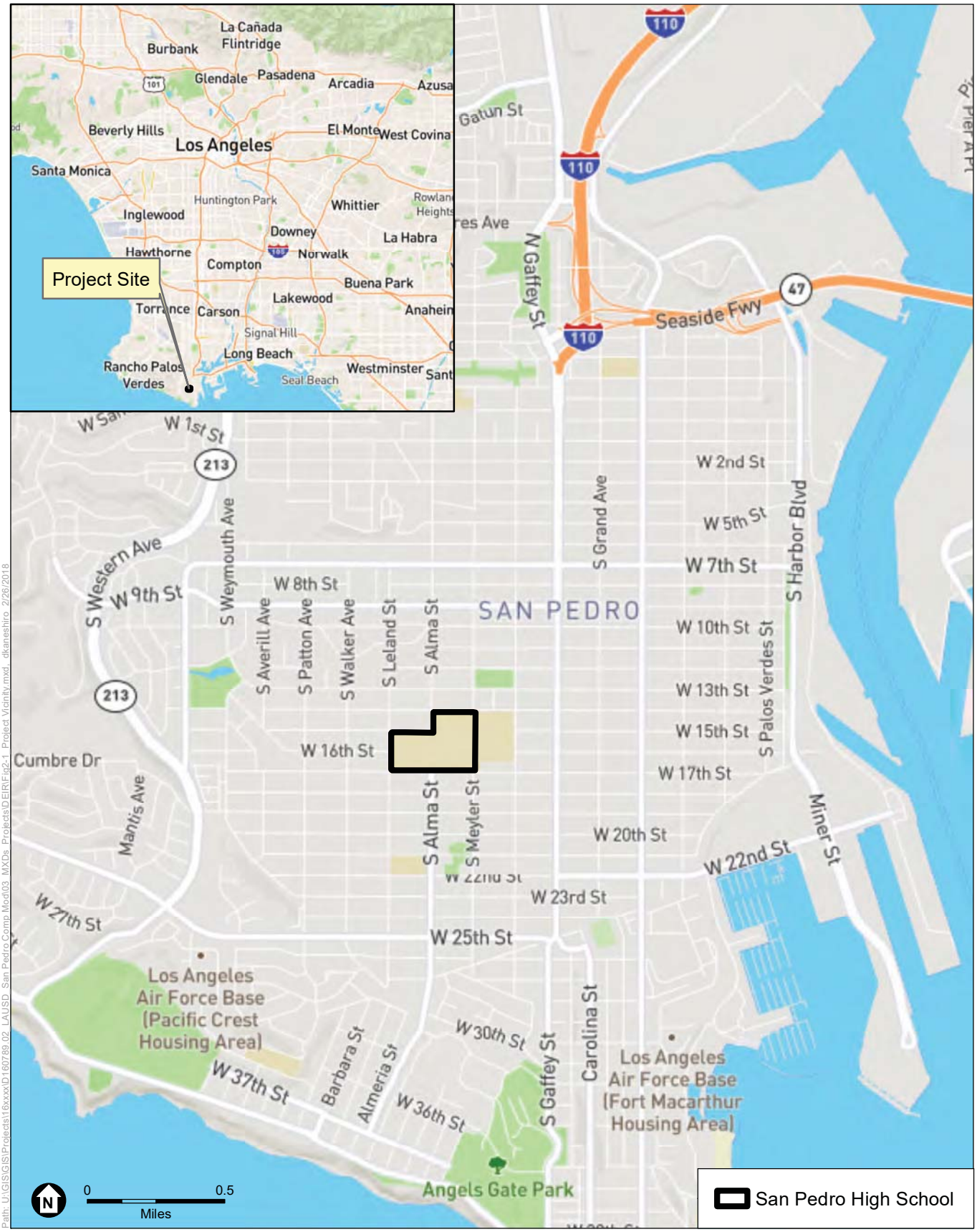
2.4.1 Existing Land Use

San Pedro HS is an operational high school serving students in grades 9 through 12. The Campus sits on a multi-tiered hillside overlooking the Los Angeles harbor with the highest elevation on the southwest. The new Gymnasium completed in 2005, play areas and athletic fields dominate the lower level, and separate the San Pedro HS Campus from adjacent Dana Middle School Campus. West of the lower level is the main plateau which consists of three original permanent buildings: Administration and Classroom Building, Home Economics Building, and Classroom Building #1. The Administration Building has side stair access on the north side from 15th Street, and an original entry courtyard to the East. At an intermediate level facing 17th Street is Classroom Building #2 (Science Building).

3 LAUSD Regular Meeting Stamped Order Of Business. 333 South Beaudry Avenue, Board Room, 1 p.m., Tuesday, November 10, 2015 (Board of Education Report No. 159 – 15/16).

4 LAUSD Board of Education Report. March 10, 2015. Report Number 373 – 14/15. Subject: Identification of 11 School Sites for the Development of Comprehensive Modernization Projects.

5 LAUSD Board of Education Report. December 8, 2015. Report Number 182-15/16. Subject: Amendment to the Facilities Services Division Strategic Execution Plan to Approve Project Definitions for Six Comprehensive Modernization Projects and Cancel Two Critical School Repair and Safety Projects.



SOURCE: OpenStreetMap, 2018

San Pedro High School Comprehensive Modernization Project

Figure 2-1
Project Vicinity

ESA

SOURCE: OpenStreetMap, 2018

San Pedro High School Comprehensive Modernization Project

Figure 2-2
Project Location

ESA

West and uphill from the main Administration Building is the upper level of the Campus where the Food Service Unit and the Auditorium Building are located. There are several portable classrooms located in the northwest end and in the central part of the Campus. South of the Auditorium are two permanent buildings, the Industrial Arts Building and the Shop Building. **Figure 2-3,** Existing Site Plan, shows the existing site plan and buildings. Various buildings and landscapes on the Project site are shown in **Figure 2-4,** Contributing Buildings and Landscapes.

The City of Los Angeles General Plan Land Use designation for the school property is 'Public Facilities.' The land use element of the General Plan is comprised of 35 community plans; they are the official guide to the future development of the City of Los Angeles.

The zoning for the school property is [Q]PF-1XL. PF (Public Facilities), the designation for the use and development of publicly owned land, including public elementary and secondary schools. [Q] means additional restrictions on building design, landscape buffer, signs, etc.; '1' is Height District No. 1; and 'XL' is Extra Limited Height District where no building or structure shall exceed two stories, nor shall the highest point of the roof of any building or structure exceed 30 feet in height.

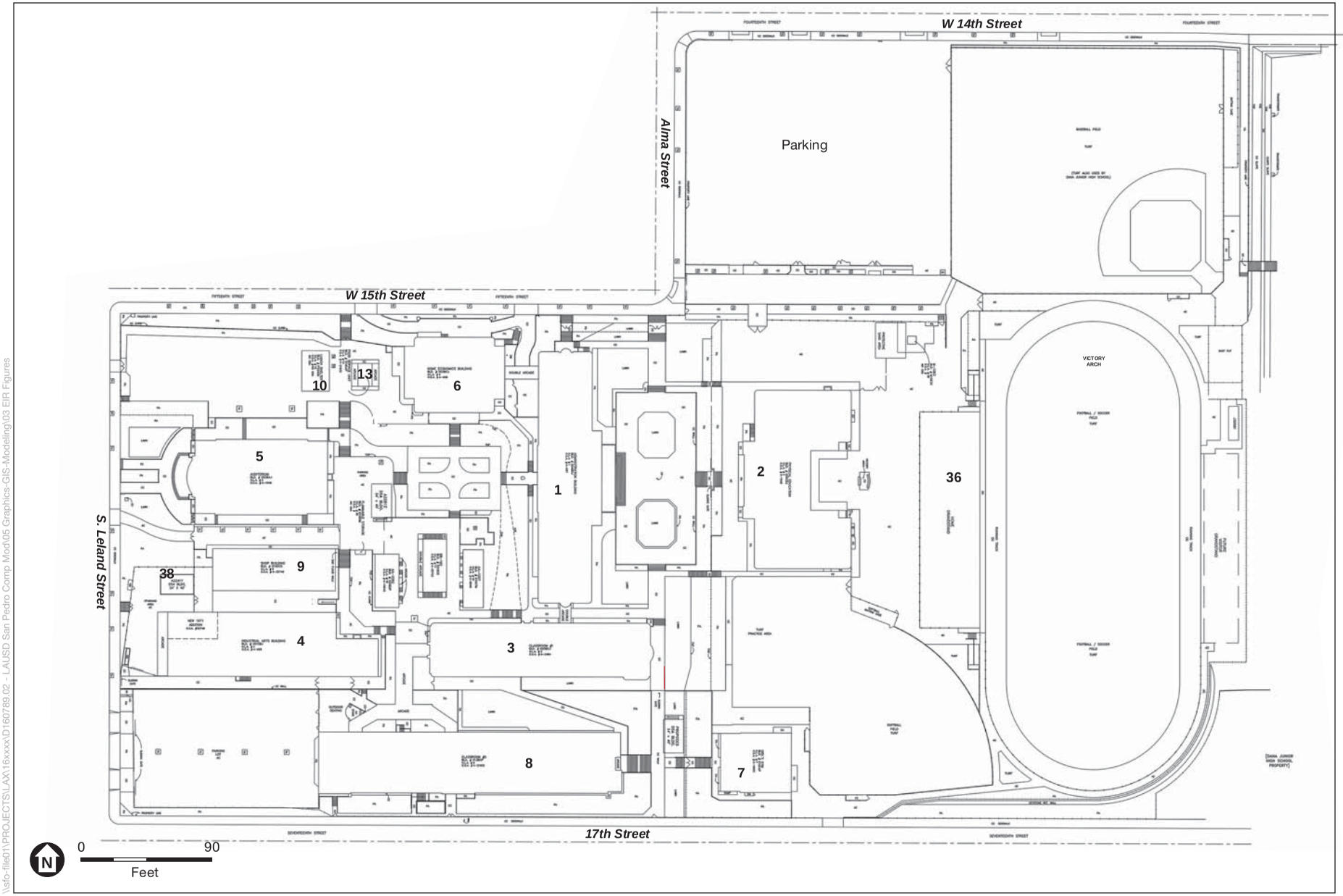
LAUSD anticipates that it would comply with Government Code Section 53094 to render the local City of Los Angeles Zoning Ordinance inapplicable to the proposed Project.

2.4.2 Campus History

During the 1920s and early 1930s, San Pedro HS was located in the block bordered by South Gaffey to the north, 13th Street to the east, South Cabrillo to the south, and 12th Street to the east. However, likely due to the Long Beach Earthquake in 1933, San Pedro HS relocated to its present site circa 1935. The primary period of significance[6] for San Pedro HS is between 1935 and 1938 when the Campus was rebuilt in the PWA Moderne style. The first buildings constructed were the Administration Building, Home Economics Building, and Industrial Arts Building. The Library is in the Administration Building and has several murals painted in 1937. By 1936, plans were complete for the Auditorium and Physical Education Buildings and they were constructed in 1937. Classroom Building # 1 was constructed in 1938. In the lead up to America's entrance into World War II, the Shop Building (which was later demolished), was built specifically for national defense training on Campus.

Postwar growth at San Pedro HS began in the 1960s, with the construction of what was then referred to as the Girls' Gymnasium in 1960, an additional Classroom Building and new Food Service Unit in 1961, alterations to the Industrial Arts Building and Home Economics Building in 1965 and 1968, respectively, and construction of a new Shop Building in 1969, as was an addition to the Industrial Arts Building.

6 Span of time in which a property attained the significance for which it meets the National Register criteria (or other state, local criteria).



SOURCE: Los Angeles Unified School District, 2002

San Pedro High School Comprehensive Modernization Project

Figure 2-3
Existing Site Plan

ESA

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SOURCE: LAUSD, 2002; PCR Services Corp., 2015; ESA, 2018.

San Pedro High School Comprehensive Modernization Project

Figure 2-4
Contributing Buildings and Landscapes

ESA

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Following the 1960s, no major new construction occurred on Campus until 2005, with the addition of the new gymnasium. Several other buildings that were added to the Campus include the portable buildings and modular structures.

The Campus has been assigned a California Register of Historic Resources (California Register) status code of 2S2, noting that the Campus appears individually eligible for the National Register of Historic Places (National Register) by a consensus through the Section 106 process and is listed in the California Register. Figure 2-4 identifies buildings, structures, and landscape features that contribute to the significance of the Campus.

2.4.3 Surrounding Land Uses

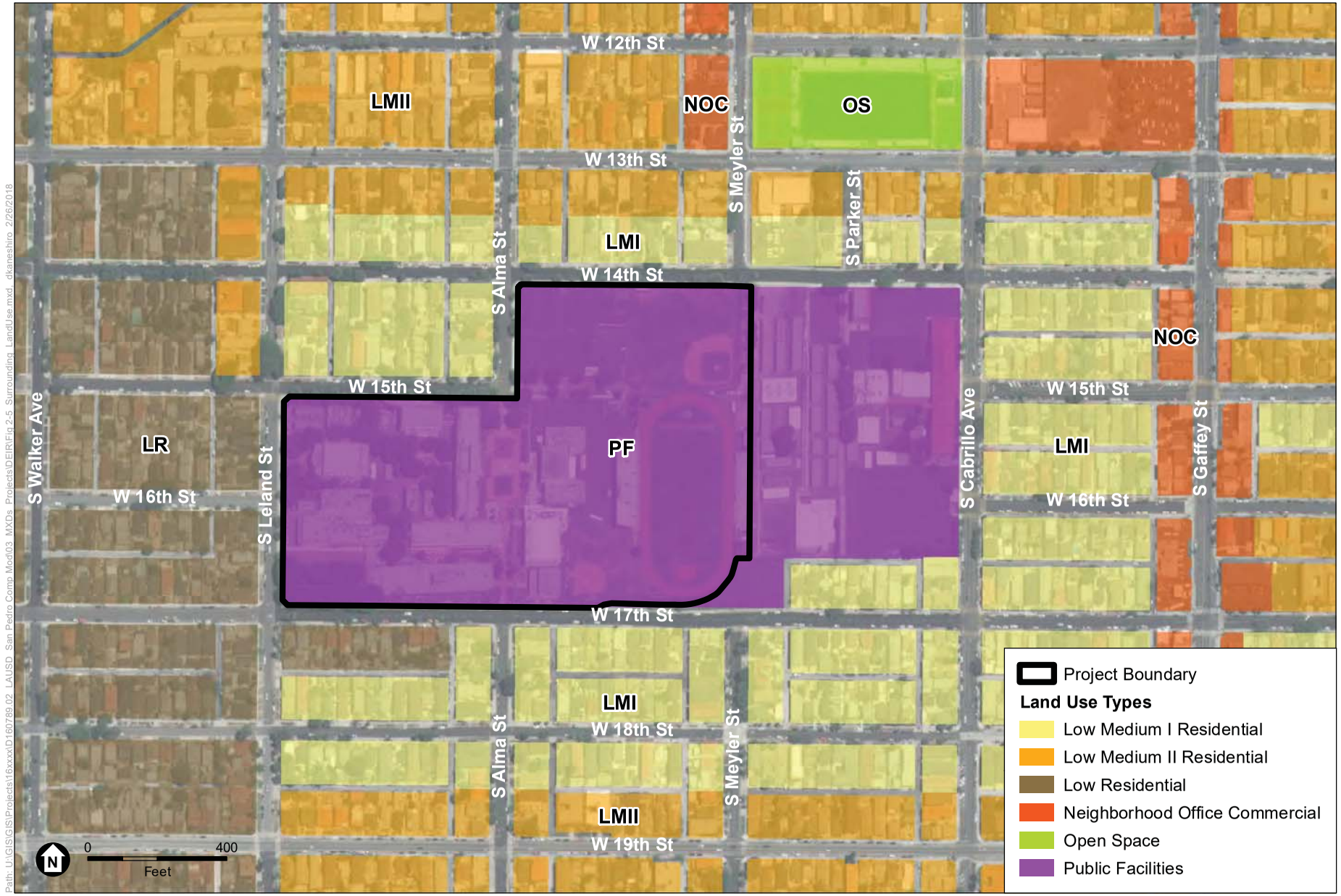
Land uses surrounding the Project site include the following and are shown in **Figure 2-5**. San Pedro HS is located in the San Pedro Community Plan Area of the City of Los Angeles.

- **North:** Land uses north of the Campus include primarily medium density residential uses and several commercial uses.
- **South and West:** Occupancies west and south of the Campus are primarily low-density residential.
- **East:** The property to the east of the Campus is occupied by Dana Middle School, with medium density residential uses beyond.

2.5 Project Objectives

CEQA Guidelines Section 15124 requires an EIR to include a statement of objectives sought by the proposed Project. The objectives assist in developing the range of Project alternatives to be evaluated in the EIR. LAUSD has established the following objectives for the proposed Project:

- Objective #1: Increase the safety and security of the staff and students through the Campus modifications and configuration
- Objective #2: Repair and seismically retrofit aging facilities while also bringing buildings into compliance with the Americans with Disabilities Act (ADA) programmatic access requirements
- Objective #3: Upgrade buildings to include modern classroom spaces that can accommodate the California Department of Education's and District's standard classroom space of 960 square feet and modern technology and efficiencies to meet San Pedro HS's priority and specialty Campus programs
- Objective #4: Promote a healthier environment through the use of green technology
- Objective #5: Design buildings and facilities that align with the current programmatic and operational needs of the Campus while retaining or enhancing opportunities for future planning
- Objective #6: Respect the history of the Campus through the rehabilitation, retention and reuse of features that have been established as character-defining or otherwise relevant to the school community (i.e., current and former students, alumni, staff, etc.) to the extent feasible, while modernizing the Campus to address the current needs of the Campus
- Objective #7: Eliminate reliance on portable classrooms.



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SOURCE: ESRI

San Pedro High School Comprehensive Modernization Project

Figure 2-5
Land Use

ESA

2.6 Project Characteristics

The proposed Project would include renovations, modernizations, and new construction at San Pedro HS; including demolition of the Industrial Arts Building, the Shop Building, Food Service Unit, and Lunch Shelter, and removal of four portable (relocatable) buildings and one modular building. The Project would include construction of a new Band and Industrial Arts Building; Administration, Food Service, and Classroom Building to house general and specialty classrooms, administration, kitchen, dining, and support spaces; Central Plant; and lunch shelter, or lunch shelters. The new buildings would house approximately 12 new general and specialty classrooms, and support spaces. The Project includes modifications and/or upgrades to the Administration Building, the Old Gymnasium (this includes a voluntary seismic retrofit and a new wood floor in the main court), the Home Economics Building Classroom Building # 1, and Classroom Building # 2 (Science Building). Upon completion of Project construction, San Pedro HS would have 69 classrooms, consisting of 23 existing classrooms, 34 remodeled classrooms, and 12 new classrooms.

The proposed Project would result in demolition of and/or modifications to existing buildings. Table 2-1 shows details about the characteristics of the existing buildings to be demolished and/or renovated. The Project would be designed to preserve and enhance significant (primary) character-defining features associated with the Campus. Additionally, the proposed Project would be designed and implemented in a manner that complies with the LAUSD Design Guidelines and Treatment Approaches for Historic Schools.[7]

As shown in **Figure 2-6, Demolition Plan**, the proposed Project would include demolition of the following facilities:

- Industrial Arts Building
- Shop Building
- Food Service Unit
- Four relocatable or portable buildings and one modular building

TABLE 2-1
CHARACTERISTICS OF EXISTING BUILDING

Current Building Name (Building Number and/or ID) a, b	Year Constructed c	Alterations/ Repairs	Historic Status	Project Activity	Square Feet
Administration Building (Building 1, ID 22037)	1935, 1997	c1964, 1981, 2013	Significant (Primary)	Renovate	48,029
Gymnasium/Physical Education Building (Building 2, ID 22223)	c1936	2010	Significant (Primary)	Renovate	23,094
Classroom Building #1 (English Building) (Building 3, ID 31223)	1938	1981, 2013	Significant (Primary)	Renovate	28,151
Industrial Arts Building (Building 4, ID 21993)	1935	1965, 1969	Contributing (Tertiary)	Demolish	18,432

7 LAUSD. January 2015. LAUSD Design Guidelines and Treatment Approaches for Historic Schools. Los Angeles, CA.

Current Building Name (Building Number and/or ID) a, b	Year Constructed c	Alterations/ Repairs	Historic Status	Project Activity	Square Feet
Auditorium (Building 5, ID 22080)	c1936	Unknown	Significant (Primary)	ADA Upgrades	19,432
Home Economics Building (Building 6, ID 21037)	1935	1968, 1981, 2013	Contributing (Secondary)	Renovate	18,610
Girls' Gymnasium (Building 7, ID 20816)	1960	Unknown	Non-Contributing	-	5,976
Classroom Building #2 (Science Building) (Building 8, 20685)	1961	1999	Non-Contributing	Minor Improvements	46,218
Shop Building (Building 9, ID 21093)	1969	Unknown	Non-Contributing	Demolish	15,806
Lunch Shelter (Building 10, ID 21892)	1941	Unknown	Non-Contributing	Demolish	-
Food Service Unit (Building 13, ID 22117)	1961	Unknown	Non-Contributing	Demolish	444
Flammable Storage (ID 21897)	1953	Unknown	Non-Contributing	-	64
Modular BB-182 (ID 22898)	1973	Unknown	Non-Contributing	Remove	3,476
Portable A-2241 (Building 38, ID 21833)	1999	Unknown	Non-Contributing	Remove	960
Portable A-2281 (ID 22515)	Unknown	Unknown	Non-Contributing	Remove	960
Portable AA-1007 (ID 22385)	1950	Unknown	Non-Contributing	Remove	1,692
Portable AA-2082 (ID 21557)	1960	Unknown	Non-Contributing	Remove	1,836
New Gymnasium (Building 42, ID 29254)	2005	-	Non-Contributing	Remain	20,341
Grandstand (home) (Building 36, ID 31242)	2009	Unknown	Non-Contributing	Remain	18,542
Electrical Building (ID 53302)	Unknown	Unknown	Non-Contributing	Remain	224
Sanitary Building 1 (ID 26248)	2000	Unknown	Non-Contributing	Remain	360
Sanitary Building 2 (ID 29186)	2000	Unknown	Non-Contributing	Remain	358
Snack Shack (ID 53303)	Unknown	Unknown	Non-Contributing	Remain	261

SOURCE: LAUSD, April 2018.
NOTES:
a. Building numbers correspond to the numbering system shown in architectural drawings dated September 11, 2017.
b. ID numbers were provided by LAUSD.
c. Construction dates provided by LAUSD.

Modernization, upgrades, and seismic retrofits would be completed for the following buildings:

- Home Economics Building
- Administration Building
- Classroom Building # 1

Upgrades to the Physical Education Building (Old Gymnasium) would be less extensive than the improvements to the three buildings undergoing modernization and would include voluntary seismic retrofits, a new wood floor in the main court, and American with Disabilities Act (ADA) upgrades.

Seismic retrofitting would be completed in compliance with the seismic safety requirements of the LAUSD Supplemental Geohazard Assessment Scope of Work, California Building Code, Division of State Architect, and CDE.

The Project includes ADA upgrades in the Auditorium. Auditorium ADA improvements would include accessible seating in the Auditorium; as well as accessibility improvements to the main entry, restrooms, and possibly the ticket area. Badly damaged or missing seats may be replaced with matching seats in District storage.

Upgrades to Classroom Building #2 (Science Building) include minor modernization to convert four science labs into general classrooms, reconfiguration of space for a Small Learning Community (SLC), and ADA upgrades that include a new elevator. Classroom Building # 2 (Science Building) would also receive an exterior facelift to make the building compatible with the architectural features of the historic buildings and the designs for the new buildings.

Upgrades that would be completed throughout the Campus include:

- Site-wide infrastructure, including electrical, storm drain, gas, sewer, and water improvements
- Site-wide upgrades to remove identified and prioritized barriers to program accessibility
- Student drop off area, landscape, hardscape, and exterior paint

Improvements required by the ADA, Division of the State Architect, CEQA, and the Office of the Independent Monitor for program accessibility, would ensure compliance with local, state, and/or federal facilities requirements.

The proposed Project would include construction of the following facilities that would be designed, constructed, and furnished/equipped to current code requirements and District design standards:

- Administration, Food Service, and Classroom Building (Building A). This would be a 3-story building totaling approximately 52,000 square feet. Based on Project design and site topography, this building would appear as a 1-story building from 17th Street and would appear as a 2-story building from Leland Street.

- Band and Industrial Arts Building (Building B). This would be a 1-story building totaling approximately 10,500 square feet.
- Central Plant. This would be a 1-story building totaling approximately 4,000 square feet.
- Lunch Shelter or Lunch Shelters

Figure 2-6 shows the proposed site plan.

2.6.1 Design Strategy

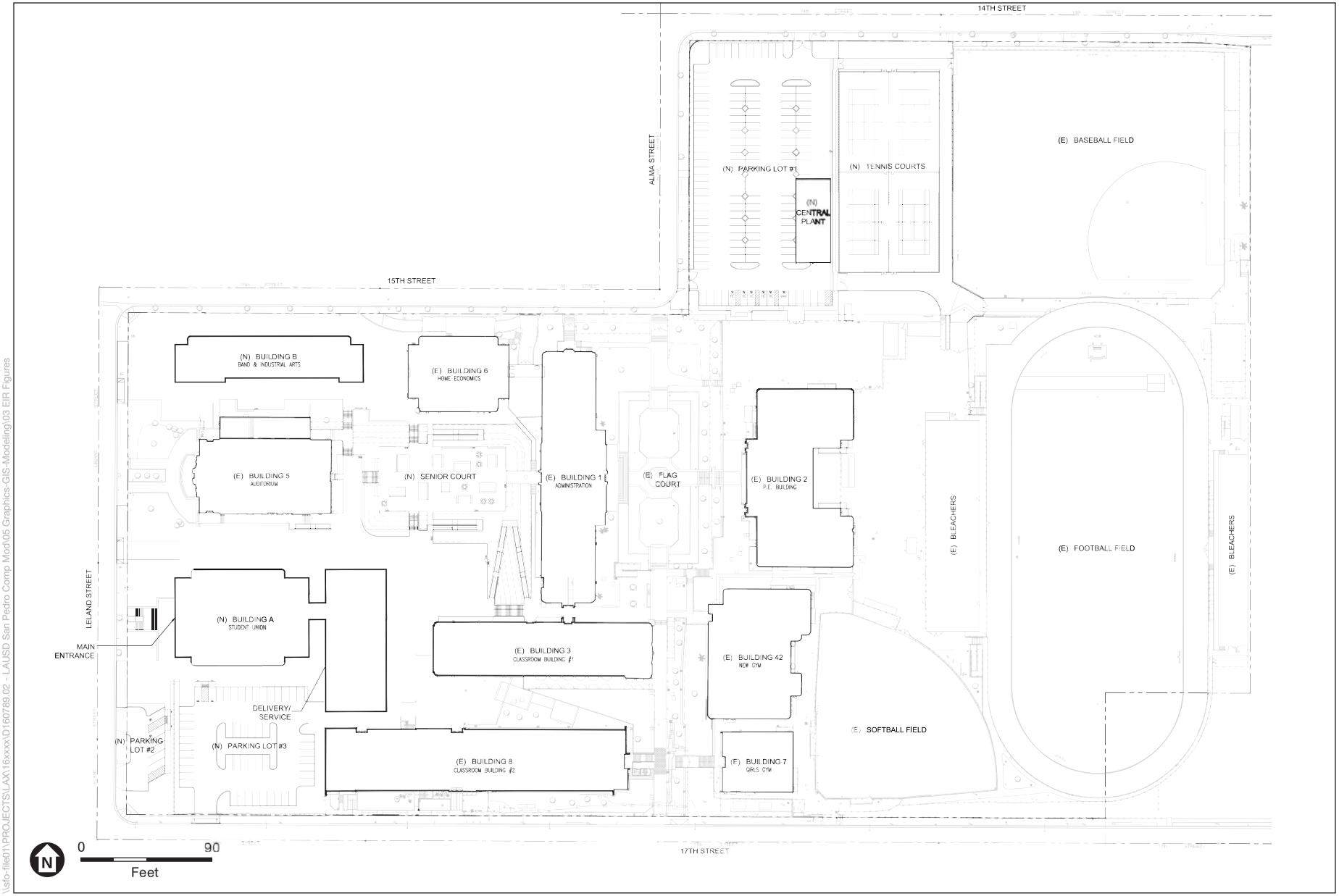
The proposed Project would provide sturdy, durable finishes at the base of new buildings, from materials that would endure maximum abuse, such as cast-in place concrete. The proposed Project would also use elevated materials, which would allow for enriched materials in areas above that are out of reach, including panelized systems that would be refined and elegant, and suitable for an historic Campus. The new buildings would take full advantage of natural daylight and harbor views, specifically in the entrance, dining and northern elevation areas, that would help emphasize shared experiences, community and gathering. A hallmark of historic Streamline Moderne buildings, the Campus would emphasize interplay of overall horizontals with strong vertical forms at building entries and corridor ends.

The main pedestrian access to the Campus would be located between the Auditorium Building and proposed Administration, Food Service, and Classroom Building in the southwestern portion of the site, fronting South Leland Street. The Senior Courtyard, which would be located east of the Auditorium Building, would include a small outdoor dining area with landscaping. A secondary pedestrian entrance to the school would be located on the north side of Campus, between the existing Administration and Old Gym Buildings off 15th Street.

2.6.2 Circulation, Access and Parking

Currently, the school's main entrance is on the north side of the Administration Building and is accessed from the intersection of West 15th Street and South Alma Street. Once the Project is complete, the main administration would be housed in the new Administration, Food Service, and Classroom Building south of the Auditorium. The school's main entrance would be relocated to the west side of the new Administration, Food Service, and Classroom Building and would be accessed from South Leland Street between 16th Street and 17th Street. The proposed Project is designed to increase circulation, access (including the path of travel), and improve parking at the Campus with the addition of an accessible visitor onsite parking lot off Leland Street. Internal circulation routes would include emergency vehicle access and pedestrian access.

The Campus currently includes a staff and visitor parking lot on the southwest corner of the Campus off West 17th Street and a staff and student parking lot in the northeast portion of the Campus off South Alma Street. The Campus currently includes 248 parking stalls. The proposed Project would result in a decrease of onsite parking spaces from 248 parking stalls to 184 parking stalls (128 parking stalls in the northeast and 56 stalls in the southwest). The staff and visitor parking lot would be reconfigured, but would remain on the southwestern corner of the Campus.



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SOURCE: LPA, 2018

San Pedro High School Comprehensive Modernization Project

Figure 2-6
Proposed Site Plan

ESA

2.6.3 Landscape Improvements

LAUSD schools are developed with: 1) buildings; 2) paved areas including parking lots, hardcourts, and walkways; and 3) landscaped areas, including turf playfields (i.e., football field and baseball/softball field) and ornamental landscaping with trees, shrubs, and grass. The landscape on certain areas of the San Pedro HS Campus is considered character-defining, which contributes to the eligibility of San Pedro HS as an historical resource. Significant (primary) landscape on the Project site is located as follows (Figure 2-4, Contributing Buildings and Landscapes): the perimeter of the Auditorium, central courtyard in front of the Administration Building, on the eastern side of the Administration Building, walkway along 15th Street, and the concrete "Victory Arch" monument at the football field.[8] There are currently 149 trees within and along the boundaries of the Project site. There are no protected trees on the Campus.

The proposed Project would include improvements to each of these areas. Landscape improvements may include repair or replacement of irrigation systems including lawn sprinklers and sprinkler controls, trees, shrubs and other vegetation; landscaping plant material; utilitarian landscape components, such as sprinkler piping; and fencing and freestanding exterior walls. The contributing landscape would be preserved. A total of 121 trees on the Project site would be removed and two street trees would be removed. None of the trees being removed are protected. In addition, the proposed Project would include a small Japanese Garden, possibly located east of the new Administration, Food Service, and Classroom Building. The new Japanese Garden will pay tribute to the Japanese Garden that was located on the San Pedro HS several decades ago, but is no longer in existence.

3.6.4 Infrastructure

The Project site is currently served by existing utilities that are at the end of their service life and need replacement. Site-wide infrastructure improvements would be completed as part of the proposed Project for electrical, gas, sewer, water, and drainage.

Existing storm water runoff is collected by a system of building roof drains and catch basins throughout the site and conveyed by a private, onsite underground storm drain system to discharge to gutters through a series of parkway drains and curb scuppers along the public street adjacent to the perimeter of the Campus. Storm water runoff from new construction would be intercepted by roof drains and catch basins and discharged through a combination of new and existing parkway drains and curb scuppers along the public streets adjacent to the perimeter of the Campus. Storm water runoff would be conveyed through best management practices (BMPs) prior to discharge. New parkway drains may be constructed, and existing parkway drains would be reconstructed and removed due to poor condition or relocation of storm drain discharge locations.

8 PCR Services, Character Defining- Features Memorandum (CDFM) for San Pedro High School, 1001 West 15h Street, Los Angeles, California 90731, Prepared for LAUSD, June 30, 2015.

Based on the Comprehensive Geotechnical Report,[9] infiltration into site subsoils is not feasible. Capture and Use would be implemented where feasible. These systems would consist of underground or above-ground storage tanks, or cisterns, that collect and store storm water runoff for reuse as irrigation. This system would connect directly to conventional irrigation systems, and would only operate when storm water is present in the storage tanks or cisterns. The system would be implemented in areas where irrigation demand is adequate to support discharge of mitigated storm water volumes.

Existing domestic water service connections are located along public streets adjacent to the perimeter of the Campus at South Leland Street, West 15th Street, South Alma Street, 14th Street and 17th Street. Existing domestic water services, meters, backflow assemblies, pressure regulators (if needed) and onsite pipe systems would be upgraded as needed to meet additional demand from plumbing fixture counts at existing buildings. New onsite domestic water supply pipes would be installed to connect domestic water services to new buildings and structures.

2.6.5 Utility Providers

The City of Los Angeles Department of Water and Power (LADWP) provides electric and potable water service to the Project site. The Southern California Gas Company (SCGC) provides natural gas to the Project site. The City of Los Angeles Bureau of Sanitation is the sewer service provider for the Project site.

2.6.6 Security and Safety Features

With the exception of the front lawn along 15th Street and in front of the Auditorium on Leland Street, the perimeter of the Campus is surrounded by an approximately 8-foot metal security fence. The improvements to the Project site would include similar fencing. All new structures would be equipped with fire suppression sprinkler systems and lighting on the exterior walls. All entries would be illuminated to provide safe access. The new parking lots would have lighting that would be focused and shielded to reduce glare and light spill-over. Project Design Features (PDFs) would be incorporated to ensure that these new sources would not create light spill-over greater than 2-foot candles onto adjacent residences. Site lighting would be designed to have minimal offsite impact and contribution to sky glow. Outdoor lighting of architecture and landscape features and interior lighting would be designed to minimize light trespass to the outside from the interior.

2.6.7 Sustainability Features

LAUSD is committed to sustainable construction principles, and has been a member of the Collaborative for High Performance Schools (CHPS) since 2001. CHPS has established criteria for the development of high performance schools to create a better educational experience for students and teachers by designing the best facilities possible. CHPS-designed facilities are

9 Group Delta, 2016. Comprehensive Geotechnical Report, Campus Modernization and Retrofit, San Pedro High School, 1001 West 15th Street, Los Angeles, CA. November 4, 2016.

energy efficient, material efficient, easy to maintain and operate, environmentally responsive, safe and secure, a community resource, and adaptable to changing needs.

School facilities seeking CHPS-certification complete a scorecard and must achieve a certain number of points to be certified. The proposed Project would exceed the minimum requirements to qualify as a CHPS-certified school, with 134 points targeted and a minimum of 110 points required. Some of the sustainable design features include easy access to public transportation, onsite treatment of storm water runoff, roofing that meets "cool roof" building certification requirements, lighting that reduces light pollution, water and energy efficient design, water-wise landscaping, collection of recyclables, and sustainable and/or recycled-content building materials. The proposed Project's new buildings and structures would be designed to reduce energy use below current levels by incorporating modernized and energy-efficient features, which may include lighting, windows, electrical transformers, building insulation, or installation of irrigation smart controllers, etc. All new construction would exceed by 10 percent, or more, the California Title 24, Part 6 energy efficient standards.

2.6.8 Removal Action Workplan

A Preliminary Environmental Assessment - Equivalent (PEA-E) conducted by Clark Seif Clark, Inc. (CSC) in June of 2017 (Appendix E) for the proposed Project recommended soil sampling at San Pedro HS based on the possibility of historic uses of termiticides, herbicides (including arsenic), pesticides, Polychlorinated Biphenyls (PCBs) (in caulking), and lead based paint (LBP). Soil sampling results indicated that arsenic, lead, and/or organochlorine pesticide (OCP) concentrations exceeded the health-based screening levels at 27 surficial soil locations. Of the 27 areas, 17 were impacted with arsenic, 10 were impacted with lead, and 5 were impacted with OCPs above screening levels. Further, there were four locations where two or more compounds exceeded their respective screening levels. CSC recommended that a Removal Action Workplan (RAW) be prepared prior to demolition or construction activities that would disturb areas of concern.

A RAW for the proposed Project was completed by EnSafe, Inc. on November 14, 2017 (Appendix G of this Draft EIR). The RAW includes a description of the contamination, excavation dimensions for the proposed Project, methodology, transportation and disposal, confirmation sampling plan, methods to ensure worker and public health and safety, and cleanup goals. Further, community notices will be distributed in accordance with LAUSD policy. All cleanup activities under the RAW would adhere to applicable state and local policies and regulations regarding excavation, removal and disposal of affected materials. The RAW estimates that the proposed Project would include removal of an estimated 226 cubic yards of soil. For the purposes of this analysis, a conservative estimate of up to 500 cubic yards of soil is used.

2.6.9 Project Construction Phasing

The proposed Project would be developed in a minimum of three phases over a 3 to 4-year construction phasing schedule. Construction is expected to commence in the first quarter of 2020 and be completed in the first quarter of 2024. The construction schedule would have limited to no overlap between phases. Each phase of construction would typically include demolition, soil

removal, grading, building modernization, building construction, architectural coating, and paving. All construction is anticipated to occur during daytime hours, specifically 7:00 a.m. to 7:00 p.m. Monday through Friday.

Project construction personnel and equipment onsite would vary depending on the construction task, and would include a range of construction trades and equipment. A maximum of 150 construction personnel would be expected to be onsite at any given time during the construction phase.

2.7 Project Plan and Building Design

The Project is subject to the California Department of Education (CDE) design and siting requirements, and the school architectural designs are subject to review and approval by the California Division of the State Architect (DSA). The proposed Project, along with all other SUP-related projects, is required to comply with specific design standards and sustainable building practices. Certain standards assist in reducing environmental impacts, such as the California Green Building Code,[10] LAUSD Standard Conditions of Approval (SC), and the Collaborative for High-Performance Schools (CHPS) criteria.[11]

Collaborative for High-Performance Schools. The proposed Project would include CHPS criteria points under seven categories: Integration, Indoor Environmental Quality, Energy, Water, Site, Materials and Waste Management, and Operations and Metrics. LAUSD is committed to sustainable construction principles and has been a member of the CHPS since 2001. CHPS has established criteria for the development of high-performance schools to create a better educational experience for students and teachers by designing the best facilities possible. CHPS-designed facilities are healthy, comfortable, energy efficient, material efficient, easy to maintain and operate, commissioned, environmentally responsive site, a building that teaches, safe and secure, community resource, stimulating architecture, and adaptable to changing needs. The proposed Project would comply with CHPS and LAUSD sustainability guidelines. The design-build team would be responsible for incorporating sustainability features into the proposed Project, including onsite treatment of storm water runoff, roofing that meets "cool roof" building certification requirements, lighting that reduces light pollution, water and energy-efficient design, water-wise landscaping, collection of recyclables, and sustainable and/or recycled-content building materials.

Project Design Features. LAUSD PDFs are environmental protection features that modify a physical element of a site-specific project and are depicted in a site plan or documented in the project design plans. PDFs may be incorporated into a project design, or description, to offset or avoid a potential environmental impact and do not require more than adhering to a site plan or

10 California Green Building Standards Code, Title 24, Part 11, of the CCR.

11 The Board of Education's October 2003 Resolution on Sustainability and Design of High Performance Schools directs staff to continue its efforts to ensure that every new school and modernization project in the District, from the beginning of the design process, incorporate CHPS criteria to the extent possible.

project design. Unlike mitigation measures, PDFs are not special actions that need to be specifically defined or analyzed for effectiveness in reducing potential impacts.

Standard Conditions of Approval. LAUSD SCs are uniformly applied development standards and were adopted by the LAUSD Board in November 2015.[12] The SCs have been updated since the adoption of the 2015 version in order to incorporate and reflect changes in the recent laws, regulations and the LAUSD's standard policies, practices and specifications. The SCs were compiled from established LAUSD standards, guidelines, specifications, practices, plans, policies, and programs, as well as typically applied mitigation measures. The SCs are divided into the 18 LAUSD CEQA environmental topics (Appendix G of the CEQA Guidelines plus Pedestrian Safety).[13] For each SC, compliance is triggered by factors such as the project type, existing conditions, and type of environmental impact. Compliance with every SC is not required.

Mitigation Measures. If, after incorporation and implementation of federal, state, and local regulations; CHPS prerequisite criteria; PDFs; and SCs, there are still significant environmental impacts, then feasible and project-specific mitigation measures are required to reduce impacts to less than significant levels. Mitigation under CEQA Guidelines Section 15370 includes:

- Avoiding the impact altogether by not taking a certain action, or parts of an action.
- Minimizing impacts by limiting the degree, or magnitude, of the action and its implementation.
- Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- Compensating for the impact by replacing, or providing substitute resources, or environments.

Mitigation measures must further reduce significant environmental impacts above and beyond compliance with federal, state, and local laws and regulations; PDFs; and SCs.

The specific CHPS prerequisite criteria and SCs are identified in the tables under each CEQA topic.[14] Federal, state, regional, and local laws, regulations, plans, and guidelines; CHPS criteria; PDFs; and LAUSD conditions are considered part of the Project and are included in the environmental analysis.[15]

12 LAUSD. 2015. Program EIR for the SUP. Available at: http://achieve.lausd.net/ceqa. (see Table 4-1 and Appendix F of the Program EIR).

13 As of September 2016, an additional environmental topic has since been required by the State Office of Planning and Research (Tribal Cultural Resources). The LAUSD Environmental Checklist now has 19 topics.

14 CHPS criteria are summarized. The full requirement can be found at http://www.chps.net/dev/Drupal/California.

15 Where the LAUSD Standard Conditions of Approval identifies actions to be taken, it is understood that the Project proponent would implement all LAUSD actions for this Project.

2.8 Project Approvals

It is anticipated that approval required for the proposed Project would include, but may not be limited to, the following:

Responsible Agencies

- City of Los Angeles, Public Works Department. Permit for curb, gutter, and other offsite improvements
- City of Los Angeles, Fire Department. Approval of plans for emergency access and emergency evacuation
- City of Los Angeles, Department of Building and Safety. Approval of haul route

Reviewing Agencies

- South Coast Air Quality Management District (SCAQMD). Approval of Construction Emission/Dust Control Plan, architectural coatings
- Los Angeles Regional Water Quality Control Board (RWQCB). Approval of water quality management plan
- State Water Resources Control Board (SWRCB) Notice of Intent (NOI) to obtain permit coverage. General Construction Permit regulates stormwater and nonstormwater discharges associated with construction activities
- California Department of General Services, DSA. Approval of site-specific project construction drawings
- California Department of Education. Final plan approval

CHAPTER 3
Environmental Analysis

This Draft EIR is prepared in accordance with CEQA (California Public Resources Code, Section 21000 et seq.), the *CEQA Guidelines* (California Code of Regulations, Title 14, Section 15000 et seq.), and applicable rules and regulations of regional and local entities. This Draft EIR evaluates the potential environmental impacts associated with the construction and operation of the proposed Project. This Draft EIR is intended to serve as an informational document for the public agency decision-makers and the public regarding the proposed Project.

3.0 Scope of the Environmental Impact Analysis

In accordance with Section 15126 of the *CEQA Guidelines*, Chapter 3 provides an analysis of the direct and indirect, Project-specific and cumulative, environmental effects of the proposed Project with respect to existing conditions at the time the NOP was published in 2017 (Appendix A). The determination of whether an impact is significant is based on the significance thresholds and methodology that have been identified for each environmental issue.

The following environmental resources are assessed in this chapter in accordance with Appendix G of the *CEQA Guidelines:*

- Air Quality
- Cultural Resources
- Energy
- Greenhouse Gas Emissions
- Noise
- Transportation and Traffic

3.0.1 Approach to Environmental Analysis

Sections 3.1 through 3.6 of this EIR contain discussions of the environmental setting, regulatory framework, and potential impacts related to construction and operation of the proposed Project. The environmental evaluation includes a Project analysis and a cumulative analysis. The Project analysis includes a level of impact before the implementation of mitigation measures, if required. The analyses also include a level of impact after the implementation of mitigation measures.

3.0.2 Organization of Environmental Issue Area

The analysis of each environmental issue includes the following components:

Introduction

Provides an introduction to the environmental issue analysis and notes other related issues, if applicable.

Environmental Setting

This section identifies and describes the existing physical environmental conditions of Project site associated with each of the impact sections. According to Section 15125(a) of the *CEQA Guidelines*, an EIR must include a description of the existing physical environmental conditions in the vicinity of the proposed Project to provide the "baseline condition" against which Project-related impacts are compared. Normally, the baseline condition is the physical condition that exists when the NOP is published. The NOP for the proposed Project was published in September 2017, which is considered the baseline for the analysis contained in this EIR.

Regulatory Framework

The Regulatory Framework provides an understanding of the regulatory environment that exists prior to the implementation of the proposed Project. The regulatory framework used in this EIR includes applicable federal, state, regional, and local regulations and policies.

Impacts, Standard Conditions and Mitigation Measures

This section describes the significance thresholds and methodology used for the analysis. The environmental changes to the existing physical conditions that may occur if the proposed Project is implemented are discussed, and an evaluation of these changes with respect to the significance criteria is provided. This section also includes a Project impact analysis and a cumulative impact analysis. The level of impact prior to the implementation of mitigation is identified. This section also provides a description and discussion of LAUSD Standard Conditions (SCs) incorporated into the proposed Project to reduce significant impacts when required. Mitigation measures are identified for potential significant Project and cumulative impacts, if determined feasible. The mitigation measures are those measures that could avoid, minimize, or reduce an environmental impact. This section also includes a discussion of the level of significance after mitigation that describes the level of impact significance remaining after mitigation measures are implemented.

References

Sources relied upon for each environmental topic analyzed in this document are provided at the end of each section.

3.0.3 Thresholds of Significance/Significance Criteria

State CEQA Guidelines Section 15382 defines a significant effect on the environment as:

> *a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.*

The "Significance Criteria" subsections provide thresholds of significance by which impacts are judged to be significant in this EIR. These include identifiable quantitative or qualitative standards or sets of criteria pursuant to which the significance of a given environmental effect may be determined. Exceedance of a threshold of significance normally means the effect will be determined to be significant (*State CEQA Guidelines* Section 15064.7(a)). However, an ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting (*State CEQA Guidelines* Section 15064(b)). Therefore, a Lead Agency has the discretion to determine whether to classify an impact described in an EIR as "significant," depending on the nature of the area affected. The thresholds of significance used to assess the significant of impacts are based on those provided in Appendix G of the *State CEQA Guidelines*.

3.0.4 Terminology Used in This Environmental Analysis

When evaluating the impacts of the proposed Project and Project alternatives, the level of significance is determined by applying the threshold of significance (significance criteria) presented for each resource evaluation area. The following terms are used to describe each type of impact:

No Impact: No adverse impact on the environment would occur, and mitigation is not required.

Less Than Significant Impact: The impact does not reach or exceed the defined threshold of significance.

Less than Significant Impact with Mitigation: The impact reaches or exceeds the defined threshold of significance and mitigation is therefore required. Feasible mitigation measures, when implemented, will reduce the significant impact to a less than significant level.

Significant Unavoidable Impact: The impact reaches or exceeds the defined threshold of significance. However, application of feasible mitigation measures would not reduce the impact to a less than significant level.

Mitigation: Mitigation refers to feasible measures that would be implemented to avoid or lessen potentially significant impacts. Mitigation includes:

- Avoiding the impact completely by not taking a certain action or parts of an action;
- Minimizing the impact by limiting the degree or magnitude of the action and its implementation;
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and/or
- Compensating for the impact by replacing or providing substitute resources or environments.

The mitigation measures would be proposed as a condition of Project approval and would be monitored to ensure compliance and implementation.

Residual Impacts: This is the level of impact after the implementation of mitigation measures.

3.0.5 Cumulative Projects

Cumulative impacts refer to the combined effect of Project impacts with the impacts of other past, present, and reasonably foreseeable probable future projects. Both CEQA and the State CEQA Guidelines require that cumulative impacts be analyzed in an EIR. As set forth in the State CEQA Guidelines Section 15130(b), "*the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone*."

According to Section 15355 of the State CEQA Guidelines:

> *"Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable, or which compound, or increase, other environmental impacts.*
>
> *a) The individual effects may be changes resulting from a single project, or a number of separate projects.*
>
> *b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

Therefore, the cumulative discussion in this EIR focuses on whether the impacts of the proposed Project are cumulatively considerable within the context of impacts caused by other past, present, and reasonably foreseeable future projects.

State CEQA Guidelines Section 15130(b)(1) states that the information utilized in an analysis of cumulative impacts should come from one of the following:

- A list of past, present, and probable future projects producing related or cumulative impacts, including those projects outside the control of the lead agency.
- A summary of projections contained in an adopted local, regional or statewide plan or related planning document that describes or evaluates conditions contributing to the cumulative effect.

The cumulative analysis discussed in this Draft EIR is provided within each technical section in Chapter 3. Generally, a summary of projections contained in the San Pedro Community Plan was utilized to understand potential cumulative growth and development within the LAUSD service area. The growth forecast provided by the Southern California Association of Governments was used to understand the population, housing and employment growth that would occur within the cities located within the LAUSD service area. These projections are provided in Chapter 4, *Other CEQA Considerations*, in this DEIR.

Additionally, the City of Los Angeles (City) was contacted for a comprehensive list of current and pending projects for the San Pedro Community Plan Area. The City concluded that no major projects or project EIRs in San Pedro were recently processed.

Table 3-1, below, provides a list of the LAUSD Comprehensive Modernization projects that are also considered in this cumulative environmental analysis.

TABLE 3-1
LAUSD COMPREHENSIVE MODERNIZATION PROJECT LIST

No.	Project Name/Location	Description
1	92nd Street Elementary School 9211 Grape St. Los Angeles 90002	Comprehensive Modernization Project
2	Elizabeth Learning Center 4811 Elizabeth St. Cudahy 90201	Comprehensive Modernization Project
3	McKinley Elementary School 7812 McKinley Ave. Los Angeles 90001	Comprehensive Modernization Project
4	HP High School 6020 Miles Ave. Huntington Park 90255	Comprehensive Modernization Project
5	Ascot Elementary School 1447 E. 45th St. Los Angeles 90011	Comprehensive Modernization Project
6	Jefferson High School 1319 E. 41st St. Los Angeles 90011	Comprehensive Modernization Project
7	Roosevelt High School 456 Matthews St. Los Angeles 90033	Comprehensive Modernization Project
8	Belvedere Middle School 312 N. Record Ave. Los Angeles 90063	Comprehensive Modernization Project
9	Lincoln High School 3501 N. Broadway Los Angeles 90031	Comprehensive Modernization Project
10	Venice High School 13000 Venice Blvd. Los Angeles 90066	Comprehensive Modernization Project
11	Hamilton High School 2955 S. Robertson Blvd. Los Angeles 90034	Comprehensive Modernization Project
12	Shenandoah Elementary School 2450 Shenandoah St. Los Angeles 90034	Comprehensive Modernization Project
13	Burroughs Middle School 600 S. McCadden Pl. Los Angeles 90005	Comprehensive Modernization Project
14	North Hollywood High School 5231 Colfax Ave. North Hollywood 91601	Comprehensive Modernization Project
15	Grant High School 13000 Oxnard St. Valley Glen 91401	Comprehensive Modernization Project
16	Polytechnic High School 12431 Roscoe Blvd. Sun Valley 91352	Comprehensive Modernization Project
17	Taft High School 5461 Winnetka Ave. Woodland Hills 91364	Comprehensive Modernization Project
18	Sherman Oaks Center for Enriched Studies 18605 Erwin St. Tarzana 91335	Comprehensive Modernization Project
19	Reseda High School 18230 Kittridge St. Reseda 91335	Comprehensive Modernization Project
20	Cleveland High School 8140 Vanalden Ave. Reseda 91335	Comprehensive Modernization Project
21	Kennedy High School 11254 Gothic Ave. Granada Hills 91344	Comprehensive Modernization Project

3.1 Air Quality

This section evaluates potential impacts related to air emissions generated by construction and operation of the proposed Project. The analysis also addresses consistency of the Project with air quality policies set forth within the South Coast Air Quality Manage District's (SCAQMD) Air Quality Management Plan (AQMP) and the LAUSD. The analysis of project-generated air emissions focuses on whether the Project would cause exceedance of an ambient air quality standard, or a SCAQMD significance threshold. Details regarding the air quality analysis are provided in the Air Quality Technical Report in Appendix B of this Draft EIR.

3.1.1 Environmental Setting

Regional Air Quality

The Project site is located within the South Coast Air Basin (Air Basin). The distinctive climate of the Air Basin is determined primarily by its terrain and geographical location. Regional meteorology is dominated by a persistent high-pressure area which commonly resides over the eastern Pacific Ocean. Seasonal variations in the strength and position of this pressure cell cause changes in the weather patterns of the area. Warm summers, mild winters, infrequent rainfall, moderate daytime on-shore breezes, and moderate humidity characterize local climatic conditions. This normally mild climatic condition is occasionally interrupted by periods of hot weather, winter storms, and hot easterly Santa Ana winds.

The Air Basin is an area of high air pollution potential, particularly from June through September. This condition is generally attributed to the large amount of pollutant emissions, light winds and shallow vertical atmospheric mixing. This frequently reduces pollutant dispersion, thus causing elevated air pollution levels. Pollutant concentrations in the Air Basin vary with location, season and time of day. Ozone concentrations, for example, tend to be lower along the coast, higher in the near inland valleys and lower in the far inland areas of the Air Basin and adjacent desert.

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in air quality. The following pollutants are regulated by the United States Environmental Protection Agency (US EPA) and are subject to emissions control requirements adopted by federal, state and local regulatory agencies. These pollutants are referred to as "criteria air pollutants" as a result of the specific standards, or criteria, which have been adopted for them. A brief description of the health effects of these criteria air pollutants are provided below.

Ozone (O_3): O_3 is a secondary pollutant formed by the chemical reaction of Volatile Organic Compounds (VOCs) and Nitrogen Oxides (NO_X) under favorable meteorological conditions such as high temperature and stagnation episodes. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. An elevated level of O_3 irritates the lungs and breathing passages, causing coughing and pain in

the chest and throat, thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower lung efficiency.

Volatile Organic Compounds (VOCs). VOCs are typically formed from combustion of fuels and/or released through evaporation of organic liquids. These are compounds comprised primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons, as are architectural coatings. Emissions of VOCs themselves are not "criteria" pollutants; however, they contribute with NO_X to formation of O_3 and are regulated as O_3 precursor emissions.

Nitrogen Dioxide (NO_2) and Nitrogen Oxides (NO_X): NO_X is a term that refers to a group of compounds containing nitrogen and oxygen. The primary compounds of air quality concern include NO_2 and nitric oxide (NO), which can quickly oxidize in the atmosphere to form NO_2. Ambient air quality standards have been promulgated for NO_2, which is a reddish-brown, reactive gas. The principle form of NO_X produced by combustion is NO, but NO reacts quickly in the atmosphere to form NO_2, creating the mixture of NO and NO_2 referred to as NO_X. Major sources of NO_X emissions include power plants, large industrial facilities, and motor vehicles. Emissions of NO_X are a precursor to the formation of ground-level ozone. NO_2 can potentially irritate the nose and throat, aggravate lung and heart problems, and may increase susceptibility to respiratory infections, especially in people with asthma. According to the California Air Resources Board (CARB), "NO_2 is an oxidizing gas capable of damaging cells lining the respiratory tract. Exposure to NO_2 along with other traffic-related pollutants, is associated with respiratory symptoms, episodes of respiratory illness and impaired lung functioning. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO_2 above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO_2 exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children." (CARB, 2017e) NO_2 also contributes to the formation of particulate matter. The terms "NO_X" and "NO_2" are sometimes used interchangeably. However, the term "NO_X" is primarily used when discussing emissions, usually from combustion-related activities. The term "NO_2" is primarily used when discussing ambient air quality standards. More specifically, NO_2 is regulated as a criteria air pollutant under the Clean Air Act and subject to the ambient air quality standards, whereas NO_X and NO are not. In cases where the thresholds of significance, or impact analyses are discussed in the context of NO_X emissions, it is based on the conservative assumption that all NO_X emissions would oxidize in the atmosphere to form NO_2.

Carbon Monoxide (CO): Carbon monoxide is primarily emitted from combustion processes and motor vehicles due to incomplete combustion of fuel. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of CO can cause nausea, dizziness, and headaches at moderate concentrations and can be fatal at high concentrations.

Sulfur Dioxide (SO_2): Major sources of SO_2 include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of sulfur dioxide aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics

and people involved in moderate to heavy exercise. Sulfur dioxide potentially causes wheezing, shortness of breath, and coughing. High levels of particulates appear to worsen the effect of sulfur dioxide, and long-term exposures to both pollutants leads to higher rates of respiratory illness.

Particulate Matter (PM10 and PM2.5): The human body naturally prevents the entry of larger particles into the body. However, small particles including fugitive dust, with an aerodynamic diameter equal to or less than ten microns (PM10) and even smaller particles with an aerodynamic diameter equal to or less than 2.5 microns (PM2.5), can enter the body and are trapped in the nose, throat, and upper respiratory tract. These small particulates could potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM10 and PM2.5. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates could become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids. The elderly, children, and those with chronic lung, or heart, disease are most sensitive to PM10 and PM2.5. In children, studies have shown associations between particulate matter exposure and reduced lung function and increased respiratory symptoms and illnesses (CARB, 2017f). Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates could become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids.

Lead (Pb): Lead is emitted from industrial facilities and from the sanding or removal of old lead-based paint. Smelting or processing the metal is the primary source of lead emissions, which is primarily a regional pollutant. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

Local Air Quality

Existing Ambient Air Quality in the Project Area

The SCAQMD maintains a network of air quality monitoring stations located throughout the Air Basin to measure ambient pollutant concentrations. The monitoring area most representative of the Project site is the South Los Angeles County Coastal Monitoring Area (Station 033). Criteria pollutants monitored at this station include O_3, NO_2, CO, SO_2, and PM10. Station 077 monitors PM10, PM2.5, and Pb. The most recent data available from the SCAQMD for these monitoring stations are from years 2012 to 2016 (SCAQMD, 2017b). The pollutant concentration data for these years are summarized in **Table 3.1-1** *Pollutant Standards and Ambient Air Quality Data from Representative Monitoring Station*.

Sensitive Receptors

Certain population groups, such as children, elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases), are considered more sensitive to the potential effects of air pollution than others. The nearest sensitive receptors are the existing students at San Pedro High School, Dana Middle School (located approximately 400 feet east of the nearest construction activity area), and residential uses surrounding the school (located as near as 70 feet from construction activity).

All other air quality sensitive receptors are located at greater distances from the Project site, and would be less impacted by Project emissions.

TABLE 3.1-1
POLLUTANT STANDARDS AND AMBIENT AIR QUALITY DATA FROM REPRESENTATIVE MONITORING STATION

Pollutant/Standard [a]	2012	2013	2014	2015	2016
O_3 (1-hour)					
Maximum Concentration (ppm)	0.080	0.090	0.087	0.087	0.079
Days > CAAQS (0.09 ppm)	0	0	0	0	0
O_3 (8-hour)					
Maximum Concentration (ppm)	0.066	0.069	0.072	0.066	0.059
4th High 8-hour Concentration (ppm)	0.054	0.057	0.061	0.056	0.055
Days > CAAQS (0.070 ppm)	0	0	1	0	0
Days > NAAQS (0.070 ppm)	0	0	1	0	0
NO_2 (1-hour)					
Maximum Concentration (ppm)	0.0978	0.0813	0.1359	0.1018	0.0756
98th Percentile Concentration (ppm)	0.0774	0.0713	0.0848	0.0644	0.0663
NO_2 (Annual)					
Annual Arithmetic Mean (0.030 ppm)	0.0253	0.0215	0.207	0.0198	0.0185
CO (1-hour)					
Maximum Concentration (ppm)	--	--	4.0	3.3	3.3
CO (8-hour)					
Maximum Concentration (ppm)	2.6	2.6	2.6	2.2	2.2
SO_2 (1-hour)					
Maximum Concentration (ppm)	0.0227	0.0151	0.0147	0.0375	0.0178
99th Percentile Concentration (ppm)	0.0213	0.0116	0.0101	0.0118	0.0120
PM10 (24-hour)[b]					
Maximum Concentration (µg/m^3)	54.0	54.0	59.0	80.0	75
Est. Days > CAAQS (50 µg/m^3)	1	1	2	6	8
Est. Days > NAAQS (150 µg/m^3)	0	0	0	0	0
PM10 (Annual Average)					
Annual Arithmetic Mean (20 µg/m^3)	25.5	27.3	26.6	31.5	31.9
$PM_{2.5}$ (24-hour)					
Maximum Concentration (µg/m^3)	46.7	42.9	52.2	48.3	28.93
98th Percentile Concentration (µg/m^3)	25.1	24.6	27.2	31.2	22.05
Est. Days > NAAQS (35 µg/m^3)	4	1	2	4	0
$PM_{2.5}$ (Annual)					
Annual Arithmetic Mean (12 µg/m^3)	10.57	10.97	10.72	10.26	9.62
Lead					
Maximum 30-day average (µg/m^3)	0.007	0.012	0.012	0.010	0.008

[a] ppm = parts per million; µg/m^3 = micrograms per cubic meter
[b] PM10 monitored at Station 033 years 2015 and 2016 and at Station 077 years 2012 – 2014.

SOURCES: SCAQMD, 2017b.

3.1.2 Regulatory Setting

Federal

Federal Clean Air Act

The federal CAA was the first federal legislation regarding air pollution control. At the federal level, the US EPA is responsible for implementation of certain portions of the CAA including mobile source requirements. Other portions of the CAA, such as stationary source requirements, are implemented by state and local agencies.

Under Title I, Nonattainment Provisions, the CAA establishes federal air quality standards, known as National Ambient Air Quality Standards (NAAQS), for the following criteria pollutants O_3, NO_2, CO, SO_2, PM10, PM2.5, and Pb. It also specifies future dates for achieving compliance with the NAAQS and mandates that states submit and implement a State Implementation Plan (SIP) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards would be met. The 1990 amendments to the CAA identify specific emission reduction goals for basins not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. **Table 3.1-2** *Ambient Air Quality* Standards, shows the NAAQS currently in effect for each criteria pollutant.

Title II of the CAA, Mobile Source Provisions, pertains to mobile sources such as cars, trucks, buses, and planes. Reformulated gasoline, automobile pollution control devices, and vapor recovery nozzles on gas pumps are a few of the mechanisms the US EPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have strengthened in recent years to improve air quality. For example, the standards for NO_X emissions have lowered substantially and the specification requirements for cleaner burning gasoline are more stringent.

TABLE 3.1-2
AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	California Standards [a]		National Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e]	Secondary [c,f]	Method [g]
O_3 [h]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
NO_2 [i]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemi-luminescence	100 ppb (188 µg/m^3)	None	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		53 ppb (100 µg/m^3)	Same as Primary Standard	
CO	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	None	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10mg/m^3)		9 ppm (10 mg/m^3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	

Pollutant	Average Time	California Standards [a]		National Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e]	Secondary [c,f]	Method [g]
SO_2 [j]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)[9]
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas) [j]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) [j]	—	
PM10 [k]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
PM2.5 [k]	24 Hour	No Separate State Standard		35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3 [k]	15 µg/m^3	
Lead [l, m]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[m]	Same as Primary Standard	
	Rolling 3-Month Average [m]	--		0.15 µg/m^3		
Visibility Reducing Particles [n]	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		**No Federal Standards**		
Sulfates (SO_4)	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[l]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

[a] California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than O_3, PM10, PM2.5, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] Any equivalent procedure which can be shown to the satisfaction of CARB to give equivalent results at or near the level of the air quality standard may be used.

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

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

Pollutant	Average Time	California Standards [a]		National Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e]	Secondary [c,f]	Method [g]

[g] Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.
[h] On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm.
[i] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb.
[j] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated non-attainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
[k] On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$.
[l] CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
[m] The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated non-attainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
[n] In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

SOURCE: CARB, 2016.

State

California Air Resources Board

CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets state ambient air quality standards (California Ambient Air Quality Standards [CAAQS]), compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of California's SIP, for which it works closely with the federal government and the local air districts. The SIP is required for the State to take over implementation of the federal CAA from the US EPA.

In 2004, CARB adopted an Airborne Toxic Control Measure (ACTM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other toxic air contaminants (Title 13 California Code of Regulations [CCR], Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure generally does not allow diesel-fueled commercial vehicles to idle for more than five (5) minutes at any given location with certain exemptions for equipment in which idling is a necessary function such as concrete trucks. While this measure primarily targets diesel particulate matter emissions, it has co-benefits of minimizing GHG emissions from unnecessary truck idling.

In 2008, CARB approved the Truck and Bus regulation to reduce particulate matter and nitrogen oxide emissions from existing diesel vehicles operating in California (13 CCR, Section 2025,

subsection (h)). CARB has also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation adopted by the CARB on July 26, 2007, aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models. While these regulations primarily target reductions in criteria air pollutant emission, they have co-benefits of minimizing GHG emissions due to improved engine efficiencies.

California Clean Air Act

The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the CAAQS by the earliest practical date. The CAAQS apply to the same criteria pollutants as the federal Clean Air Act but also include state-identified criteria pollutants, which include sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. CARB has primary responsibility for ensuring the implementation of the California Clean Air Act, responding to the federal Clean Air Act planning requirements applicable to the state, and regulating emissions from motor vehicles and consumer products within the state. Table 3.1-2 shows the CAAQS currently in effect for each of the criteria pollutants as well as the other pollutants recognized by the state. As shown in Table 3.1-2, the CAAQS include more stringent standards than the NAAQS for most of the criteria air pollutants.

Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria. **Table 3.1-3***South Coast Air Basin Attainment Status (Los Angeles County)* provides a summary of the attainment status of the Los Angeles County portion of the Air Basin with respect to the state standards. The Air Basin is designated as attainment for the California standards for sulfates, hydrogen sulfide, and vinyl chloride. As shown in Table 3.1-3, the Air Basin is currently in nonattainment for ozone, PM10, and PM2.5 under the CAAQS.

The Clean Air Act also specifies future dates for achieving compliance with the NAAQS and mandates that states submit and implement a State Implementation Plan (SIP) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards would be met. The 1990 amendments to the Clean Air Act identify specific emission reduction goals for basins not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain, or meet, interim milestones.

Title II of the Clean Air Act pertains to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline, automobile pollution control devices, and vapor recovery nozzles on gas pumps are a few of the mechanisms the US EPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have strengthened in recent years to improve air quality. For example, the standards for NO_X emissions have lowered substantially and the specification requirements for cleaner burning gasoline are more stringent.

TABLE 3.1-3
SOUTH COAST AIR BASIN ATTAINMENT STATUS (LOS ANGELES COUNTY)

Pollutant	National Standards	California Standards
Ozone (1-hour standard)	N/A [a]	Non-attainment
Ozone (8-hour standard)	Non-attainment – Extreme	Non-attainment
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
PM10	Attainment	Non-attainment
PM2.5	Non-attainment – Serious	Non-attainment
Lead	Non-attainment (Partial) [b]	Attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Attainment
Vinyl Chloride	N/A	N/A [c]

NOTES:
N/A = not applicable

[a] The NAAQS for 1-hour ozone was revoked on June 15, 2005, for all areas except Early Action Compact areas.
[b] Partial Nonattainment designation – Los Angeles County portion of the Air Basin only for near-source monitors.
[c] In 1990 the California Air Resources Board identified vinyl chloride as a toxic air contaminant and determined that it does not have an identifiable threshold. Therefore, the California Air Resources Board does not monitor or make status designations for this pollutant.

SOURCE: US EPA, 2017; CARB, 2017a.

Air Quality and Land Use Handbook

The CARB published the Air Quality and Land Use Handbook in April 2005 to serve as a general guide for considering impacts to sensitive receptors from facilities that emit toxic air contaminant (TAC) emissions. The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts.

On-Road and Off-Road Vehicle Rules

In 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter (DPM) and other TACs (Title 13 California Code of Regulations [CCR], Section 2485) (CARB, 2017b). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given time.

In 2008 CARB approved the Truck and Bus regulation to reduce NO_X, PM10, and PM2.5 emissions from existing diesel vehicles operating in California (13 CCR, Section 2025) (CARB, 2017c). The requirements were amended in December 2010 and apply to nearly all diesel fueled

trucks and busses with a gross vehicle weight rating greater than 14,000 pounds. For the largest trucks in the fleet, those with a gross vehicle weight rating greater than 26,000 pounds, there are two methods to comply with the requirements. The first way is for the fleet owner to retrofit or replace engines, starting with the oldest engine model year, to meet 2010 engine standards, or better. This is phased over eight years, starting in 2015 and would be fully implemented by 2023, meaning that all trucks operating in the State subject to this option would meet, or exceed, the 2010 engine emission standards for NO_X and DPM by 2023. The second option, if chosen, requires fleet owners, starting in 2012, to retrofit a portion of their fleet with diesel particulate filters achieving at least 85 percent removal efficiency, so that by January 1, 2016 their entire fleet was equipped with diesel particulate filters. However, diesel particulate filters do not typically lower NO_X emissions. Thus, fleet owners choosing the second option must still comply with the 2010 engine emission standards for their trucks and busses by 2020.

In addition to limiting exhaust from idling trucks, CARB promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower (hp) such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation adopted by the CARB on July 26, 2007, aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower, of older, dirtier engines with newer emission-controlled models (13 CCR, Section 2449) (CARB, 2017d). Implementation is staggered based on fleet size (which is the total of all off-road horsepower under common ownership or control), with the largest fleets to begin compliance January 1, 2014. Each fleet must demonstrate compliance through one of two methods. The first option is to calculate and maintain fleet average emissions targets, which encourages the retirement, or repowering, of older equipment and rewards the introduction of newer cleaner units into the fleet. The second option is to meet the Best Available Control Technology (BACT) requirements by turning over, or installing, Verified Diesel Emission Control Strategies (VDECS) on a certain percentage of its total fleet horsepower. The compliance schedule requires that BACT turn overs, or retrofits (VDECS installation), be fully implemented by 2023 in all equipment in large and medium fleets and across 100 percent of small fleets by 2028.

Regional

South Coast Air Quality Management District

The SCAQMD has jurisdiction over an area of approximately 10,743 square miles. This area includes all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The Air Basin is a sub-region of the SCAQMD jurisdiction. While air quality in this area has improved, the Air Basin requires continued diligence to meet air quality standards.

Air Quality Management Plan

The SCAQMD has adopted a series of Air Quality Management Plans (AQMP) to meet the CAAQS and NAAQS. The SCAQMD and CARB have adopted the 2016 AQMP, which incorporates scientific and technological information and planning assumptions regarding air quality, including the SCAG 2016 Regional Transportation Plan/Sustainable Communities

Strategy (RTP/SCS), and emission inventory methodologies for various source categories (SCAQMD, 2017a). The 2016 AQMP was adopted by the AQMD Governing Board on March 3, 2017 (SCAQMD, 2017a).

The purpose of the 2016 AQMP is to bring the Air Basin into attainment with NAAQS for 24-hour PM2.5. SCAQMD has since determined that this deadline was impractical due to drought conditions in the region (SCAQMD, 2017a). In 2016, US EPA approved reclassification of the Air Basin from "moderate" to "serious" non-attainment for the 24-hour PM2.5 standard, which has a new attainment deadline of December 31, 2019. The 2016 AQMP demonstrates that the 24-hour standard will be met by 2019 with no additional reductions beyond already adopted and implemented measures. The 2016 AQMP also intensifies the scope and pace of continued air quality improvement efforts toward meeting the 2024 and 2032 8-hour ozone standard deadline with new measures designed to reduce reliance on the CAA Section 182(e)(5) long-term measures for NO_X and VOC reductions. SCAQMD expects exposure reductions to be achieved through implementation of new and advanced control technologies as well as improvement of existing technologies.

The control measures in the 2016 AQMP consist of 8-hour ozone control measures and PM2.5 control measures designed to achieve the ozone and PM2.5 NAAQS by statutory deadlines. The AQMP includes ten $PM_{2.5}$ control measures, 15 stationary source 8-hour ozone measures and 15 early action measures for mobile sources. In general, the SCAQMD's control strategy for stationary and mobile sources is based on the following approaches: (1) available cleaner technologies; (2) best management practices; (3) incentive programs; (4) development and implementation of near-zero technologies and vehicles and control methods; and (5) emission reductions from mobile sources. Control strategies in the AQMP with potential applicability to short-term emissions from construction activities associated with the Project include strategies denoted in the AQMP as MOB-08 and MOB-10, which are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment. Descriptions of measures MOB-08 and MOB-10 are provided below:

> **MOB-08 – Accelerated Retirement of Older On-Road Heavy-Duty Vehicles:** This proposed measure seeks to replace heavy-duty vehicles with newer, or new, vehicles that at a minimum, meet the 2010 on-road heavy-duty NO_X exhaust emissions standard of 0.2 grams per brake horsepower-hour (g/bhp-hr). Given that exceedances of the 24-hour $PM_{2.5}$ air quality standard occur in the state, priority will be placed on replacing older diesel trucks that operate primarily at the warehouse and distribution centers. Funding assistance of up to $50,000 per vehicle is proposed and the level of funding will depend upon the NO_X emissions certification level of the replacement vehicle. In addition, a provision similar to the Surplus Off-Road Option for NO_X (SOON) provision of the statewide In-Use Off-Road Fleet Vehicle Regulation will be sought to ensure that additional NO_X emission reduction benefits are achieved.
>
> **MOB-10 – Extension of the SOON Provision for Construction/Industrial Equipment:** This measure seeks to continue the (SOON) provision of the statewide In-Use Off-Road Fleet Vehicle Regulation beyond 2023 through the 2031 timeframe. To implement the SOON program in this timeframe, funding of at least $10 million per year would be sought to help fund the repower, or replacement, of older Tier 0 and Tier 1

equipment, with reductions that are considered surplus to the statewide regulation with Tier 4 or cleaner engines.

The SCAQMD released the Draft 2016 AQMP on June 30, 2016 for public review and comment. A revised Draft 2016 AQMP was released in October 2016 and the SCAQMD Governing Board adopted the 2016 AQMP on March 3, 2017 (SCAQMD, 2017a). CARB approved the 2016 AQMP on March 23, 2017. USEPA approval is pending, and is a necessary requirement before the 2016 AQMP can be incorporated into the State Implementation Plan. Key elements of the 2016 AQMP include implementing fair-share emissions reductions strategies at the federal, state, and local levels; establishing partnerships, funding, and incentives to accelerate deployment of zero and near-zero-emissions technologies; and taking credit from co-benefits from greenhouse gas, energy, transportation and other planning efforts (SCAQMD, 2017a). The strategies included in the 2016 AQMP are intended to demonstrate attainment of the NAAQS for the federal non-attainment pollutants O_3 and PM2.5 (SCAQMD, 2016). Provisions of the 2016 AQMP do not appear to affect the proposed Project.

Regulations and Rules

Several SCAQMD rules adopted to implement portions of the AQMP may apply to construction, or operation, of the Project. The Project may be subject to the following SCAQMD rules and regulations:

Regulation IV – Prohibitions: This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air emissions, fuel contaminants, start-up/shut-down exemptions and breakdown events. The following is a list of rules which may apply to the Project:

Rule 401 – Visible Emissions: This rule states that a person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period, or periods, aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, or of such opacity as to obscure an observer's view.

Rule 402 – Nuisance: This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons, or to the public, or which endanger the comfort, repose, health or safety of any such persons, or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Rule 403 – Fugitive Dust: This rule requires projects to prevent, reduce or mitigate fugitive dust emissions from a site. Rule 403 restricts visible fugitive dust to the Project property line, restricts the net PM10 emissions to less than 50 micrograms per cubic meter ($\mu g/m^3$) and restricts the tracking out of bulk materials onto public roads. Additionally, projects must utilize one or more of the best available control measures (identified in the tables within the rule). Mitigation measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers and/or ceasing all activities. Finally, a contingency plan may be required if so determined by the US EPA.

Regulation XI – Source Specific Standards: Regulation XI sets emissions standards for different specific sources. The following is a list of rules which may apply to the Project:

Rule 1113 – Architectural Coatings: This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters: This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NO_X emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule.

Regulation XIV – Toxics and Other Non-Criteria Pollutants: Regulation XIV sets requirements for new permit units, relocations, or modifications to existing permit units which emit toxic air contaminants or other non-criteria pollutants. The following is a list of rules which may apply to the Project:

Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities: This rule requires owners and operators of any demolition or renovation activity and the associated disturbance of asbestos-containing materials, any asbestos storage facility, or any active waste disposal site to implement work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials.

Air Quality Guidance Documents

The SCAQMD published a *CEQA Air Quality Handbook* (the Handbook) to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts. The Handbook provides standards, methodologies, and procedures for conducting air quality analyses in CEQA documents and was used extensively in the preparation of this analysis. However, the SCAQMD is currently in the process of replacing the Handbook with the *Air Quality Analysis Guidance Handbook*. While this process is underway, the SCAQMD recommends using CalEEMod or another approved model to calculate emissions from land use projects (SCAQMD, 1993).

In June 2003, the SCAQMD published a document called the *Localized Significance Threshold Methodology* that is intended to provide voluntary guidance for lead agencies in analyzing localized air quality impacts from projects (SCAQMD, 2008). The document was revised in July 2008 to incorporate additional guidance regarding PM2.5 emissions (SCAQMD, 2006). The *Localized Significance Threshold Methodology* was also used in the preparation of this assessment.

The SCAQMD has also adopted land use planning guidance in the May 2005 *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning* (SCAQMD, 2005) which, like the CARB Handbook, also considers impacts to sensitive receptors from facilities that emit TACs. SCAQMD's distance recommendations are the same as those provided by CARB (e.g., the same siting criteria for distribution centers and dry-cleaning facilities). The SCAQMD's document introduces land use-related policies that rely on design and distance

parameters to manage potential health risk. The guidance consists of voluntary initiatives recommended for consideration by local planning agencies.

Local

City of Los Angeles

Local jurisdictions, such as the City of Los Angeles (City), have the authority and responsibility to reduce air pollution through its land use decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The City's General Plan Air Quality Element includes City-wide goals, objectives, and policies related to air quality resources. A number of these goals, objectives, and policies are relevant to the proposed Project, and are related to traffic mobility, minimizing particulate emissions from construction activities, discouraging single-occupancy vehicle trips, managing traffic congestion during peak hours, and increasing energy efficiency in City facilities and private developments.

The City of Los Angeles is also responsible for the implementation of transportation control measures as outlined in the AQMP. Through capital improvement programs, local governments can fund infrastructure that contributes to improved air quality by requiring such improvements as bus turnouts as appropriate, installation of energy-efficient streetlights, and synchronization of traffic signals. In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits and monitors and enforces implementation of such mitigation measures.

Los Angeles Unified School District PEIR

The SUP Program EIR includes Standard Conditions of Approval (SCs) for reducing impacts on air quality in areas where future projects would be implemented under the SUP. Applicable SCs related to Project air quality impacts are provided in **Table 3.1-4** *Air quality Standard Conditions of Approval*, below.

According to the Program EIR, projects implemented under the SUP are anticipated to have less than significant and potentially significant impacts on air quality within the LAUSD service area. However, the Project-specific analysis provided below concludes that implementation of the San Pedro High School Comprehensive Modernization Project would have less than significant impacts on the surrounding community.

TABLE 3.1-4
AIR QUALITY STANDARD CONDITIONS OF APPROVAL

Applicable SCs	Description
SC-AQ-1	**OEHS CEQA Specification Manual, Appendix J, Air Toxics Health Risk Assessment (HRA)** This document includes guidance on HRA protocols for permitted, non-permitted, and mobile sources that might reasonably be anticipated to emit hazardous air emissions and result in potential long-term and short-term health impacts to student and staff at the school site
SC-AQ-2	LAUSD's construction contractor shall ensure that construction equipment is properly tuned and maintained in accordance with manufacturer's specifications, to ensure excessive emissions are not generated by unmaintained equipment.
SC-AQ-3	LAUSD's construction contractor shall: • Maintain slow speeds with all vehicles. • Load impacted soil directly into transportation trucks to minimize soil handling. • Water/mist soil as it is being excavated and loaded onto the transportation trucks. • Water/mist and/or apply surfactants to soil placed in transportation trucks prior to exiting the site. • Minimize soil drop height into transportation trucks or stockpiles during dumping. • During transport, cover or enclose trucks transporting soils, increase freeboard requirements, and repair trucks exhibiting spillage due to leaks. • Cover the bottom of the excavated area with polyethylene sheeting when work is not being performed. • Place stockpiled soil on polyethylene sheeting and cover with similar material. • Place stockpiled soil in areas shielded from prevailing winds.
SC-AQ-4	LAUSD shall prepare an air quality assessment: If site-specific review of a school construction project identifies potentially significant adverse regional and localized construction air quality impacts, then LAUSD shall implement all feasible measures to reduce air emissions below the South Coast Air Quality Management District's (SCAQMD) regional and localized significance thresholds. LAUSD shall mandate that construction bid contracts include the measures identified in the air quality assessment. Measures shall reduce construction emissions during high-emission construction phases from vehicles and other fuel driven construction engines, activities that generate fugitive dust, and surface coating operations. Specific air emission reduction measures include, but are not limited to, the following: Exhaust Emissions • Schedule construction activities that affect traffic flow to off-peak hours (e.g. between 10:00 AM and 3:00 PM). • Consolidate truck deliveries and/or limit the number of haul trips per day. • Route construction trucks off congested streets. • Employ high pressure fuel injection systems or engine timing retardation. • Utilize ultra-low sulfur diesel fuel, containing 15 ppm sulfur or less (ULSD) in all diesel construction equipment. • Use construction equipment rated by the United States Environmental Protection Agency as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits for engines between 50 and 750 horsepower. • Restrict non-essential diesel engine idle time, to not more than five consecutive minutes. • Utilize electrical power rather than internal combustion engine power generators as soon as feasible during construction. • Utilize electric or alternatively fueled equipment, if feasible. • Utilize construction equipment with the minimum practical engine size. • Utilize low-emission on-road construction fleet vehicles. • Ensure construction equipment is properly serviced and maintained to the manufacturer's standards.

Applicable SCs	Description
	Fugitive Dust • Apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for ten days or more). • Replace ground cover in disturbed areas as quickly as possible. • Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water). • Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip. • Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, and/or 150 daily trips for all vehicles. • Pave all construction access roads for at least 100 feet from the main road to the Project site. • Water the disturbed areas of the active construction site at least three times per day, except during periods of rainfall. • Enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications to exposed piles (i.e., gravel, dirt, and sand) with a five percent or greater silt content. • Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour (mph). • Apply water at least three times daily, except during periods of rainfall, to all unpaved road surfaces. • Limit traffic speeds on unpaved road to 15 mph or less. • Prohibit high emission causing fugitive dust activities on days where violations of the ambient air quality standard have been forecast by SCAQMD. • Tarp and/or maintain a minimum of 24 inches of freeboard on trucks hauling dirt, sand, soil, or other loose materials. • Limit the amount of daily soil and/or demolition debris loaded and hauled per day. General Construction • Utilize ultra-low VOC or zero-VOC surface coatings. • Phase construction activities to minimize maximum daily emissions. • Configure construction parking to minimize traffic interference. • Provide temporary traffic control during construction activities to improve traffic flow (e.g., flag person). • Develop a trip reduction plan for construction employees. • Implement a shuttle service to and from retail services and food establishments during lunch hours. • Increase distance between emission sources to reduce near-field emission impacts. • Require construction contractors to document compliance with the identified mitigation measures.
SC-AQ-5	LAUSD shall encourage ride-sharing programs for students and teachers as well as maintain fleet vehicles such as school buses, maintenance vehicles, and other service fleet vehicles in good condition in order to prevent significant increases in air pollutant emissions created by operation of a new school.

3.1.3 Thresholds of Significance

Pursuant to Appendix G of the State *CEQA Guidelines*, the Project would result in a significant impact related to air quality if it would:

- Conflict with or obstruct the implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

Pursuant to the State CEQA Guidelines (Section 15064.7), a lead agency may consider using, when available, the significance criteria established by the applicable air quality management district or air pollution control district when making determinations of significance. The Project would be under the SCAQMD's jurisdiction. SCAQMD has established air quality significance criteria in its CEQA Air Quality Handbook. These criteria are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health (SCAQMD, 1993). The potential air quality impacts of the Project are, therefore, evaluated according to the most recent criteria adopted by the SCAQMD in connection with its CEQA Air Quality Handbook, Air Quality Analysis Guidance Handbook, and subsequent SCAQMD guidance as discussed previously.[1]

Construction Emissions

The SCAQMD has established numerical emission indicators of significance for construction. The numerical emission indicators are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health (SCAQMD, 1993). Given that construction impacts are temporary and limited to the construction phase, the SCAQMD has established numeric indicators of significance specific to construction activity. Based on the indicators in the SCAQMD CEQA Air Quality Handbook, the Project would potentially cause or contribute to an exceedance of an ambient air quality standard if the following would occur:

- Regional construction emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed daily regional emissions criteria (SCAQMD, 2015):
  - 75 pounds a day for VOC;
  - 100 pounds per day for NO_X;
  - 550 pounds per day for CO;
  - 150 pounds per day for SO_2;
  - 150 pounds per day for PM10; or
  - 55 pounds per day for PM2.5.

[1] While the SCAQMD CEQA Air Quality Handbook contains significance thresholds for lead, Project construction and operation would not include sources of lead emissions and would not exceed the established thresholds for lead. Unleaded fuel and unleaded paints have virtually eliminated lead emissions from commercial and residential land use projects such as the Project. As a result, lead emissions are not further evaluated in this Draft EIR.

In addition, the SCAQMD has developed a methodology to assess the potential for localized emissions to cause an exceedance of applicable ambient air quality standards or ambient concentration limits. Impacts would be considered significant if the following would occur:

- Maximum daily localized emissions of NO_X and/or CO during construction are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project site greater than the most stringent ambient air quality standards for NO_2 and/or CO (SCAQMD, 2008).
- Maximum daily localized emissions of PM10 and/or PM2.5 during construction are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project site to exceed 10.4 $\mu g/m^3$ over 24 hours (SCAQMD Rule 403 control requirement).

As discussed in detail in Section 3.1.4 *Methodology*, the SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds, and, therefore, not cause, or contribute to, an exceedance of the applicable ambient air quality standards, or ambient concentration limits without Project-specific dispersion modeling. This analysis uses the screening criteria to evaluate impacts from localized emissions for a 5-acre site located within 25 meters from a sensitive receptor in the South Los Angeles County Coastal Monitoring Area:

- 57 pounds per day for NO_X;
- 585 pounds per day for CO;
- 4 pounds per day for PM10; or
- 3 pounds per day for PM2.5.

Operational Emissions

The SCAQMD has established numerical emission indicators of significance for operations. The numerical emission indicators are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health (SCAQMD, 1993). The SCAQMD has established numeric indicators of significance in part based on Section 182(e) of the Clean Air Act which identifies 10 tons per year of VOC as a significance level for stationary source emissions in extreme non-attainment areas for ozone (SCAQMD, 1993). The Air Basin is designated as extreme non-attainment for ozone. The SCAQMD converted this significance level to pounds per day for ozone precursor emissions (10 tons per year × 2,000 pounds per ton ÷ 365 days per year = 55 pounds per day). The numeric indicators for other pollutants are also based on federal stationary source significance levels. Based on the indicators in the SCAQMD CEQA Air Quality Handbook, the Project would potentially cause or contribute to an exceedance of an ambient air quality standard if the following would occur:

- Regional operational emissions exceed any of the following SCAQMD prescribed daily regional emissions criteria (SCAQMD, 2015):
  - 55 pounds a day for VOC;
  - 55 pounds per day for NOX;

- 550 pounds per day for CO;
- 150 pounds per day for SO2;
- 150 pounds per day for PM10; or
- 55 pounds per day for PM2.5.

In addition, the SCAQMD has developed a methodology to assess the potential for localized emissions to cause an exceedance of applicable ambient air quality standards. Impacts would be considered significant if the following were to occur:

- Maximum daily localized emissions of NO_X and/or CO during operation are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project site greater than the most stringent ambient air quality standards for NO_2 and/or CO (SCAQMD, 2015).
- Maximum daily localized emissions of PM10 and/or PM2.5 during operation are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project site to exceed 2.5 $\mu g/m^3$ over 24 hours (SCAQMD Rule 1303 allowable change in concentration).

Carbon Monoxide Hotspots

With respect to the formation of CO hotspots, the Project would be considered significant if the following would occur:

- The Project would cause, or contribute to, an exceedance of the CAAQS one-hour or eight-hour CO standards of 20 or 9.0 parts per million (ppm), respectively.

Toxic Air Contaminants

Based on criteria set forth by the SCAQMD, the Project would expose sensitive receptors to substantial concentrations of toxic air contaminants if any of the following were to occur (SCAQMD, 1993):

- The Project would emit carcinogenic materials or TACs that exceed the maximum incremental cancer risk of ten in one million or a cancer burden greater than 0.5 excess cancer cases (in areas greater than or equal to 1 in 1 million) or
- An acute or chronic hazard index of 1.0.

Odors

Based on the criteria in Appendix G of the State *CEQA Guidelines*, the Project would be considered potentially significant for odors if the Project would create objectionable odors affecting a substantial number of people.

3.1.4 Methodology

Consistency with Air Quality Plan

The SCAQMD is required, pursuant to the CAA, to reduce emissions of criteria pollutants for which the Air Basin is in non-attainment of the NAAQS (e.g., O_3 and PM2.5). The SCAQMD's

AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving the NAAQS. These strategies are developed, in part, based on regional growth projections prepared by the SCAG. As part of its air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide and the RTP/SCS, which provide the basis for the land use and transportation components of the AQMP and are used in the preparation of the air quality forecasts and the consistency analysis included in the AQMP. Both the Regional Comprehensive Plan and AQMP are based, in part, on projections originating with county and city general plans.

The 2016 AQMP was prepared to accommodate growth, reduce the high levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are consistent with the assumptions used in the AQMP do not interfere with attainment because the growth is included in the projections utilized in the formulation of the AQMP. Thus, projects, uses, and activities that are consistent with the applicable growth projections and control strategies used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP, even if they exceed the SCAQMD's numeric indicators.

Construction Emissions

Construction of the proposed Project has the potential to generate temporary criteria pollutant emissions through the use of heavy-duty construction equipment, such as excavators and forklifts, and through vehicle trips generated from worker trips and haul trucks traveling to, and from, the Project site. In addition, fugitive dust emissions would result from demolition and various soil-handling activities. Mobile source emissions, primarily NO_X, would result from the use of construction equipment such as dozers and loaders. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of construction activity, and prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources.

Daily regional emissions during construction are forecasted by assuming conservative construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. The emissions are estimated using the CalEEMod (Version 2016.3.2) software, an emissions inventory software program recommended by the SCAQMD. CalEEMod is based on outputs from OFFROAD and EMFAC, which are emissions estimation models developed by CARB and used to calculate emissions from construction activities, including on-and off-road vehicles. Default CalEEMod inputs were used for the modeling unless Project specific details were available to adjust the Project input values based on construction equipment and schedule information from similar land use development projects in the LAUSD. These values were then applied to the construction phasing assumptions used in the criteria pollutant analysis to generate criteria pollutant emissions values for each construction activity. Detailed construction equipment lists, construction scheduling, and emissions calculations are provided in Appendix B of this Draft EIR.

Construction of the proposed Project was assumed to begin in 2020. Construction may commence at a later date than that analyzed in this air quality impact analysis. If this occurs, construction

impacts should be less than those analyzed herein, because a more energy-efficient and cleaner burning construction equipment fleet mix are expected in the future, pursuant to State regulations that require construction equipment fleet operators to phase-in less polluting heavy-duty equipment. As a result, should the proposed Project commence construction at a later date, air quality impacts are anticipated to be less than the impacts disclosed herein. Sub-phases of construction would include soil removal, demolition, grading, building construction, paving, and architectural coating. Emissions from these activities are estimated by construction phase. The maximum daily emissions are predicted values for the worst-case day and do not necessarily represent the emissions that would occur for every day of Project construction. The maximum daily emissions are compared to the SCAQMD daily regional numeric indicators.

Operational Emissions

With respect to SUP modernization projects, the Program EIR states that operational activities would be less than significant, as these projects would not increase capacity to existing schools and net Project emissions would be minimal. Additionally, overall District enrollment is forecast to decrease over the next ten years and operational emissions are not expected to increase in the long-term (LAUSD, 2015).

The proposed Project would replace and upgrade facilities on the Campus of San Pedro HS, but it would not increase the number of students, or faculty, at the high school, and would not introduce major new emission sources. No new vehicle trips would be generated, and there would be no increase in mobile source emissions. Furthermore, building upgrades and replacement of old, energy-inefficient structures with those that use less energy would reduce emissions from space heating and other onsite sources. Therefore, there would be no net increase in regional emissions of any criteria pollutant, and the impact would be less than significant. Additionally, the District is required to comply with all applicable SCs, and would implement SC-AQ-5 to further reduce Project-related operational impacts. Therefore, operational emissions are not discussed further in this document.

Localized Emissions

The localized effects from the on-site portion of the emissions are evaluated at nearby sensitive receptor locations potentially impacted by the proposed Project according to the SCAQMD's Localized Significance Threshold Methodology, which relies on onsite mass emission rate screening tables and Project-specific dispersion modeling, where appropriate. The localized significance thresholds are only applicable to NO_X, CO, PM10, and PM2.5. The SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds, and, therefore, would not cause, or contribute to, an exceedance of the applicable ambient air quality standards without Project-specific dispersion modeling. The screening criteria depend on: (1) the area in which the Project is located, (2) the size of the Project site, and (3) the distance between the Project site and the nearest sensitive receptor (e.g., residences, schools, hospitals). The Project site is located in the South Coastal Los Angeles County area and approximately 1-acre would be worked on at a time. The nearest sensitive receptors would be the students onsite at San Pedro HS during construction of the Project and residences adjacent to the Project site. Therefore, to ensure a

conservative analysis, the screening criteria was applied to a 1-acre site in South Coastal Los Angeles with a 25-meter receptor distance. According to the SCAQMD, projects with boundaries located closer than 25 meters to the nearest receptor should use the local significance thresholds (LSTs) for receptors located at 25 meters (SCAQMD, 2008).

Carbon Monoxide Hotspots

Emissions of CO are produced in greatest quantities from motor vehicle combustion and are usually concentrated at, or near, ground level because they do not readily disperse into the atmosphere, particularly under cool, stable (i.e., low or no wind) atmospheric conditions. Localized areas where ambient concentrations exceed state and/or federal standards are termed CO hotspots. The potential for the Project to cause, or contribute to, the formation of offsite CO hotspots are evaluated based on prior dispersion modeling conducted by SCAQMD in the Los Angeles Area, as discussed in the Program EIR.

The proposed Project would replace, or upgrade, facilities on the Campus of San Pedro HS, but it would not increase the number of students, or faculty, at the high school, and would not introduce major new emission sources. No new operational vehicle trips would be generated, and there would be no increase in mobile source CO emissions. Therefore, CO Hotspots are not discussed further in this document.

Toxic Air Contaminants

The greatest potential for TAC emissions during construction would be related to diesel particulate matter emissions associated with heavy-duty equipment during demolition, excavation and grading activities. Construction activities associated with the Project would be sporadic, transitory, and short-term in nature. During long-term operations, TACs could be emitted as part of periodic maintenance operations, cleaning, painting, etc., and from periodic visits from delivery trucks and service vehicles. However, these uses are expected to be occasional and result in minimal exposure to offsite sensitive receptors. The potential for the Project to result in significant health risk impacts are evaluated based on guidance provided in the Program EIR.

Odors

Potential odor impacts are evaluated by conducting a screening-level analysis followed by a more detailed analysis as necessary. The screening-level analysis consists of reviewing the Project's site plan and Project description to identify new, or modified, odor sources. If it is determined that the Project would introduce a potentially significant new odor source, or modify an existing odor source, then downwind sensitive receptor locations are identified, and a site-specific analysis is conducted to determine Project impacts.

3.1.5 Impact Analysis

Air Quality Plan

Impact 3.1-1: The Project would not conflict with, or obstruct, implementation of the applicable air quality plan.

The Project site is located within the Air Basin. The SCAQMD is required, pursuant to the CAA, to reduce emissions of criteria pollutants for which the Air Basin is in non-attainment (i.e., ozone, PM10, and PM2.5). The Project would be subject to the SCAQMD's Air Quality Management Plan (AQMP), which contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. 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. Neither the San Pedro High School Comprehensive Modernization Project nor the SUP as a whole is a large, regionally significant project that would affect the regional growth projections made by the SCAG and used by the SCAQMD in formulating its AQMP. The student and faculty population at the school would not increase as a result of the Project.

Under this criterion, the SCAQMD recommends that lead agencies demonstrate that a project would not directly obstruct implementation of an applicable air quality plan and that a project be consistent with the assumptions (typically land-use related, such as resultant employment or residential units) upon which the air quality plan is based. Being relatively small in number and temporary in nature, construction jobs under the Project would not conflict with the long-term employment projections upon which the AQMP is based. Control strategies in the AQMP with potential applicability to short-term emissions from construction activities include strategies denoted in the AQMP as MOB-08 and MOB-10, which are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment by accelerating replacement of older, emissions-prone engines with newer engines meeting more stringent emission standards. The Project would not conflict with implementation of these strategies as the construction contractor hired would be in compliance with the current requirements for fleet emissions. Additionally, the Project would comply with CARB requirements to minimize short-term emissions from on-road and off-road diesel equipment. The Project would also comply with SCAQMD regulations for controlling fugitive dust pursuant to SCAQMD Rule 403 and implement SC-AQ-2 through SC-AQ-4. SC-AQ-2 would obligate construction contractors to have off-road equipment properly tuned and maintained in accordance with the manufacturer's specifications. SC-AQ-3 would implement methods for reducing onsite dust emissions during soil removal. These methods would include: maintain slow speeds for vehicles, applying water/mist to dirt as it is loaded and unloaded, minimize soil drop heights, covering haul truck loads, and using polyethylene sheeting during to cover excavated areas and dirt stockpiles. SC-AQ-4 is intended to reduce construction exhaust and fugitive dust emissions with a number of features, including, but not limited to: restricting diesel engine idling times to no more than five consecutive minutes, utilizing ultra-low sulfur diesel fuel, utilizing off-road construction equipment that is compliant with Tier 3 engine standards at a minimum, applying soil stabilizers, replacing ground cover as soon as possible, and installing wheel washers.

Compliance with these requirements is consistent with, and meets, or exceeds, the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. Because the Project would not conflict with the control strategies intended to reduce emissions from construction equipment, the Project would not conflict with, or obstruct, implementation of the AQMP. Additionally, the projected emissions from the Project would not exceed the SCAQMD's regional significance thresholds, as discussed below in Impact 3.1-2. Thus, the Project would not be considered by SCAQMD to be a substantial source of air pollutant emissions, and would not conflict, or obstruct, implementation of the AQMP. Therefore, impacts would be less than significant with respect to construction activities.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Less than Significant

Air Quality Standards/Violations

Impact 3.1-2: The Project would not violate any air quality standard, or contribute substantially to an existing, or projected, air quality violation.

The worst-case daily emissions were calculated as maximum daily construction emissions for each phase by year. Detailed emissions calculations are provided in Appendix B of this Draft EIR. Results of the criteria pollutant calculations are presented in **Table 3.1-5** *Maximum Daily Unmitigated Regional Construction Emissions (pounds per day)*. As shown therein, construction-related daily emissions for the criteria and precursor pollutants (VOC, NO_X, CO, SO_X, PM10, and PM2.5) would be below the SCAQMD numeric indicators. These calculations include compliance with appropriate dust control measures required to be implemented during each phase of development, as required by SCAQMD Rule 403 (Control of Fugitive Dust) and SC-AQ-2 through SC-AQ-4. As discussed previously, SC-AQ-2 would obligate construction contractors to have off-road equipment properly tuned and maintained in accordance with the manufacturer's specifications. SC-AQ-3 would implement methods for reducing onsite dust emissions during soil removal. SC-AQ-4 is intended to reduce construction exhaust and fugitive dusts emissions with a number of features including utilizing off-road construction equipment that is compliant with Tier 3 engine standards (at a minimum) and applying soil stabilizers. Therefore, impacts would be less than significant with respect to regional emissions from construction activities.

With respect to all SUP projects, including the proposed Project, the Program EIR states that construction activities may generate short-term emissions that exceed significance thresholds. Though construction emissions for this Project are not expected to exceed regional thresholds, the District will implement SCs AQ-2, SC-AQ-3, and AQ-4 to ensure that construction emissions would have minimal impacts. Also, criteria pollutant emissions would occur outside of SCAQMD's jurisdiction during transportation of contaminated soil to Buttonwillow, California. Transportation of contaminated soil would occur within the San Joaquin Valley Air Pollution District (SJVAPD). The Project would be substantially below the SJVAPD's Thresholds of

Significance for all criteria pollutants, as shown in **Table 3.1-6**, *San Joaquin Valley Air Basin Hauling Emissions (Tons per Year*).

TABLE 3.1-5
MAXIMUM DAILY UNMITIGATED REGIONAL CONSTRUCTION EMISSIONS (POUNDS PER DAY) [A]

Phase	Source	VOC	NO_X	CO	SO_2	PM10[b]	PM2.5[b]
Phase 1A	Demolition (& soil removal) – 2020	2	51	25	<1	4	2
	Grading/Modernization – 2020	1	7	12	<1	3	2
	Building Construction - 2020	2	15	22	<1	4	1
	Building Construction – 2021	2	14	21	<1	4	1
	Architectural Coatings – 2021	33	2	13	<1	3	1
Phase 1B	Grading/Modernization – 2020	1	7	12	<1	3	2
	Building Construction- 2020	2	16	23	<1	4	2
	Paving – 2020	2	12	30	<1	4	2
Phase 2	Demolition – 2020	2	24	31	<1	6	2
	Grading/Modernization – 2020	2	8	20	<1	6	2
	Building Construction – 2020	1	14	14	<1	2	1
	Building Construction – 2021	1	13	14	<1	2	1
	Building Construction – 2022	1	13	13	<1	2	1
	Architectural Coating – 2022	17	2	12	<1	3	1
Phase 3	Demolition – 2022	2	13	27	<1	4	2
	Paving - 2022	1	12	21	<1	2	1
Overlapping Phases							
2020							
Phase 1A Building Construction + Phase 1B Grading/Modernization		3	22	34	<1	8	3
Phase 1A Building Construction + Phase 1B Building Construction		4	30	45	<1	9	3
Phase 1A Building Construction + Phase 1B Building Construction +Phase 2 Demolition		7	54	76	<1	15	5
Phase 1A Building Construction + Phase 1B Building Construction +Phase 2 Grading/Modernization		6	38	65	<1	14	5
Phase 1A Building Construction + Phase 1B Paving + Phase 2 Grading/Modernization		6	35	72	<1	14	5
Phase 1A Building Construction + Phase 2 Grading/Modernization		4	22	42	<1	10	4
Phase 1A Building Construction + Phase 2 Building Construction		3	29	37	<1	6	2
2021							
Phase 1A Building Construction + Phase 2 Building Construction		3	27	35	<1	6	2
Phase 1A Architectural Coating + Phase 2 Building Construction		36	29	48	<1	10	3

Phase	Source	VOC	NO_X	CO	SO_2	PM10[b]	PM2.5 [b]
	2022						
Phase 2 Building Construction + Phase 2 Architectural Coating + Phase 3 Demolition		20	29	52	<1	10	3
Phase 2 Architectural Coating + Phase 3 Demolition		18	16	39	<1	8	3
Maximum Daily Emissions		**36**	**54**	**76**	**<1**	**15**	**5**
SCAQMD Significance Thresholds		**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Threshold?		No	No	No	No	No	No

NOTE: Detailed emissions calculations are provided in Appendix B of this Draft EIR.
[a] Totals may not add up exactly due to rounding in the modeling calculations.
[b] Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.

TABLE 3.1-6
SAN JOAQUIN VALLEY AIR BASIN HAULING EMISSIONS (TONS PER YEAR)

Phase	Source	VOC	NO_X	CO	SO_2	PM10[b]	PM2.5 [b]
Phase 1A	Soil Removal – 2020	0.08	3.31	0.32	0.01	0.08	0.04
SJVAPD Significance Thresholds		**10**	**10**	**100**	**27**	**15**	**15**
Exceeds Threshold?		No	No	No	No	No	No

NOTE: Detailed emissions calculations are provided in Appendix B of this Draft EIR.
[a] Totals may not add up exactly due to rounding in the modeling calculations.
[b] Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Less than Significant

Cumulative Increase of Criteria Pollutant

Impact 3.1-3: The Project would not 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).

Short-term pollutants would be generated by construction of the proposed Project. The Project site currently operates as a high school and would continue to do so after construction. The proposed Project would not introduce any new long-term pollutants when operational. Therefore, only short-term construction emissions were evaluated for cumulative impacts.

Since the District has no control over the timing, or sequencing, of the related projects, any quantitative analysis of related projects to ascertain daily construction emissions that assumes

multiple, concurrent construction projects would be speculative. For this reason, the SCAQMD's methodology to assess a project's cumulative impact differs from the cumulative impacts methodology employed elsewhere in this Draft EIR analysis. The SCAQMD recommends that Project-specific air quality impacts of the proposed Project be used to determine the potential cumulative impacts to regional air quality. The proposed Project would result in the emission of criteria pollutants for which the area is in non-attainment during construction. A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. The Air Basin is currently in non-attainment for O_3, PM10, and PM2.5.

The emissions from construction of the proposed Project are not predicted to exceed the SCAQMD regional (see Impact 3.1-2), or localized (see Impact 3.1-4), impact thresholds, and, therefore, are not expected to cause, or substantially contribute to, ground level concentrations that exceed the NAAQS or CAAQS. Furthermore, the District would implement SC-AQ-2, SC-AQ-3, and SC-AQ-4 to ensure that construction emissions would minimize off-site impacts (LAUSD, 2015). Therefore, the Project would not result in a cumulatively considerable net increase for non-attainment pollutants, or O_3 precursors, and would result in a less than significant impact with respect to construction emissions.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Less than Significant

Sensitive Receptors

Impact 3.1-4: The Project would not expose sensitive receptors to substantial pollutant concentrations.

Localized Emissions

The localized construction air quality analysis was conducted using the methodology described in the SCAQMD *Localized Significance Threshold Methodology* (SCAQMD, 2008). The screening criteria provided in the *Localized Significance Threshold Methodology* were used to determine localized construction emissions thresholds for the Project. The maximum daily localized emissions for each of the construction phases and localized significance thresholds are presented in **Table** *3.1-7, Maximum Unmitigated Localized Construction Emissions (Pounds Per* Day). As shown therein, maximum localized construction emissions for sensitive receptors would not exceed the localized thresholds for NO_X, CO, PM10, and PM2.5. Therefore, impacts would be less than significant with respect to localized emissions from construction activities.

TABLE 3.1-7
MAXIMUM UNMITIGATED LOCALIZED CONSTRUCTION EMISSIONS (POUNDS PER DAY) [A]

Phase		NO_X	CO	PM10[b]	PM2.5[b]
Phase 1A	Demolition (& soil removal) – 2020	13	16	2	1
	Grading/Modernization – 2020	7	8	2	1
	Building Construction – 2020	8	9	<1	<1
	Building Construction – 2021	8	9	<1	<1
	Architectural Coatings – 2021	1	2	<1	<1
Phase 1B	Grading/Modernization – 2020	7	8	2	1
	Building Construction- 2020	8	9	<1	<1
	Paving – 2020	11	17	1	1
Phase 2	Demolition – 2020	12	16	2	1
	Grading/Modernization – 2020	7	8	2	1
	Building Construction – 2020	8	9	<1	<1
	Building Construction – 2021	8	9	<1	<1
	Building Construction – 2022	8	9	<1	<1
	Architectural Coating – 2022	1	2	<1	<1
Phase 3	Demolition – 2022	12	16	1	1
	Paving – 2022	11	17	1	1
Overlapping Phases					
2020					
Phase 1A Building Construction + Phase 1B Grading/Modernization		15	16	**3**	**2**
Phase 1A Building Construction + Phase 1B Building Construction		16	17	1	1
Phase 1A Building Construction + Phase 1B Building Construction +Phase 2 Demolition		**28**	33	**3**	**2**
Phase 1A Building Construction + Phase 1B Building Construction +Phase 2 Grading/Modernization		23	25	**3**	**2**
Phase 1A Building Construction + Phase 1B Paving + Phase 2 Grading/Modernization		26	**34**	**3**	**2**
Phase 1A Building Construction + Phase 2 Grading/Modernization		15	16	**3**	**2**
Phase 1A Building Construction + Phase 2 Building Construction		16	17	1	1
2021					
Phase 1A Building Construction + Phase 2 Building Construction		16	17	1	1
Phase 1A Architectural Coating + Phase 2 Building Construction		17	19	1	1
2022					
Phase 2 Building Construction + Phase 2 Architectural Coating + Phase 3 Demolition		21	26	1	1
Phase 2 Architectural Coating + Phase 3 Demolition		13	18	1	1
Maximum Daily Emissions		**28**	**34**	**3**	**2**
SCAQMD Significance Thresholds		**57**	**585**	**4**	**3**
Exceeds Threshold?		No	No	No	No

Phase	NO_X	CO	PM10[b]	PM2.5[b]

NOTE: Detailed emissions calculations are provided in Appendix B of this Draft EIR.
[a] Totals may not add up exactly due to rounding in the modeling calculations.
[b] Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.

Toxic Air Contaminants

The proposed Project would require approximately one week to remove a maximum of 500 cubic yards of contaminated soil. Project-related construction also has the potential to expose sensitive receptors to substantial pollutant concentrations of TACs. TAC are pollutants for which neither California, nor the federal government, has set ambient air quality thresholds, but which still pose health risks to sensitive individuals. The primary TAC of concern from construction is DPM. Inhalation of DPM has been linked to increased cancer risk and chronic health hazards.

The proposed Project includes the modernization and upgrade of facilities on the San Pedro HS Campus. The Program EIR states that modernization projects would not cause a change in toxic air contaminant exposure levels (LAUSD, 2015). Therefore, impacts would be less than significant with respect to health risk impacts.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Less than Significant

Odors

Impact 3.1-5: The Project would not create objectionable odors affecting a substantial number of people.

Potential activities that may emit odors during construction activities include the use of architectural coatings and solvents and the combustion of diesel fuel in on-and off-road equipment. As discussed in the Regulatory Setting, SCAQMD Rule 1113 would limit the amount of VOCs in architectural coatings and solvents. In addition, the proposed Project would comply with the applicable provisions of the CARB Air Toxics Control Measure regarding idling limitations for diesel trucks. Through mandatory compliance with SCAQMD Rules, no construction activities, or materials, are expected to create objectionable odors affecting a substantial number of people. Therefore, impacts would be less than significant with respect to construction activities.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Less than Significant

3.1.6 Cumulative Impact Analysis

The Project would result in the emission of criteria pollutants for which the region is in non-attainment during both construction and operation. The Air Basin fails to meet national standards for O_3 and PM2.5, and, therefore, is considered a federal "non-attainment" area for these pollutants.

The SCAQMD has provided guidance on an acceptable approach to addressing the cumulative impacts issue for air quality as discussed below (SCAQMD, 2003):

> *As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR… Projects that exceed the Project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.*

Consistent with accepted and established SCAQMD cumulative impact evaluation methodologies, the potential for the Project to results in cumulative impacts is assessed based on the SCAQMD thresholds.

As shown in Table 3.1-5, regional emissions calculated for the Project would be less than the applicable SCAQMD daily significance thresholds. The thresholds are designed to assist the region in attaining the applicable State and national ambient air quality standards. These standards apply to both primary (criteria and precursor) and secondary pollutants (O_3). Although the Project site is located in a region that is in non-attainment for O_3 and PM2.5, the emissions associated with the Project would not be cumulatively considerable as the emissions would fall below SCAQMD daily significance thresholds. In addition, the Project would be consistent with the AQMP, which is intended to bring the Air Basin into attainment for all criteria pollutants.

The SCAQMD's methodology to assess a project's cumulative impact differs from the cumulative impacts methodology employed for other environmental topics such as traffic, which are typically based on the number, types, and proximity to related projects. The SCAQMD recommends that Project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality.

With respect to the Project's short-term construction-related air quality emissions and cumulative conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the AQMP pursuant to the federal CAA mandates. Construction of the Project would comply with SCAQMD Rule 403 requirements and the ATCM to limit heavy duty diesel motor vehicle idling to no more than 5 minutes at any given time (per SC-AQ-4). Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures) would

also be imposed on all construction projects in the Air Basin, which would include the cumulative projects in the Project area. As shown above in Table 3.1-5 and Table 3.1-7, regional and localized construction emissions associated with the Project would not exceed the SCAQMD daily significance thresholds. As such, the Project's contribution to cumulatively significant construction impacts to air quality would not be cumulatively considerable and cumulative impacts would be less than significant for regional and localized criteria pollutants during construction.

3.1.7 References

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3.2 Cultural Resources

This section addresses the potential impacts of the Project to cultural resources in the Project vicinity in accordance with the significance criteria established in Appendix G of the CEQA Guidelines. This section is based on the following sources: the Historic Resources Technical Report prepared by ESA (2018) and the Archaeological and Paleontological Resources Report prepared by ESA (2017) (Appendices C and D).

Cultural resources include prehistoric and historic-period sites, structures, districts, places, and landscapes, or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious or other reasons. Under CEQA, paleontological resources, although not associated with past human activity, are grouped within cultural resources. For the purposes of this analysis, cultural resources may be categorized into the following groups: archaeological resources, historic resources (including architectural/engineering resources), contemporary Native American resources, human remains, and paleontological resources.

3.2.1 Environmental Setting

Existing Setting

The proposed Project is currently a high school composed of a cluster of permanent structures (used mainly for classrooms, offices, gymnasiums, an auditorium, and a cafeteria); portable classrooms; a concrete block storage bunker; baseball, football, and softball field; a parking lot; and landscaped and hardscaped surfaces (Clark Seif Clark, Inc., 2016). The proposed Project is located in a highly urbanized portion of the Los Angeles Basin in an area dominated by residential development.

Geologic Setting

The Project site is situated within the northwest coastal portion of the Peninsular Ranges Geomorphic Province. The Peninsular Ranges extend eastward from the Los Angeles coastline to the San Bernardino Fault and from the San Diego coastline to the Colorado Desert. The ranges are characterized by northwest-southeast trending mountains and valleys (Norris and Webb, 1990). The Project site is located within the southeast portion of the Palos Verdes Peninsula, which forms a prominent topographic high 70 km long that separates the Los Angeles Basin from the San Pedro Basin (Saucedo et al., 2016). The Palos Verdes Peninsula is an anticlinorium, or a sequence of upwardly-folded strata, created by compressional deformation that began in the Pliocene (around 4.5 million years ago), with uplift continuing to the present (Sorlein et al., 2013).

The Palos Verdes Peninsula consists of the Catalina Schist, metamorphic basement rocks that date to the Cretaceous, overlain by a thick sequence of marine sediments assigned to the Monterey Formation that dates from the middle Miocene to the upper Pliocene (approximately 16 - 4 million years ago). In the Palos Verdes Peninsula, the Monterey Formation is represented by the middle Miocene Altamira Shale member, which is overlain in turn by the upper Miocene

Valmonte Diatomite member and the upper Miocene/lower Pliocene Malaga Mudstone member (Saucedo et al., 2016). The sedimentary sequence continues in the Palos Verdes Peninsula with the continued deposition of sediments through the Pliocene Fernando Formation and Pleistocene San Pedro Formation (Saucedo et al., 2016).

Prehistoric Setting

The chronology of coastal southern California is typically divided into three general time periods: the Early Holocene (11,000 to 8,000 Before Present [B.P.]), the Middle Holocene (8,000 to 4,000 B.P.), and the Late Holocene (4,000 B.P. to A.D. 1769). Within this timeframe, the archaeology of southern California is generally described in terms of cultural "complexes." A complex is a specific archaeological manifestation of a general mode of life, characterized archaeologically by particular technologies, artifacts, economic systems, trade relationships, burial practices, and other aspects of culture.

While it is not certain when humans first came to California, their presence in southern California by about 11,000 B.P. has been well documented. At Daisy Cave, on San Miguel Island, cultural remains have been radiocarbon dated to between 11,100 and 10,950 B.P. (Byrd and Raab, 2007). The first evidence of human occupation in the Los Angeles area dates to at least 9,000 years B.P. and is associated with the Millingstone cultures (Wallace, 1955; Warren, 1968), though rare occurrences of large, fluted points, known as Clovis points, suggest occupation of several thousand years older. Millingstone cultures were characterized by the collection and processing of plant foods, particularly acorns, and the hunting of a wide variety of game animals (Byrd and Raab, 2007; Wallace, 1955). Millingstone cultures established semi-permanent settlements that were located primarily on the coast and in the vicinity of estuaries, lagoons, lakes, streams, and marshes where a variety of resources, including seeds, fish, shellfish, small mammals, and birds, were exploited. Early Millingstone occupations are typically identified by the presence of handstones (manos) and millingstones (metates), while those Millingstone occupations dating later than 5,000 B.P. contain a mortar and pestle complex as well, signifying the exploitation of acorns.

During the Middle Holocene (8,000 to 4,000 B.P.), there is evidence for the processing of acorns for food and a shift toward a more generalized economy. Around 7,000 B.P., the climate of southern California became warmer and more arid and the human population, residing mainly in coastal, or inland desert areas, began exploiting a wider range of plant and animal resources (Byrd and Raab, 2007).

During the Late Holocene (4,000 B.P. to A.D. 1769), many aspects of Millingstone culture persisted, but a number of socioeconomic changes occurred (Erlandson, 1994; Wallace, 1955; Warren, 1968). The native populations of southern California were becoming less mobile and populations began to gather in small sedentary villages with satellite resource-gathering camps. Increasing population size necessitated the intensified use of existing terrestrial and marine resources (Erlandson, 1994). Evidence indicates that the overexploitation of larger, high-ranked food resources may have led to a shift in subsistence, towards a focus on acquiring greater amounts of smaller resources, such as shellfish and small-seeded plants (Byrd and Raab, 2007). Around 1,000 B.P., there was an episode of sustained drought, known as the Medieval Climatic

Anomaly. While this climatic event did not appear to reduce the human population, it did lead to a change in subsistence strategies in order to deal with the substantial stress on resources. The Late Holocene marks a period in which specialization in labor emerged, trading networks became an increasingly important means by which both utilitarian and non-utilitarian materials were acquired, and travel routes were extended. Trading reached its zenith during this time period, with asphaltum (tar), seashells and steatite being exchanged from southern California to the Great Basin. Major technological changes appeared as well, particularly with the advent of the bow and arrow, which largely replaced the use of the dart and atlatl. Small projectile points, ceramics, including Tizon brownware pottery, and obsidian from Obsidian Butte (Imperial County), are all representative artifacts of the Late Holocene.

Ethnographic Setting

The Project site is located in a region traditionally occupied by the Takic-speaking Gabrielino Indians. The term "Gabrielino" is a general term that refers to those Native Americans who were administered by the Spanish at the Mission San Gabriel Arcángel. Many contemporary Gabrielino identify themselves by the name "Tongva." Prior to European colonization, the Gabrielino occupied a diverse area that included: the watersheds of the Los Angeles, San Gabriel, and Santa Ana rivers; the Los Angeles basin; and the islands of San Clemente, San Nicolas, and Santa Catalina (Kroeber, 1925). Their neighbors included the Chumash to the north, the Juañeno to the south, and the Serrano and Cahuilla to the east. The Gabrielino are reported to have been second only to the Chumash in terms of population size and regional influence (Bean and Smith, 1978). The Gabrielino language was part of the Takic branch of the Uto-Aztecan language family.

The Gabrielino Indians were hunter-gatherers and lived in permanent communities located near stable food supplies. Subsistence consisted of hunting, fishing, and gathering. Small terrestrial game were hunted with deadfalls, rabbit drives, and by burning undergrowth, while larger game such as deer were hunted using bows and arrows. Fish were taken by hook and line, nets, traps, spears, and poison (Bean and Smith, 1978). The primary plant resources were the acorn, gathered in the fall and processed in mortars and pestles, and various seeds that were harvested in late spring and summer and ground with manos and metates. The seeds included chia and other sages, various grasses, and islay, or holly-leafed cherry.

Community populations generally ranged from 50 to 100 inhabitants, although larger settlements may have existed. The Gabrielino are estimated to have had a population numbering around 5,000 in the pre-contact period (Kroeber, 1925). Villages are reported to have been the most abundant in the San Fernando Valley, the Glendale Narrows area north of downtown, and around the Los Angeles River's coastal outlets (Gumprecht, 2001).

Historic Setting

The historic context developed below presents the historical and architectural background of LAUSD and San Pedro HS. Historical themes discussed below that are associated with the establishment, development, and use of San Pedro HS include LAUSD: Founding Years (1870s-

1909), LAUSD: Pre-1933 Long Beach Earthquake School Plants (1910-1933), LAUSD: Post-1933 Long Beach Earthquake Schools (1933-1945), and Streamline Moderne Style (1934-1945).

LAUSD: Founding Years (1870s-1909)

The Los Angeles City School District was founded in 1872, shortly before the massive increase in Southern California's population in the 1880s. The boom was brought on by the completion of the transcontinental railroad and the rampant land speculation that accompanied it. The population of Los Angeles jumped from 10,000 to 100,000 within the span of two decades between 1880 and 1900. By 1910, the population reached 320,000. Such extraordinary growth led to a number of problems in the new school district. These included: overcrowding, no uniform curriculum, wildly disparate education levels of incoming students, and a severe lack of funding. Just before the turn-of-the-century, the District was finally granted the authority to sell bonds and was able to raise $200,000 for a desperately needed new building campaign. Through a series of these campaigns, LAUSD was able to construct modern school facilities representative of the new, progressive education movement sweeping through the United States during this period. Los Angeles took great pride in its schools, as residents saw their new facilities and modern teaching methods as part of the city's urban development that helped create a city that could rival San Francisco (Sapphos Environmental, Inc., 2014).

LAUSD: Pre-1933 Long Beach Earthquake School Plants (1910-1933)

The early 20th century was an important period of development for the Los Angeles area. In 1913, the Los Angeles Aqueduct was opened, creating easier access to water for residents while the burgeoning film industry boosted the economy. In the realm of architecture, the University of Southern California began to confer Southern California's first professional degrees in architecture in 1925, establishing Los Angeles as a center of architecture in the region. During this period, the American education system was profoundly influenced by the Progressive Education Movement. This movement brought sweeping change to education and educational facilities around the country. During this time, educators moved away from the authoritarian methods of their predecessors and placed greater emphasis on the teaching of abstract concepts and real life skills. Additionally, the one-size-fits-all mentality of the previous era gave way to a new focus on the needs of the individual student and transformed public schools into centers of community. As the educational method in America changed, the built environment of educational facilities also began to shift to better accommodate the new style of teaching. The writings of John J. Donovan, a graduate of Massachusetts Institute of Technology who later practiced architecture in Oakland, California, were especially influential during this time. Donovan's book, *School Architecture: Principles and Practices,* was published in 1921 and widely read by architects. Donovan discouraged monumental school buildings, focusing instead on simple and functional designs with low massing, outdoor spaces, and regional or revival styles (Sapphos Environmental, Inc., 2014).

During the 1920s, Southern California was experiencing an unprecedented population boom. Los Angeles County, for example, had experienced an increase of 133.2% in population from the previous decade. Grammar schools in particular were becoming overcrowded. These second-generation school buildings (1910-1933) were of masonry; brick was a popular structural and

decorative cladding material, as were hollow clay tile and concrete, the latter often manipulated to resemble stone or other materials. Most often two stories in height, second generation schools were less fortress-like although an institutional appearance was usually maintained. New styles were introduced, including the Romanesque Revival, Italian Renaissance Revival, Spanish Colonial Revival, and Collegiate Gothic Revival. As a rule, the school initially would be planned as a single building, with spaces allocated for standardized classrooms; special kindergarten rooms with toilets *en suite*; principal's and vice principal's offices; and boys' and girls' toilet rooms. Rooms were arrayed off of double-loaded corridors in the most common arrangement, establishing a linear organization to building plans that had been missing in earlier plants. During this period, designers were increasingly concerned with the provision of natural light and fresh air, and as a consequence, another signature element of school design became a regular feature: the repetition of bays of windows often stacked three high. Buildings were either massed as single rectangular units or embellished with wings set perpendicular to the main body of the building, frequently enclosing, all, or in part, a courtyard space. Usually auditoriums, or cafeterias if provided, would be located in a wing. Gymnasiums, introduced at the junior high and senior high levels, were housed in separate buildings of more utilitarian design. Similarly, shops were often located in industrial-like buildings, provided with large spaces and open truss roofs.

LAUSD: Post-1933 Long Beach Earthquake Schools (1933-1945)

Although the Great Depression and World War II brought a number of challenges to the district, the schools constructed and reconstructed during the post-earthquake period laid the groundwork for the modern school designs prevalent in the Postwar era. Modernism was still in its early days, but the driving principles of the Modern design ethos had already begun to gain ground in school architecture, beginning in the late 1920s and continued through World War II. Revival styles, so popular in the early decades of the 20th century, were largely eschewed in favor of simple, purpose-driven architecture. New emphasis was placed on honesty in structure and materials, and the function of the building superseded stylistic considerations. Early examples of this type of design include Richard Neutra's Corona Bell Elementary School and Ralph Waldo Emerson High School, both located in Los Angeles. Both of Neutra's designs created an integration of indoor and outdoor spaces, providing light, ventilation, and a sense of freedom within the classroom. Another highly influential school type developed during this period was the finger-plan, created by the firm of Franklin & Kump for Acalenes Union High School outside of San Francisco. The finger-plan, based in modular elements, became popular in the Postwar years for its easy construction and expansion. Additionally, this plan type provided excellent natural light, ventilation, and access to outdoor spaces for students.

This kind of experimentation in school architecture, which didn't take a firm hold until after the end of World War II, was partly possibly due to the Long Beach Earthquake in March of 1933. The 6.5 magnitude quake destroyed 40 unreinforced masonry schools within the Los Angeles City School District, and damaged many exterior elements on other school facilities. Many parapets, chimneys, and exterior ornaments were removed either due to damage or for fear they would fall. Indeed, the lack of ornament in Southern California architecture in the 20th century was largely due to concerns about applied ornament falling and causing injuries during an earthquake. Shortly after the disaster, the Field Act was passed, which improved the building codes to insure new construction had better resistance to seismic activity. Many of the new

requirements were coincidentally in-line with emerging design principles for educational buildings, such as open plans and single-story structures. An insistence on regional appropriateness remained, but ornament, and therefore many revival styles, was no longer a necessary or desirable part of design.

The forces of depression and war also brought funding to the district, with the Public Works Administration (PWA, later the Works Progress Administration) providing $13 million for schools in Southern California. The PWA funded 70% of all newly constructed schools nationwide in the 1930s. Monetary restrictions only encouraged the move away from the ornate Beaux-Arts Classicism and revival styles, and the PWA building efforts ushered in the era of the Streamline Moderne. World War II saw a restriction in building funds, but school were utilized for a variety of support activities. Among these was the National Defense Training (NDT) program, which pumped $400,000 into Los Angeles schools for vocational training related to the war effort. By 1942, Los Angeles had the largest NDT program in the country. A year after the war concluded a $75 million bond was issued, helping to facilitate a Postwar boom in Los Angeles school construction (Sapphos Environmental, Inc., 2014).

Streamline Moderne Style (1934-1945)

Following the height of Art Deco in the early 1930s, the Streamline Moderne style was an economic and stylistic response to the ravaging effects of the Great Depression. A new style was needed to express optimism and a bright look toward the future. Streamline structures continued to suggest modern values of movement and rejection of historic precedents, but with far less opulence and more restraint than Art Deco of the late 1920s and early 1930s. Yet the Streamline Moderne differed from the "High Art Modern Architecture" of the early 1930s in that it "continued to regard design as 'styling' and that architecture should represent or perform as an image rather than be a used as a space to radically change one's everyday life. The boosters of Streamline Moderne argued that their purpose was not to create an architecture that functioned in the same way as the ocean liner, airplane, or locomotive; rather, the buildings would symbolize those things and therefore remind one of the 'modern' future" (Kesling, 2002). Streamline Moderne architecture took its cue from the emerging field of industrial design and borrowed imagery from transportation, in particular, the ocean liner.

Popular between 1934 and 1945, character-defining features of Streamline Moderne style include horizontally-oriented masses, flat rooflines with coping or flat parapets, smooth stucco or concrete exteriors, relatively unadorned and unornamented surfaces, curved end walls and corners, glass block and porthole windows sometimes used, windows "punched" into walls, flat canopies over entrances, pipe railings used along staircases and balconies, grooved moldings and stringcourses, and steel-sash windows.

History of San Pedro High School

The following excerpt is from the 1994 evaluation of San Pedro HS prepared by Historic Resources Group:

> *San Pedro High School is the third oldest school in the Los Angeles Unified School District. Classes were first held in 1903 at the corner of 15th and Mesa*

Streets. In the fall of 1906, the school year commenced in a newly constructed high school building on Gaffey Street between 12th and 13th Streets. Gradually more buildings were constructed until the Campus filled the entire block. In 1909, San Pedro was incorporated into the City of Los Angeles. Consequently, its schools became a part of the Los Angeles Unified School District. During the 1920s, junior high school students left the Campus to attend the new Dana Junior High School [located immediately east of the Project site (extant)].

In 1933 the Long Beach Earthquake damaged the buildings of San Pedro High School so severely that a new Campus was built on the present site where the Dodson estate had been. Noted Los Angeles architect Gordon B. Kaufmann was commissioned to design the new Campus which opened in 1937. A native of Great Britain, Kaufmann moved to Los Angeles in 1914 and formed a partnership with Reginald Johnson and Roland Coate. As a partner in Johnson, Kaufmann and Coate, Kaufmann was the designer of residences and one of the leading purveyors of period revival architecture. In 1925 the partnership dissolved. Kaufmann went on to great individual success as his practice expanded beyond residential architecture, to include large-scale commercial, academic, religious and institutional buildings. Like a number of other talented architects of the time, Kaufmann was forced to shed his preference for period revivalism as Modernism quickly became the more fashionable architectural style. Kaufmann, however, proved to be just as adept at interpreting modern architectural styles as he was historic ones. Indeed, he may be best known for his restrained and sophisticated interpretations of the Moderne, Streamline and P.W.A. styles of which San Pedro High School is one of the finer, extant examples. Similarly styled buildings by Kaufmann include the Los Angeles Times Building (1931-35), the Santa Anita Park Grand Stand (1934), the Federal Building in Long Beach (1931-32), and the Aluminum Company of America Building (1938). Although Kaufmann designed other buildings, namely libraries and dormitories, for other educational institutions such as the California Institute of Technology, Scripps College and Claremont College, San Pedro High School was his only commission for an entire campus. […]

The Campus setting of San Pedro High School and Kaufmann's use of board-formed poured-in-place reinforced concrete are also significant architectural elements of school design in the Los Angeles area. David Gebhard and Harriet Von Bretton state in Los Angeles In the Thirties, "Of all governmental constructions in the L.A. area (and in California as a whole), public school buildings were the most original and inventive in design. Because of earthquake-resistance standards, school buildings were generally of reinforced concrete, and most revealed the patterns of the form boards on their exterior surfaces. The ideal of the open-air school, which in California goes back to 1910, was increasingly used even in the more conservative and monumental schools." […]

Situated on a promontory overlooking the Los Angeles Harbor, San Pedro High School embodies the distinguishing characteristics of the P.W.A. Moderne style with its simplified reinforced concrete walls and poured-in-place bas relief ornamentation. The central facade of the Administration and Classroom Building is typical of the overall design of the Campus in its materials, massing and ornament. The building is two-story and rectangular in plan with a centralized square massing protruding from the rest of the facade to form the main entrance

> *to the building and house the Library within its second story. Six vertical piers are symmetrically positioned on this front facade and cut off just before the roof line. Between the piers and above the second story windows the walls are ornamented by vertical pleats. The spandrels below these windows contain stylized bas relief ornamentation. All of the windows are steel sash and all are original as are the metal and glass main entrance doors, transoms, and side lights. All of the historic buildings of San Pedro High School are unaltered and all retain remarkable historic architectural integrity. The library on the Second Floor of the Administration Building contains murals depicting harbor workers and are excellent examples of artistic work of the period.*

The first buildings constructed on the present Campus were the Administration Building (Building 1), Home Economics Building (Building 6), and Industrial Arts Building (Building 4). Plans were complete for a new Auditorium (Building 5) and Gymnasium/Physical Education Building (Building 2 or Old Gymnasium) by 1936. A new Classroom Building (Building 3 or Classroom Building No. 1) soon followed in 1938. In the lead up to America's entrance into World War II, a Shop Building (which was later demolished) constructed specifically for national defense training was erected on Campus.

Postwar growth did not truly pick up at San Pedro HS until the 1960s. A Girls' Gymnasium (Building 7) was among the first major postwar building projects, constructed in 1960. An additional Classroom Building No. 2 (Building 8) and a new Food Service Unit (Building 13) went up in 1961. Both of these buildings were designed by William Shinderman, AIA, whose other completed projects include additions to the El Rodeo de Las Aguas Elementary School in 1963 and a remodel of the Los Angeles County/USC Cancer Center in 1977 (Los Angeles Times, 1977; Beverly Hills Unified School District). The Industrial Arts Building (Building 4) and Home Economics Building (Building 6) were altered, respectively, in 1965 and 1968. A new Shop Building (Building 9) was constructed in 1969, as was an addition to the Industrial Arts Building (Building 4). It appears that there were no major new construction efforts on Campus until 2005, with the addition of the New Gymnasium (Building 42).

3.2.2 Regulatory Setting

State

California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the state and is codified at *Public Resources Code (PRC) Section 21000 et seq.* CEQA requires lead agencies to determine if a proposed project would have a significant effect on the environment, including significant effects on historical or unique archaeological resources.

Under CEQA (Section 21084.1), a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. An archaeological resource may qualify as an "historical resource" under CEQA. The *CEQA Guidelines* (Title 14 California Code of Regulations [CCR] Section 15064.5) recognize that an historical resource includes: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical

Resources (California Register); (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k), or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) 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 by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record. The fact that a resource does not meet the three criteria outlined above does not preclude the lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

If a lead agency determines that an archaeological site is a historical resource, the provisions of Section 21084.1 of CEQA and Section 15064.5 of the *CEQA Guidelines* apply. If a project may cause a substantial adverse change (defined as 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) in the significance of an historical resource, the lead agency must identify potentially feasible measures to mitigate these effects (*CEQA Guidelines* Sections 15064.5(b)(1), 15064.5(b)(4)).

If an archaeological site does not meet the criteria for a historical resource contained in the *CEQA Guidelines*, then the site may be treated in accordance with the provisions of Section 21083, which is as a unique archaeological resource. As defined in Section 21083.2 of CEQA a "unique" archaeological resource is 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:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
- Is directly associated with a scientifically recognized important prehistoric or historic event, or person.

If an archaeological site meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site is to be treated in accordance with the provisions of Section 21083.2, which state that if the lead agency determines that a project would have a significant effect on unique archaeological resources, the lead agency may require reasonable efforts be made to permit any, or all, of these resources to be preserved in place (Section 21083.1(a)). If preservation in place is not feasible, mitigation measures shall be required.

The *CEQA Guidelines* note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the Project on those resources shall not be considered a significant effect on the environment (*CEQA Guidelines* Section 15064.5(c)(4)).

Paleontological Resources

The CEQA Guidelines (Title 14, Chapter 3 of the California Code of Regulations, Section 15000 *et seq*.), define the procedures, types of activities, individuals, and public agencies required to comply with CEQA. As part of CEQA's Initial Study process, one of the questions that must be answered by the lead agency relates to paleontological resources: "Will the proposed project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?" (CEQA Guidelines Section 15023, Appendix G, Section XIV, Part a).

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 to 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 is, 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 a less than 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 projects 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 projects 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.

California Register of Historical Resources

The 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" (PRC Section 5024.1[a]). The criteria for eligibility for the California Register are based upon the National Register of Historic Places (National Register) criteria (PRC Section 5024.1[b]). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.

To be eligible for the California Register, a prehistoric or historic-period property must be significant at the local, state, and/or federal level under one or more of the following four criteria:

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; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must meet one of the criteria of significance described above, and retain enough of its historic character, or appearance (integrity), to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

Additionally, 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 on the National Register and those formally determined eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward; and,
- Those California Points of Historical Interest that have been evaluated by the California Office of Historic Preservation (OHP) and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5 (those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register);
- Individual historical resources;
- Historical resources contributing to historic districts; and,
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

California Health and Safety Code Section 7050.5

California Health and Safety Code Section 7050.5 requires that in the event human remains are discovered, the County Coroner be contacted to determine the nature of the remains. In the event the remains are determined to be Native American in origin, the Coroner is required to contact the California Native American Heritage Commission (NAHC) within 24 hours to relinquish jurisdiction.

California Public Resources Code Section 5097.98

California PRC Section 5097.98, as amended by AB 2641, provides procedures in the event human remains of Native American origin are discovered during Project implementation. PRC Section 5097.98 requires that no further disturbances occur in the immediate vicinity of the discovery, that the discovery is adequately protected according to generally accepted cultural and archaeological standards, and that further activities take into account the possibility of multiple burials. PRC Section 5097.98 further requires the NAHC, upon notification by a County Coroner,

designate and notify a Most Likely Descendant (MLD) regarding the discovery of Native American human remains. Once the MLD has been granted access to the site by the landowner and inspected the discovery, the MLD then has 48 hours to provide recommendations to the landowner for the treatment of the human remains and any associated grave goods.

In the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, or if the land owner rejects the recommendation of the descendant, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that will not be subject to further disturbance.

Public Resources Code Section 5097.5 and Section 30244

Other state requirements for paleontological resource management are included in PRC Section 5097.5 and Section 30244. These statutes prohibit the removal of any paleontological site or feature from 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, county, city, district) lands.

Local

City of Los Angeles General Plan

The City of Los Angeles General Plan (adopted 2001) states as its objective, to "protect the city's archaeological and paleontological resources for historical, cultural, research, and/or educational purposes" by continuing "to identify and protect significant archaeological and paleontological resources known to exist or that are identified during land development, demolition, or property modification activities."

In addition, the City will:

> *continue to protect historic and cultural sites and/or resources potentially affected by proposed land development, demolition, or property modification activities…The city's environmental guidelines require the applicant to secure services of a bona fide archaeologist to monitor excavations or other subsurface activities associated with a development project in which all or a portion is deemed to be of archaeological significance. Discovery of archaeological materials may temporarily halt the project until the site has been assessed, potential impacts evaluated and, if deemed appropriate, the resources protected, documented and/or removed (City of Los Angeles, 2001).*

The General Plan also contains the following statement regarding paleontological resources:

> *Pursuant to CEQA, if a land development project is within a potentially significant paleontological area, the developer is required to contact a bona fide paleontologist to arrange for assessment of the potential impact and mitigation of potential disruption of or damage to the site. If significant paleontological resources are uncovered during project execution, authorities are to be notified and the designated paleontologist may order excavations stopped, within reasonable time limits, to enable assessment, removal or protection of the*

resources. For Los Angeles city and county, the Los Angeles County Museum of Natural History, including the George C. Page Museum, provides advice concerning paleontological resources.

In addition, the Los Angeles Municipal Code (LAMC) Section 91.106.4.5 states that the Building Department "shall not issue a permit to demolish, alter or remove a building or structure of historical, archaeological or architectural consequence if such building or structure has been officially designated" by a federal, state, or local authority.

LAUSD

The SUP Program EIR was certified by LAUSD on November 10, 2015. The overall purpose of the EIR was to inform LAUSD (lead agency), responsible agencies, decision makers, and the general public of the potential environmental effects from implementation of the SUP, and to streamline future CEQA compliance. The SUP Program EIR included Standard Conditions to provide sufficient performance standards for future projects to reduce environmental impacts. The following Standard Conditions are applicable to archaeological and paleontological resources.

TABLE 3.2-1
SUP PROGRAM EIR – APPLICABLE CULTURAL RESOURCES STANDARD CONDITIONS

Reference	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
SC-CUL-1	Treatment of Historical Resources	Project may directly or indirectly affect historical resources (i.e., buildings, structures, historic districts, and contributing site plan and landscaping features that are either designated or eligible for local, state, or federal landmark listing)	During project design, design development, pre-construction and construction (Planning & Construction)	**Design Build Team to Include Qualified Historic Architect** For campuses with qualifying historical resources under CEQA, the Design-Build team shall include a qualified Historic Architect. The Historic Architect shall provide input to ensure ongoing compliance, as project plans progress, with the Secretary of the Interior's Standards and LAUSD requirements and guidelines for the treatment of historical resources (specific requirements follow in SC-CUL-2). For projects involving structural upgrades to historic resources, the Design-Build team shall include a qualified Structural Engineer with a minimum of eight (8) years of demonstrated project-level experience in Historic Preservation. The Historic Architect/s shall meet the Secretary of the Interior's Professional Qualifications Standards and the standards described on page 8 of the LAUSD Design Guidelines and Treatment Approaches for Historic Schools. The Historic Architect shall provide input throughout the design and construction process to ensure ongoing compliance with the above-mentioned standards.
SC-CUL-2	Treatment of Historical Resources	Project may directly or indirectly affect historical resources (i.e., buildings, structures, historic districts, and contributing site plan and landscaping features that are either designated or eligible for local, state, or federal landmark listing)	During project design, design development, pre-construction and construction (Planning & Construction)	**Role of Historic Architect on Design-Build Team** The tasks of the Historic Architect on the Design-Build team shall include (but not necessarily be limited to) the following: 1. The Historic Architect shall work with the Design Builder and LAUSD to ensure that project components, including new construction and modernization of existing facilities, continue to comply with applicable historic preservation standards, including the Secretary of the Interior's

Reference	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
				Standards for the Treatment of Historic Properties and LAUSD Design Guidelines and Treatment Approaches for Historic Schools. The Historic Architect shall work with the Design-Builder throughout the design process to develop project options that facilitate compliance with the applicable historic preservation standards. 2. For new construction, the Historic Architect shall work with the Design-Builder and LAUSD to identify options and opportunities for (1) ensuring compatibility of scale and character for new construction, site and landscape features, and circulation corridors, and (2) ensuring that new construction is designed and sited in such a way that reinforces and strengthens, as much as feasible, character-defining site plan features, landscaping, and circulation corridors throughout campus. 3. For modernization and upgrade projects involving contributing (significant) buildings or features, the Historic Architect shall work with the Design-Builder and LAUSD to ensure that specifications for design and implementation of projects comply with the applicable historic preservation standards. 4. The Historic Architect shall participate in design team meetings through all phases of the project through 100 percent construction drawings, pre-construction, and construction phases. 5. The Historic Architect shall produce brief memos, at the 50 percent and 100 percent construction drawings stages, demonstrating how principal project components and treatment approaches comply with applicable historic preservation standards, including the Secretary of the Interior's Standards for the Treatment of Historic Properties and LAUSD Design Guidelines and Treatment Approaches for Historic Schools. The memos will be reviewed by LAUSD and incorporated into the Mitigation Monitoring and Report Plan (MMRP) for the project. 6. The Historic Architect shall participate in pre-construction and construction monitoring activities to ensure continuing conformance with Secretary's Standards and/or avoidance of a material impairment of the historical resources. 7. The Historic Architect shall provide specialized Construction Specifications Institute (CSI) specifications for architectural features or materials requiring restoration, removal, or on site storage. This shall include detailed instructions on maintaining and protecting in place relevant features. 8. The Design-Builder and Historic Architect shall be responsible for incorporating LAUSD's recommended updates and revisions during the design development and review process.
SC-CUL-3	Treatment of Historical Resources	Project may directly or indirectly affect historical resources (i.e., buildings, structures, historic districts, and contributing site plan and landscaping features that	During project design, design development, pre-construction and construction	**School Design Guide and LAUSD Design Guidelines and Treatment Approaches for Historic Schools** LAUSD has adopted policies and guidelines that apply to projects involving historic resources. The Design-Builder and Historic Architect shall apply

Reference	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
		are either designated or eligible for local, state, or federal landmark listing)	(Planning & Construction)	these guidelines, which include the LAUSD School Design Guide and LAUSD Design Guidelines and Treatment Approaches for Historic Schools and the Secretary's Standards for all new construction and upgrade/modernization projects. In keeping with the district's adopted policies and goals, LAUSD shall re-use rather than destroy historical resources where feasible. LAUSD shall follow the guidelines outlined in these documents to the maximum extent practicable when planning and implementing projects and adjacent new construction involving historical resources. General guidelines shall include: • Retain and preserve the historic character of buildings, structures, landscapes, and site features that are historically significant. • Repair rather than remove, replace, or destroy character-defining features; if replacement is necessary, replace in-kind to match in materials and appearance. • Avoid removing, obscuring, or destroying character-defining features and materials. • Treat distinctive architectural features or examples of skilled craftsmanship that characterize a building with sensitivity. • Conceal reinforcement required for structural stability or the installation of life safety or mechanical systems. • Undertake surface cleaning, preparation of surfaces, and other projects involving character-defining features using the least invasive, gentlest means possible. Avoid sandblasting and chemical treatments.
SC-CUL-4	Historical Resource Document	Demolition or potential damage to any recognized historic resources or any contributors to a historic district	Prior to demolition or major alteration (Planning & Construction)	Prior to demolition or mothballing activities, LAUSD shall retain a professional architectural photographer and a historian or architectural historian who meets the Secretary of the Interior's Professional Qualifications Standards to prepare HABS-like documentation for the historical resources slated for demolition. The HABS-like package will document in photographs and descriptive and historic narrative the historical resources slated for demolition. Documentation prepared for the package will draw upon primary- and secondary-source research and available studies previously prepared for the project. Measured drawings shall not be required for the project. The specifications for the HABS-like package follow: **Photographs:** Photographic documentation will focus on the historical resources/features slated for demolition, with overview and context photographs for the campus and adjacent setting. Photographs will be taken of interior and exterior features of the buildings using a professional-quality single lens reflex (SLR) digital camera with a minimum resolution of 10 megapixels. Photographs will include context views, elevations/exteriors, architectural details, overall interiors, and interior details (if warranted). Digital photographs will be printed in black and white on

Reference	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
				archival film paper and also provided in electronic format. **Descriptive and Historic Narrative:** The historian or architectural historian will prepare descriptive and historic narrative of the historical resources/features slated for demolition. Physical descriptions will detail each resource, elevation by elevation, with accompanying photographs, and information on how the resource fits within the broader campus during its period of significance. The historic narrative will include available information on the campus design, history, architect/contractor/designer as appropriate, area history, and historic context. In addition, the narrative will include a methodology section specifying the name of researcher, date of research, and sources/archives visited, as well as a bibliography. Within the written history, statements shall be footnoted as to their sources, where appropriate. **Historic Documentation Package Submittal:** The draft package will be assembled by the historian or architectural historian and submitted to LAUSD for review and comment. After final approval, one hard-copy set of the package will be prepared as follows: Photographs will be individually labeled and stored in individual acid-free sleeves. The remaining components of the historic documentation package (site map, photo index, historic narrative, and additional data) will be printed on archival bond, acid-free paper. Upon completion of the descriptive and historic narrative, all materials will be compiled in electronic format and presented to LAUSD for review and approval. Upon approval, one hard-copy version of the historic documentation package will be prepared and submitted to LAUSD. The historian or architectural historian shall offer a hardcopy package and compiled, electronic version of the final package to the Los Angeles Public Library (Central Library), Los Angeles Historical Society, and the South Central Coastal Information Center, to make available to researchers.
SC-CUL-5	Historical Resource Reuse	Demolition of any of the recognized historic structures	Prior to demolition or alteration (Construction)	LAUSD, consistent with Education Code Section 17540, shall offer to sell any useful features of the school building (e.g., the school bell, chalkboards, lockers) that do not contain hazardous materials for use or display, if features are not retained by LAUSD for reuse or display.
SC-CUL-6	Historical Resource Reuse	Demolition of any of the recognized historic structures	Prior to demolition or alteration (Construction)	LAUSD, consistent with Education Code Section 17545, shall offer for sale any remaining functional and defining features and building materials from the buildings. These materials could include doors, windows, siding, stones, lighting, doorknobs, hinges, cabinets, and appliances, among others. They shall be made available to the public for sale and reuse, if features are not retained by LAUSD for reuse or display.
SC-CUL-7	Archaeological Resource	Project area is deemed highly sensitive for archaeological resources.	Prior to and during grading, excavation, or other ground disturbing activities	LAUSD shall retain a qualified archaeologist to be available on-call. The qualified archaeologist shall meet the Secretary of the Interior's Professional

Reference	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
				Qualifications Standards (48 Federal Register 44738–39).
SC-CUL-8	Historic and Archaeological Resource	Historical or unique archaeological resources are discovered during construction activities.	During grading, excavation, or other ground disturbing activities	The contractor shall halt construction activities in the immediate area and notify the LAUSD. LAUSD shall retain a qualified archeologist to make an immediate evaluation of significance and appropriate treatment of the resource. To complete this assessment, the qualified archeologist will be afforded the necessary time to recover, analyze, and curate the find. The qualified archeologist shall recommend the extent of archeological monitoring necessary to ensure the protection of any other resources that may be in the area. Construction activities may continue on other parts of the building site while evaluation and treatment of historical or unique archaeological resources takes place.
SC-CUL-9	Archaeological Resource Monitoring Program	Phase I Archaeological Site Investigation shows a strong possibility that unique resources, and/or unique architectural resources have been identified on a site.	Prior to the start of construction	LAUSD shall implement an archaeological monitoring program for construction activities at a site prepared by a qualified archaeologist under the following conditions: (1) when a Phase I Site Investigation shows a strong possibility that unique archeological resources are buried on the site; and/or (2) when unique architectural resources have been identified on a site, but LAUSD does not implement a Phase III Data Recovery/Mitigation Program because the resources can be recovered through the archaeological monitoring program.
SC-CUL-10	Archaeological Resource	Evidence of prehistoric or historic cultural resources is uncovered.	During grading, excavation, or other ground disturbing activities	All work shall stop within a 30 foot radius of the discovery. Work shall not continue until the discovery has been evaluated by a qualified archaeologist. The qualified archaeologist shall assess the find(s) and, if it is determined to be of value, shall draft a monitoring program and oversee the remainder of the grading program. Should evidence of prehistoric or historic cultural resources be found the archaeologist shall monitor all ground-disturbing activities related to the proposed project. Any significant archaeological resources found shall be preserved as determined necessary by the archaeologist and offered to a local museum or repository willing to accept the resource. Any resulting reports shall also be forwarded to the South Central Coastal Information Center at the California State University, Fullerton.
SC-CUL-11	Archaeological Resource	Project construction requires archaeological monitoring	Prior to the start grading, excavation, or other ground disturbing activities	Cultural resources sensitivity training shall be conducted by a qualified archaeologist for all construction workers involved in moving soil or working near soil disturbance. This training shall review the types of archaeological resources that might be found, along with laws for the protection of resources.

Reference	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
SC-CUL-12	Archaeological Resource	Unique archaeological resources are discovered and LAUSD determines not to avoid them by abandoning the site or redesigning the project	During grading, excavation, or other ground disturbing activities	LAUSD shall determine whether it is feasible to prepare and implement a Phase III Data Recovery/Mitigation Program. A Phase III Data Recovery/Mitigation Program would be designed by a Qualified Archaeologist to recover a statistically valid sample of the archaeological remains and to document the site to a level where the impacts can be determined to be less than significant. All documentation shall be prepared in the standard format of the ARMR Guidelines, as prepared by the OHP. Once a Phase III Data Recovery/Mitigation Program is completed, an archaeological monitor shall be present on site to oversee the grading, demolition activities, and/or initial construction activities to ensure that construction proceeds in accordance with the adopted Phase III Data Recovery/Mitigation Program. The extent of the Phase III Data Recovery/Mitigation Program and the extent and duration of the archaeological monitoring program depend on site-specific factors.
SC-CUL-13	Native American Resource	Evidence of Native American Resources is Uncovered	During grading, excavation, or other ground-disturbing activities (Construction)	All work shall stop within a 30-foot radius of the discovery. Work shall not continue until the discovery has been evaluated by a qualified archaeologist and the local Native American representative has been contacted and consulted to assist in the accurate recordation and recovery of the resources.
SC-CUL-14	Paleontological Resource	Cultural Resources Assessment identifies the project area as sensitive for paleontological resources.	During grading, excavation, or other ground disturbing activities	LAUSD shall have paleontological monitor on-call during construction activities. This monitor shall provide the construction crew(s) with a brief summary of the sensitivity, the rationale behind the need for protection of these resources, and information on the initial identification of paleontological resources. If paleontological resources are uncovered during construction, the on-call paleontologist shall be notified and afforded the necessary time and funds to recover, analyze, and curate the find(s). Subsequently, the monitor shall remain on site for the duration of the ground disturbances to ensure the protection of any other resources that may be in the area.
SC-CUL-15	Paleontological Resource	Project area is deemed highly sensitive for paleontological resources.	During grading, excavation, or other ground disturbing activities	The paleontological monitor shall be on site for all ground altering activities and shall advise LAUSD as to necessary means of protecting potentially significant paleontological resources, including, but not limited to, possible cessation of construction activities in the immediate area of a find. If resources are identified during the monitoring program, the paleontologist shall be afforded the necessary time and funds to recover, analyze, and curate the find(s). Subsequently, the monitor shall remain on site for the duration of the ground disturbances to insure the protection of any other resources that may be in the area.
SC-N-8	Vibration (Structural Damage)	Vibration intensive activities are planned within 25 feet of a historic building or structure	Prior to and during demolition and construction (Construction)	LAUSD shall meet with the construction contractor to discuss alternative methods of demolition and construction for activities within 25 feet of a historic building to reduce vibration impacts. During the preconstruction meeting, the construction contractor shall identify demolition methods not involving vibration-intensive construction equipment or activities. For example: sawing into sections that can

Reference	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
				be loaded onto trucks results in lower vibration levels than demolition by hydraulic hammers. • Prior to construction activities, the construction contractor shall inspect and report on the current foundation and structural condition of the historic building. • The construction contractor shall implement alternative methods identified in the preconstruction meeting during demolition, excavation, and construction for work done within 25 feet of the historic building. • The construction contractor shall avoid use of vibratory rollers and packers adjacent to a historic building. • During demolition the construction contractor shall not phase any ground-impacting operations near a historic building to occur at the same time as any ground impacting operation associated with demolition and construction of a new building. During demolition and construction, if any vibration levels cause cosmetic or structural damage to a historic building the District shall issue "stop-work" orders to the construction contractor immediately to prevent further damage. Work shall not restart until the building is stabilized and/or preventive measures to relieve further damage to the building are implemented.

Society for Vertebrate Paleontology Professional Standards

The Society for Vertebrate Paleontology (SVP) has established standard guidelines for acceptable professional practices in the conduct of paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, and specimen preparation, identification, analysis, and curation. Most practicing professional paleontologists in the nation adhere closely to the SVP's assessment, mitigation, and monitoring requirements as specifically provided in its standard guidelines. Most California State regulatory agencies accept the SVP standard guidelines as a measure of professional practice.

As defined by the SVP (2010: 11), significant nonrenewable paleontological resources are:

> *fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).*

As defined by the SVP (1995:26), significant fossiliferous deposits are:

> *a rock unit or formation which contains significant nonrenewable paleontologic resources, here defined as comprising one or more identifiable vertebrate fossils, large or small, and any associated invertebrate and plant fossils, traces, and other data that provide taphonomic, taxonomic, phylogenetic, ecologic, and*

stratigraphic information (ichnites and trace fossils generated by vertebrate animals, e.g., trackways, or nests and middens which provide datable material and climatic information).

Based on the significance definitions of the SVP (1995, 2010), all identifiable vertebrate fossils are considered to have significant scientific value. This position is adhered to because vertebrate fossils are relatively uncommon, and only rarely will a fossil locality yield a statistically significant number of specimens of the same genus. Therefore, every vertebrate fossil found has the potential to provide significant new information on the taxon it represents, its paleoenvironment, and/or its distribution. Furthermore, all geologic units in which vertebrate fossils have previously been found are considered to have high sensitivity. Identifiable plant and invertebrate fossils are considered significant if found in association with vertebrate fossils or if defined as significant by Project paleontologists, specialists, or local government agencies.

A geologic unit known to contain significant fossils is considered "sensitive" to adverse impacts if there is a high probability that earth-moving or ground-disturbing activities in that rock unit will either directly or indirectly disturb, or destroy, fossil remains. The limits of the entire rock formation, both areal and stratigraphic, therefore define the scope of the paleontological potential in each case (SVP, 1995).

Fossils are contained within surficial sediments, or bedrock, and are, therefore, not observable, or detectable, unless exposed by erosion or human activity. In summary, paleontologists cannot know either the quality or quantity of fossils prior to natural erosion, or human-caused exposure. As a result, even in the absence of surface fossils, it is necessary to assess the sensitivity of rock units based on their known potential to produce significant fossils elsewhere within the same geologic unit (both within and outside of the study area), a similar geologic unit, or based on whether the unit in question was deposited in a type of environment that is known to be favorable for fossil preservation. Monitoring by experienced paleontologists greatly increases the probability that fossils will be discovered during ground-disturbing activities and that, if these remains are significant, successful mitigation and salvage efforts may be undertaken in order to prevent adverse impacts to these resources.

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 Paleontologic Resources," the SVP (2010: 1-2) 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, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources. Rocks units classified as having high potential for producing paleontological resources include, but are not limited to, sedimentary formations and some volcaniclastic formations (e. g., ashes or tephras), and some low-grade metamorphic rocks which contain significant paleontological resources anywhere within their

geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils (e. g., middle Holocene and older, fine-grained fluvial sandstones, argillaceous and carbonate-rich paleosols, cross-bedded point bar sandstones, fine-grained marine sandstones, etc.). Rock units which contain potentially datable organic remains older than late Holocene, including deposits associated with animal nests or middens, and rock units which may contain new vertebrate deposits, traces, or trackways are also classified as having high potential.

- **Low Potential**. Reports in the paleontological literature or field surveys by a qualified professional paleontologist may allow determination that some rock units have low potential for yielding significant fossils. Such rock units will be poorly represented by fossil specimens in institutional collections, or based on general scientific consensus only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule, e.g. basalt flows or Recent colluvium. Rock units with low potential typically will not require impact mitigation measures to protect fossils.
- **Undetermined Potential**. Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study is necessary to determine if these rock units have high or low potential to contain significant paleontological resources. A field survey by a qualified professional paleontologist to specifically determine the paleontological resource potential of these rock units is required before a paleontological resource impact mitigation program can be developed. In cases where no subsurface data are available, paleontological potential can sometimes be determined by strategically located excavations into subsurface stratigraphy.
- **No Potential**. Some rock units have no potential to contain significant paleontological resources, for instance high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites). Rock units with no potential require no protection nor impact mitigation measures relative to paleontological resources.

For geologic units with high potential, full-time monitoring is generally recommended during any Project-related ground disturbance (SVP, 2010). For geologic units with low potential, full-time monitoring will not generally be required. For geologic units with undetermined potential, field surveys by a qualified vertebrate paleontologist should be conducted to specifically determine the paleontologic potential of the rock units present within the Project area.

3.2.3 Thresholds of Significance

According to Appendix G of the State CEQA Guidelines, the proposed Project could have a potentially significant impact with respect to Cultural Resources if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 (see Impact 3.2-1, below);
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 (see Impact 3.2-2, below);
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (see Impact 3.2-3, below); or
- Disturb any human remains, including those interred outside of dedicated cemeteries (see Impact 3.2-4, below).

CEQA provides that a project may cause a significant environmental effect where the Project could result in a substantial adverse change in the significance of a historical resource (Public Resources Code, Section 21084.1). CEQA Guidelines Section 15064.5 defines a "substantial adverse change" in the significance of a historical resource to mean physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be "materially impaired" (CEQA Guidelines Section 15064.5(b)(1)). Per CEQA Guidelines Section 15064.5(b)(2), the significance of a historical resource is materially impaired when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.
- CEQA also provides that a project may cause a significant environmental effect where the project could result in damage to or destroy unique archaeological resources, unique paleontological resource or site or unique geologic feature, or human remains. Typically, impacts to unique archaeological resources can be mitigated to less-than-significant level through data recovery excavations. CEQA provides that excavation as mitigation shall be limited to those parts of the unique archaeological resource that would be damaged or destroyed by the project (Public Resources Code Section 21083.2(d)) and sets limits on the dollar amount required of an applicant to mitigate impacts (Public Resources Code Section 21083.2(e)). Under CEQA, documentation and recovery of the scientific information contained in "significant" fossils (i.e., fossils that are unique, unusual, rare, uncommon, or diagnostically important) is considered to reduce the impact to paleontological resources to less than significant. CEQA Guidelines Section 15064.5(e) indicates that in the event of human remains discoveries, the county coroner shall be contacted and the provisions of Public Resources Code Section 5097.98 shall be followed to mitigate impacts.

3.2.4 Methodology

To evaluate the proposed Project's potential effects on significant cultural resources, a cultural resources assessment of the Project site was conducted, which included records searches conducted at the California Historical Resources Information System (CHRIS) South Central Coastal Information Center (SCCIC) and the Natural History Museum of Los Angeles County (LACM), archival research (consisting of historic map and aerial photograph review, paleontological resources literature review, and a geotechnical investigation review), and a review of the Sacred Lands File (SLF) at the Native American Heritage Commission (NAHC). Because the proposed Project site is fully developed and no natural ground surface exposures exist, an archaeological and paleontological resources survey was not conducted.

SCCIC Records Search

A records search for the proposed Project was conducted on December 6, 2017 at the SCCIC housed at California State University, Fullerton. The records search included a review of all recorded archaeological resources within a ½-mile radius of the Project site, as well as a review of cultural resource reports on file. The records search indicates that seven cultural resources studies have been conducted within a ½-mile of the proposed Project (**Table 3.2-2**). Less than five percent of the ½-mile records search area has been included in previous studies. Of the seven studies, none have included the Project site.

TABLE 3.2-2
PREVIOUS CULTURAL RESOURCES INVESTIGATIONS

Author	SCCIC# (LA-)	Title	Year
Winman, Lois J. and E. Gary Stickel	02399	*Los Angeles-Long Beach Harbor Areas Cultural Resource Survey.*	1978
Bonner, Wayne H. and Kathleen A. Crawford	08834	*Cultural Resources Records Search and Site Visit Results for Royal Street Communications, LLC Candidate La2633a (w. 15th St. & Cabrillo), 1707 South Gaffey Street, San Pedro, Los Angeles County, California*	2007
Carmack, Shannon and Judith Marvin	09324	*Cultural Resource Assessment Verizon Wireless Meyler Facility Community of San Pedro, Los Angeles County, California*	2005
Crawford, Kathleen	09360	*Direct APE Historic Architectural Assessment for AT&T Telecommunications Facility Candidate 950031012 (9th Street and CA-110) 1002 South Gaffey Street, San Pedro, Los Angeles County, California*	2004
Bonner, Wayne H.	10012	*Cultural Resources Records Search Results and Site Visit for Cingular Wireless Candidate Lsanca0199a (alma & 25th), 2303 South Alma Street, San Pedro, Los Angeles County, California.*	2005
Weinman, Lois J.	10527	*Los Angeles-Long Beach Harbor Areas Regional Cultural History, Los Angeles County, California*	1978
Shepard, Richard S.	11006	*Phase I/Class II Archaeological Survey: Daniels Field Improvements Project, San Pedro Area, City of Los Angeles, Los Angeles County, California*	2011

The records search results indicate that no archaeological resources (historic or prehistoric) have been recorded within the Project site, or the ½-mile radius. One historic-period built resource (19-175245, San Pedro HS itself) has been recorded within the boundaries of the Project site. During the 1994 FEMA Survey, San Pedro HS was assigned a California Historical Resource Status Codes of "2S2," which means the subject school is an "individual property determined eligible for the National Register by a consensus through the Section 106 process and is listed in the California Register" (Sapphos Environmental, Inc., 2014). San Pedro HS was found to be significant under National Register Criterion B for its association with noted Los Angeles architect Gordon B. Kaufmann and under Criterion C as an excellent example of 1930s academic architecture (Historic Resources Group, 1994). Although no archaeological resources have been recorded within the ½-mile radius, review of a previous ESA project (Garcia and Clark, 2017) located approximately 1-mile south in the community of San Pedro indicated that buried slit trenches (associated with the remains of a military defense) and artifacts were encountered within

soil materials classified as fill, and considered similar to the fill found within the proposed Project site (Garcia and Clark, 2017).

LACM Paleontological Records Search

A paleontological records search was conducted by the LACM on December 11, 2017. The results indicate that no fossil localities are known from within the proposed Project site. However, the LACM has pointed out that there are localities close by from the same sedimentary deposits that occur within the Project site (McLeod, 2017, included in Appendix D).

The LACM reported that exposures of the marine upper Miocene Valmonte Diatomite Member of the Monterey Formation are located within the eastern portion of the Project site. The closest locality from the Valmonte Diatomite is LACM 4993, located approximately 1.0 mile southeast of the Project site (and east of the Fort MacArthur Community Center), which produced fossil specimens of lampfish (*Lampanyctus petrolifer*) and cod (*Gadiformes*). Another locality (LACM 1925) from the Valmonte Diatomite is situated approximately 1.5 miles southeast of the Project site (at Cabrillo Beach) and yielded fossil specimens of sevengill shark (*Notorynchus maculatus*), viperfish (*Chauliodus eximius*), croaker (*Lompoquia*), cod (*Eclipes*), pipefish (*Syngnathus avus*), flounder (Pleuronectiformes) bristlemouth (*Cyclothone*), herring (*Ganolytes*), and lanternfish (Myctophidae) (McLeod, 2017). All of these localities were recovered from unknown depths.

The LACM has also stated that the western portion of the Project site has exposures of the marine middle Miocene Altamira Shale Member of the Monterey Formation. The closest fossil localities (LACM 7472-7474) from the Altamira Shale, located approximately 1.0 mile northwest of the Project site (within the Deane Dana Friendship Park) yielded fossil specimens of herring (*Ganolytes* and *Xyne*) and croaker (*Lompoquia*). Approximately 2.0 miles west of LACM 7472-7474 (near Crest Road and Palos Verdes Drive East), fossil localities LACM 1898, 1927, 4446 and 5460 produced fossil specimens of seahorse (*Hipposyngnathus imporcitor*), wahoo (*Scomberomorus*), sea lion (*Atopotaurus courseni*), a marine mammal (*Paleoparadoxia*), dolphin (Delphinidae), and a primitive baleen whale (Cetotheriidae). Approximately 1.4 miles southwest of the Project site (west of Whites Point), LACM (CIT) 341 yielded fossil specimens of butterfly ray (*Pteroplatea lapislutosa*), herring (*Opisthonema palosverdensis*), cod (*Eclipes extensus*), tuna (*Alciola* and *Thunnus*), and pipefish (*Syngnathus*). LACM 3888 (located approximately 1.3 miles southwest of the Project site and on the west side of Whites Point) yielded fossil specimens of booby (Sulidae), porpoise (Phocoenidae), and baleen whale (Mysticeti). LACM 5162 (also located approximately 1.3 miles southwest of the Project site and on the east side of Whites Point) produced a fossil specimen of a sperm whale (Physeteridae). Lastly, LACM 1348 (located 1.3 miles south of the Project site and west of Point Fermin) yielded fossil specimens of leatherback turtle (Dermochelyidae) (McLeod, 2017). All of these localities were recovered from unknown depths.

According to the records search results, excavations into the Valmonte Diatomite Member or the Altamira Shale Member of the Monterey Formation could yield fossil vertebrates within substantial excavations in the Project site (McLeod, 2017).

Archival Research

Historic Map and Aerial Photo Review

Historic maps were examined to provide historical information about the proposed Project site and vicinity, and to contribute to an assessment of the proposed Project's archaeological sensitivity. Reviewed historic topographic maps included the 1896 San Pedro 15-minute topographic quadrangle. Sanborn Fire Insurance maps for the years 1921, 1950, and 1969 were also studied (Clark Seif Clark, 2016). Historic aerial photographs were reviewed for the years 1928, 1952, 1960, 1965, and 1971 (Los Angeles Public Library; University of California, Santa Barbara), as well as aerial imagery from 2016 (Google Earth).

Review of the 1896 topographic map indicates that the Project site was undeveloped at that time. The Sanborn map review indicates that by 1921 the southern portion of the Project site was developed with nine single-family dwellings near 17th Street. Several other dwellings and structures (a total of six) are also shown in the central portion of the Project site and near 15th Street. Lastly, one single-family dwelling is depicted as located in the northern portion (near 14th Street) of the Project site. A 1928 aerial photograph illustrates the residential neighborhood that existed in the vicinity of the future San Pedro HS Campus. Sanborn map review also shows that by 1950, most of the northern portion of the Project site was developed, with single- and multi-family dwellings and some associated detached garages. The central portion of the Project site is depicted as developed with six buildings, now referred to as the historic core, that comprised San Pedro HS, and the southern portion of the Project site (facing 17th Street) is shown as fully developed with single- and multi-family dwellings and some associated detached garages. By 1969, the Sanborn map review shows that the northern portion of the Project site continued to be occupied by single-family dwellings; however, by this time some classrooms of San Pedro HS are also shown in this portion of the Project site. The entire central and southern portions of the Project site are depicted as developed with several large buildings that are part of San Pedro HS. Review of current aerial imagery indicates that no residential buildings now exist within the Project site and that the entire Project site is developed with buildings, landscaping, and hardscape for San Pedro HS.

Paleontological Resources Literature Review

A desktop review was conducted to assess the potential of the geologic units in the Project site to preserve fossil resources. The surficial geology of the Project site has been mapped by Dibblee et al. (1999) at a scale of 1: 24,000. The eastern Project site consists of the Valmonte Diatomite Member (Tmv) of the Monterey Formation, while the western portion consist of the Altamira Shale Member (Tma) of the Monterey Formation. These units are discussed in detail below.

Valmonte Diatomite Member (Tmv). This unit consists of soft, white, punky diatomaceous shale and mudstone that is laminated and up to 125 m thick, dating to the upper Miocene (approximately 12 million years old) (Dibblee et al., 1999). In addition to the fossils noted above by the LACM records search, fossil resources such as whales and other marine mammals, fishes, cephalopods, mollusks, and others from the Valmonte Diatomite have been published extensively in the scientific literature (e.g., Barnes, 1976; Crane, 1966; David, 1943; Saul and Stadum, 2005;

Woodring et al., 1946). Given the documented history of the presence of significant fossil resources in the Valmonte Diatomite, this unit has **high paleontological sensitivity**.

Altamira Shale Member (Tma). This unit consists of white-weathering, thin bedded siliceous and phosphatic shale with interbeds of limestone and siltstone up to 40 m thick, overlying 15 m of cherty and porcelaneous shale from the middle Miocene (approximately 14 million years old) (Dibblee et al., 1999). In addition to the fossils noted above by the LACM records search, fossil resources very similar to those noted above for the Valmonte Diatomite, such as whales and other marine mammals, fishes, cephalopods, crustaceans, mollusks, and others from the Valmonte Diatomite have been published extensively in the scientific literature (e.g., Bell et al., 2009; Barnes, 1976; David, 1943; Downs, 1956; Hof and Schram, 1998; Woodring et al., 1946). Given the documented history of the presence of significant fossil resources in the Altamira Shale, this unit has **high paleontological sensitivity**.

Geotechnical Investigation Review

A report prepared by Group Delta Consultants, Inc. (2016) detailing the results of a geotechnical investigation for the Project site was reviewed. A total of 15 borings was drilled to depths of about 26.5 feet below existing grades within the Project site. Review of the boring logs and the exploration location plan indicated that borings 1-3, 5-7, and 14-15 (drilled within the central, northwest, and a small portion of the southwest area, respectively) yielded fill materials starting from just below asphalt surface down to a maximum depth of 16.5 feet below grade, below which was diatomaceous siltstone, present to the end of the boring. The boring logs and exploration location plan also revealed that borings 4 and 8 -14 (drilled in the southwestern portion of the Project site) found diatomaceous siltstone present from just below surface asphalt to the end of the borings (the deepest of which was 26.5 feet below surface) (Group Delta Consultants, Inc. 2016). The boring logs from previous geotechnical studies of the site were all also included in the Group Delta Consultants, Inc. (2016) study, and were generally consistent with 3-8 feet of artificial fill overlying diatomaceous shale, or siltstone, identified as the Valmonte Diatomite.

Sacred Lands File Search

The NAHC maintains a confidential Sacred Lands File (SLF) which contains sites of traditional, cultural, or religious value to the Native American community. The NAHC was contacted on November 27, 2017 to request a search of the SLF. The NAHC responded to the request in a letter dated November 29, 2017. The SLF yielded negative results; however, the NAHC noted that the negative results of the SLF search does not preclude the existence of Native American resources within the Project site (Quinn, 2017).

3.2.5 Impact Analysis

Historical Resources

Impact 3.2-1: The Project could cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

Direct Impacts

San Pedro HS was determined individually eligible for inclusion in the National Register through consensus and is listed in the California Register because it is associated with noted Los Angeles architect Gordon B. Kaufmann (National Register Criterion B) and embodies the distinctive characteristics of the Streamline Moderne style of academic architecture (Criterion C). San Pedro HS retains integrity of setting, design, materials, workmanship, location, feeling, and association from its period of significance (1935-1938).

Through subsequent analysis, San Pedro HS has been identified as the eligible San Pedro HS Historic District (Historic District). The Administration Building (Building 1), Old Gymnasium/Physical Education Building (Building 2), Classroom Building No. 1 (Building 3), Industrial Arts Building (Building 4), Auditorium (Building 5), and Home Economics Building (Building 6) were determined to be contributors to the Historic District, as well as the majority of the related landscape elements.

The proposed Project would include renovations, modernizations, and new construction on the Campus, in addition to the demolition of one contributing building and several non-contributing buildings. The proposed Project would include seismic retrofitting and modernization of the Administration Building (Building 1), Old Gymnasium/Physical Education Building (Building 2), Classroom Building No. 1 (Building 3), and Home Economics Building (Building 6), all contributors. The Auditorium (Building 5), also a contributor, is proposed to receive minor improvements. Furthermore, the proposed Project would include demolition of the contributing Industrial Arts Building (Building 4) and several non-contributing buildings, which would be replaced under the Project with a new Building A. While the Industrial Arts Building is a contributor to the Historic District, it is not the most visually or functionally prominent building. Lastly, a new Building B would be constructed north of the Auditorium (Building 5), and a new Central Plant would be constructed in the parking lot located north of 15th Street and east of Alma Street.

With the incorporation of SC-CUL-1, SC-CUL-2, and SC-CUL-3, the majority of the contributing buildings and landscape features would be rehabilitated in conformance with the Secretary of the Interior's Standards for Rehabilitation (SOI Standards) to the extent feasible, LAUSD Design Guidelines and Treatment Approaches for Historic Schools, and LAUSD's requirements and guidelines for the treatment of historical resources under the guidance of a qualified Historic Architect. The proposed renovations would largely conform with the SOI Standards, the buildings and landscape would retain integrity, and San Pedro HS would remain eligible for listing on the National Register and California Register.

The Administration Building (Building 1), Old Gymnasium/Physical Education Building (Building 2), Classroom Building No. 1 (Building 3), and Auditorium (Building 5) are the most architecturally distinctive buildings and, along with the associated landscaping, are essential to conveying the significance and historic character of the Historic District. The demolition of the Industrial Arts Building (Building 4) would result in the removal of a contributing building to the Historic District, causing a loss of historic fabric. However, the Industrial Arts Building has undergone several notable exterior alterations as described above, and the degree to which it contributes to the Historic District is not commensurate with that of the buildings listed above. Therefore, its removal would not significantly detract from the overall site plan such that San Pedro HS would no longer be eligible as a Historic District. As such, the removal of the Industrial Arts Building would not constitute a substantial adverse change in the historic significance or integrity of the Historic District. The implementation of SC-CUL-4 would require the recordation/documentation of this building in a HABS-like package.

The Historic District would retain sufficient integrity through the preservation of the majority of the contributing buildings and landscape features. The majority of the character-defining features of these contributing buildings would be restored or, in limited instances, replaced in-kind, ensuring the integrity of the historical resource and maintaining its eligibility for the National Register and California Register.

The Project would result in construction of three new buildings: Buildings A, B, and the Central Plant. With implementation of SC-CUL-1, SC-CUL-2, and SC-CUL-3, the proposed new construction would comply with SOI Standards 9 and 10, would be compatible with the size, scale, and height of the contributing Streamline Moderne-style buildings and landscape features that would remain, and would not destroy spatial relationships that characterize the Historic District. Additionally, the implementation of SC-N-8 would help to protect historic buildings from construction-related vibration impacts.

Under the CEQA Guidelines, the significance of an historical resource is materially impaired when a project alters in an adverse manner those physical characteristics that account for its eligibility as a historical resource. The Campus is seen as a single historical resource—the San Pedro HS Historic District—with the buildings, structures, and other features, such as landscaping, as either contributing or non-contributing elements, or components, of that historical resource. Therefore, with implementation of SC-CUL-1 through SC-CUL-6, the Historic District would retain sufficient integrity to remain eligible for the National Register and California Register as the majority of the contributing buildings and landscape features would be rehabilitated in conformance to the SOI Standards, new construction would conform to SOI Standards 9 and 10. It has been determined that the demolition of the one contributing building (Industrial Arts Building) would not result in the ineligibility of the historic district. Additionally, it would be documented in a HABS-like recordation document and its character-defining features would be salvaged per LAUSD SC-CUL-1 to SC-CUL-6, resulting in a less-than-significant impact. No mitigation or further study is required.

No archaeological resources were identified within the Project site. As such the Project would not result in an impact to known archaeological resources that could qualify as Historical resources.

However, there is a potential for subsurface archaeological deposits that could qualify as historical resources to be encountered during ground disturbing activities. Archival research indicates that, prior to the construction of the school, several portions of the Project site was developed with former family dwellings as early as 1921. Further, review of the geotechnical report revealed that fill soil materials are located within the Project site from just below the asphalt down to a depth of 16.5 feet below grade. Research conducted for a previous ESA project (located in the general vicinity of the Project site) also indicated that buried features and artifacts were found within soil materials classified as fill. Based on this, there is potential for the Project site to preserve historic-period archaeological resources that could qualify as historical resources, even in fill soils under the current foundations of the school buildings, landscaping, and hardscape.

Since the Project includes ground disturbance, previously undocumented archaeological resources could be encountered during construction. If any such resources were found to be historical resources as defined in Section 15064.5, the proposed Project could result in a significant impact to historical resources pursuant to Section 15064.5. The Project requires compliance with SC-CUL-7 through SC-CUL-13 in order to reduce impacts to less than significant. These measures include retention of an on-call qualified archaeologist, implementation of an archaeological resources monitoring program, halting and re-directing work in the event of a discovery until it is evaluated for significance, cultural resources sensitivity training, and Phase III Data Recovery/Mitigation Program in the event that a significant resource is discovered and cannot be avoided. After implementation of these conditions, potential impacts related to archaeological resources would be reduced. No mitigation, or further study, is required. Therefore, impacts would be less than significant with respect to direct impacts to historic resources.

Indirect Impacts

Indirect impacts were analyzed to determine if the proposed Project would result in a substantial material change to the integrity and significance of historical resources and their immediate surroundings within the Project site and Project vicinity such that their eligibility would be materially impaired. Potential indirect impacts were found to be less than significant.
The one historical resource with an indirect view of the Historic District is the Dodson House located at 859 West 13th Street. Changes to a historical resource's setting through the alteration, demolition, or construction of buildings can, in some cases, result in a substantial adverse change. The Dodson House would retain its eligibility as an historical resource after Project completion, as the proposed Project would not physically alter or destroy any of its character-defining features or significantly alter the setting of this resource. Therefore, impacts would be less than significant with respect to indirect impacts to historical resources.

Standard Conditions

The following LAUSD Standard Conditions of approval would be implemented as part of the Project:

> **SC-CUL-1: Design Build Team to Include Qualified Historic Architect.** For campuses with qualifying historical resources under CEQA, the Design-Build team shall include a qualified Historic Architect. The Historic Architect shall provide input to ensure ongoing compliance, as Project plans progress, with the *Secretary of the Interior's*

Standards and LAUSD requirements and guidelines for the treatment of historical resources (specific requirements follow in SC-CUL-2).

For projects involving structural upgrades to historic resources, the Design-Build team shall include a qualified Structural Engineer with a minimum of eight (8) years of demonstrated project-level experience in Historic Preservation.

The Historic Architect/s shall meet the Secretary of the Interior's Professional Qualifications Standards and the standards described on page 8 of the *LAUSD Design Guidelines and Treatment Approaches for Historic Schools*. The Historic Architect shall provide input throughout the design and construction process to ensure ongoing compliance with the above-mentioned standards.

SC-CUL-2: Role of Historic Architect on Design-Build Team. The tasks of the Historic Architect on the Design-Build team shall include (but not necessarily be limited to) the following:

1. The Historic Architect shall work with the Design Builder and LAUSD to ensure that Project components, including new construction and modernization of existing facilities, continue to comply with applicable historic preservation standards, including the *Secretary of the Interior's Standards for the Treatment of Historic Properties* and *LAUSD Design Guidelines and Treatment Approaches for Historic Schools*. The Historic Architect shall work with the Design-Builder throughout the design process to develop Project options that facilitate compliance with the applicable historic preservation standards.

2. For new construction, the Historic Architect shall work with the Design-Builder and LAUSD to identify options and opportunities for (1) ensuring compatibility of scale and character for new construction, site and landscape features, and circulation corridors, and (2) ensuring that new construction is designed and sited in such a way that reinforces and strengthens, as much as feasible, character-defining site plan features, landscaping, and circulation corridors throughout the Campus.

3. For modernization and upgrade projects involving contributing (significant) buildings or features, the Historic Architect shall work with the Design-Builder and LAUSD to ensure that specifications for design and implementation of projects comply with the applicable historic preservation standards.

4. The Historic Architect shall participate in design team meetings through all phases of the Project through 100 percent construction drawings, pre-construction, and construction phases.

5. The Historic Architect shall produce brief memos, at the 50 percent and 100 percent construction drawings stages, demonstrating how principal Project components and treatment approaches comply with applicable historic preservation standards, including the *Secretary of the Interior's Standards for the Treatment of Historic Properties* and *LAUSD Design Guidelines and Treatment Approaches for Historic Schools*. The memos will be reviewed by LAUSD and incorporated into the Mitigation Monitoring and Report Plan (MMRP) for the Project.

6. The Historic Architect shall participate in pre-construction and construction monitoring activities to ensure continuing conformance with Secretary's Standards and/or avoidance of a material impairment of the historical resources.

7. The Historic Architect shall provide specialized Construction Specifications Institute (CSI) specifications for architectural features or materials requiring restoration, removal, or on-site storage. This shall include detailed instructions on maintaining and protecting in place relevant features.

8. The Design-Builder and Historic Architect shall be responsible for incorporating LAUSD's recommended updates and revisions during the design development and review process.

SC-CUL-3: School Design Guide and LAUSD Design Guidelines and Treatment Approaches for Historic Schools. LAUSD has adopted policies and guidelines that apply to projects involving historic resources. The Design-Builder and Historic Architect shall apply these guidelines, which include the *LAUSD School Design Guide* and *LAUSD Design Guidelines and Treatment Approaches for Historic Schools* and the *Secretary's Standards* for all new construction and upgrade/modernization projects. In keeping with the district's adopted policies and goals, LAUSD shall re-use rather than destroy historical resources where feasible.

LAUSD shall follow the guidelines outlined in these documents to the maximum extent practicable when planning and implementing projects and adjacent new construction involving historical resources. General guidelines shall include:

- Retain and preserve the historic character of buildings, structures, landscapes, and site features that are historically significant.

- Repair rather than remove, replace, or destroy character-defining features; if replacement is necessary, replace in-kind to match in materials and appearance.

- Avoid removing, obscuring, or destroying character-defining features and materials.

- Treat distinctive architectural features or examples of skilled craftsmanship that characterize a building with sensitivity.

- Conceal reinforcement required for structural stability or the installation of life safety or mechanical systems.

- Undertake surface cleaning, preparation of surfaces, and other projects involving character-defining features using the least invasive, gentlest means possible. Avoid sandblasting and chemical treatments.

SC-CUL-4: Prior to demolition or mothballing activities, LAUSD shall retain a professional architectural photographer and a historian or architectural historian who meets the Secretary of the Interior's Professional Qualifications Standards to prepare HABS-like documentation for the historical resources slated for demolition.

The HABS-like package will document in photographs and descriptive and historic narrative the historical resources slated for demolition. Documentation prepared for the

package will draw upon primary- and secondary-source research and available studies previously prepared for the Project. Measured drawings shall not be required for the Project. The specifications for the HABS-like package follow:

- **Photographs:** Photographic documentation will focus on the historical resources/features slated for demolition, with overview and context photographs for the Campus and adjacent setting. Photographs will be taken of interior and exterior features of the buildings using a professional-quality single lens reflex (SLR) digital camera with a minimum resolution of 10 megapixels. Photographs will include context views, elevations/exteriors, architectural details, overall interiors, and interior details (if warranted). Digital photographs will be printed in black and white on archival film paper and also provided in electronic format.
- **Descriptive and Historic Narrative:** The historian or architectural historian will prepare descriptive and historic narrative of the historical resources/features slated for demolition. Physical descriptions will detail each resource, elevation by elevation, with accompanying photographs, and information on how the resource fits within the broader Campus during its period of significance. The historic narrative will include available information on the Campus design, history, architect/contractor/designer as appropriate, area history, and historic context. In addition, the narrative will include a methodology section specifying the name of researcher, date of research, and sources/archives visited, as well as a bibliography. Within the written history, statements shall be footnoted as to their sources, where appropriate.
- **Historic Documentation Package Submittal:** The draft package will be assembled by the historian or architectural historian and submitted to LAUSD for review and comment. After final approval, one hard-copy set of the package will be prepared as follows: Photographs will be individually labeled and stored in individual acid-free sleeves. The remaining components of the historic documentation package (site map, photo index, historic narrative, and additional data) will be printed on archival bond, acid-free paper.

Upon completion of the descriptive and historic narrative, all materials will be compiled in electronic format and presented to LAUSD for review and approval. Upon approval, one hard-copy version of the historic documentation package will be prepared and submitted to LAUSD. The historian or architectural historian shall offer a hardcopy package and compiled, electronic version of the final package to the Los Angeles Public Library (Central Library), Los Angeles Historical Society, and the South Central Coastal Information Center, to make available to researchers.

SC-CUL-5: LAUSD, consistent with Education Code Section 17540, shall offer to sell any useful features of the school building (e.g., the school bell, chalkboards, lockers) that do not contain hazardous materials for use or display, if features are not retained by LAUSD for reuse or display.

SC-CUL-6: LAUSD, consistent with Education Code Section 17545, shall offer for sale any remaining functional and defining features and building materials from the buildings. These materials could include doors, windows, siding, stones, lighting, doorknobs, hinges, cabinets, and appliances, among others. They shall be made available to the public for sale and reuse, if features are not retained by LAUSD for reuse or display.

SC-CUL-7: LAUSD shall retain a qualified archaeologist to be available on-call. The qualified archaeologist shall meet the Secretary of the Interior's Professional Qualifications Standards (48 Federal Register 44738–39).

SC-CUL-8: The contractor shall halt construction activities in the immediate area and notify the LAUSD. LAUSD shall retain a qualified archeologist to make an immediate evaluation of significance and appropriate treatment of the resource. To complete this assessment, the qualified archeologist will be afforded the necessary time to recover, analyze, and curate the find. The qualified archeologist shall recommend the extent of archeological monitoring necessary to ensure the protection of any other resources that may be in the area. Construction activities may continue on other parts of the building site while evaluation and treatment of historical or unique archaeological resources takes place.

SC-CUL-9: LAUSD shall implement an archaeological monitoring program for construction activities at a site prepared by a qualified archaeologist under the following conditions: (1) when a Phase I Site Investigation shows a strong possibility that unique archeological resources are buried on the site; and/or (2) when unique architectural resources have been identified on a site, but LAUSD does not implement a Phase III Data Recovery/Mitigation Program because the resources can be recovered through the archaeological monitoring program.

The Project site has a strong possibility of containing subsurface archaeological materials that could qualify as historical resources or unique archaeological resources, and these resources could be impacted by construction. Given this, per condition (1) of SC-CUL-9, an archaeological monitoring program shall be implemented during Project-related ground disturbing activity.

SC-CUL-10: If evidence of prehistoric or historic cultural resources is uncovered, all work shall stop within a 30-foot radius of the discovery. Work shall not continue until the discovery has been evaluated by a qualified archaeologist. The qualified archaeologist shall assess the find(s) and, if it is determined to be of value, shall draft a monitoring program and oversee the remainder of the grading program. Should evidence of prehistoric or historic cultural resources be found the archaeologist shall monitor all ground-disturbing activities related to the proposed Project. Any significant archaeological resources found shall be preserved as determined necessary by the archaeologist and offered to a local museum or repository willing to accept the resource. Any resulting reports shall also be forwarded to the South Central Coastal Information Center at the California State University, Fullerton.

SC-CUL-11: Cultural resources sensitivity training shall be conducted by a qualified archaeologist for all construction workers involved in moving soil or working near soil disturbance. This training shall review the types of archaeological resources that might be found, along with laws for the protection of resources.

SC-CUL-12: If archeological resources qualifying as unique archaeological resources are discovered and LAUSD determines not to avoid them by abandoning the site or redesigning the Project, LAUSD will determine whether it is feasible to prepare and implement a Phase III Data Recovery/Mitigation Program. A Phase III Data Recovery/Mitigation Program would be designed by the Qualified Archaeologist to recover a statistically valid sample of the archaeological remains and to document the site

to a level where the impacts can be determined to be less than significant. All documentation will be prepared in the standard format of the ARMR Guidelines, as prepared by the OHP. Once a Phase III Data Recovery/Mitigation Program is completed, an archaeological monitor will be present on site to oversee the grading, demolition activities, and/or initial construction activities to ensure that construction proceeds in accordance with the adopted Phase III Data Recovery/Mitigation Program. The extent of the Phase III Data Recovery/Mitigation Program and the extent and duration of the archaeological monitoring program depend on site-specific factors.

SC-CUL-13: If evidence of Native American resources is uncovered during construction, then all work shall stop within a 30-foot radius of the discovery. Work shall not continue until the discovery has been evaluated by a qualified archaeologist and the local Native American representative has been contacted and consulted to assist in the accurate recordation and recovery of the resources.

SC-N-8: LAUSD shall meet with the construction contractor to discuss alternative methods of demolition and construction for activities within 25 feet of a historic building to reduce vibration impacts. During the preconstruction meeting, the construction contractor shall identify demolition methods not involving vibration-intensive construction equipment or activities. For example: sawing into sections that can be loaded onto trucks results in lower vibration levels than demolition by hydraulic hammers.

- Prior to construction activities, the construction contractor shall inspect and report on the current foundation and structural condition of the historic building.
- The construction contractor shall implement alternative methods identified in the preconstruction meeting during demolition, excavation, and construction for work done within 25 feet of the historic building.
- The construction contractor shall avoid use of vibratory rollers and packers adjacent to a historic building.
- During demolition the construction contractor shall not phase any ground-impacting operations near a historic building to occur at the same time as any ground impacting operation associated with demolition and construction of a new building.

During demolition and construction, if any vibration levels cause cosmetic or structural damage to a historic building the District shall issue “stop-work” orders to the construction contractor immediately to prevent further damage. Work shall not restart until the building is stabilized and/or preventive measures to relieve further damage to the building are implemented.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Implementation of SC-CUL-1 through SC-CUL-13 and SC-N-8 would ensure that impacts would be less than significant.

Archaeological Resources

Impact 3.2-2: The Project could cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

No archaeological resources were identified within the Project site, and the Project would not result in an impact to known archaeological resources. However, there is a potential for subsurface archaeological deposits that could be encountered during ground disturbing activity. Archival research indicates that, prior to the construction of the school, several portions of the Project site were developed with former family dwellings as early as 1921. Further, review of the geotechnical report revealed that fill soil materials are located within the Project site from just below the asphalt down to a depth of 16.5 feet below grade. Research conducted for a previous ESA project (located in the general vicinity of the Project site) also indicated that buried features and artifacts were found within soil materials classified as fill similar to the Project site. Based on this, there is potential for the Project site to preserve historic-period archaeological resources (associated with the former family dwellings) even in fill soils under the current foundations of the school buildings, landscaping, and hardscape.

Since the Project includes ground disturbance, previously undocumented archaeological resources could be encountered during construction. If any such resources were found to be significant, the proposed Project could result in a significant impact to archaeological resources pursuant to Section 15064.5. The Project requires compliance with SC-CUL-7 through SC-CUL-13 in order to reduce impacts to less than significant. These conditions include retention of an on-call qualified archaeologist, implementation of an archaeological resources monitoring program, halting and re-directing work in the event of a discovery until it is evaluated for significance, cultural resources sensitivity training, and Phase III Data Recovery/Mitigation Program in the event that a significant resource is discovered and cannot be avoided. After implementation of these conditions, potential impacts related to archaeological resources would be reduced. No mitigation is required. Therefore, impacts associated with archaeological resources would be less than significant.

Standard Conditions

LAUSD Standard Conditions of approval SC-CUL-7 through SC-CUL-13 would be implemented as part of the Project.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Less Than Significant

Paleontological Resources

Impact 3.5-3: The Project could directly, or indirectly, destroy a unique paleontological resource, or site, or unique geologic feature.

No paleontological resources were identified within the Project site. However, background research conducted for the Project indicates that the proposed Project is underlain by the Valmonte Diatomite Member of the Monterey Formation in the eastern Project site and the Altamira Shale Member of the Monterey Formation in the western Project site. Both of these units have a strong record of fossil preservation, as recorded in the scientific literature review, as well as multiple LACM fossil localities in the San Pedro area. Therefore, these units are assigned **high paleontological sensitivity.** Ground-disturbing activities for the proposed Project could therefore result in a significant impact to unique paleontological resources under CEQA. As such, SC-CUL-14 and the associated mitigation measures CUL-1 through -3 would be incorporated to ensure that impacts remain at levels that are less than significant. Therefore, impacts associated with paleontological resources would be less than significant with mitigation.

Significance Determination: Potentially Significant

Standard Condition

LAUSD Standard Condition of approval SC-CUL-14 would be implemented as part of the Project.

> **SC-CUL-14:** A qualified paleontologist meeting the Society of Vertebrate Paleontology (SVP) Standards (SVP, 2010) (Qualified Paleontologist) shall be retained by LAUSD prior to the approval of demolition or grading permits. The Qualified Paleontologist shall provide technical and compliance oversight of all work as it relates to paleontological resources, shall attend the Project kick-off meeting and Project progress meetings on a regular basis, and shall report to the site in the event potential paleontological resources are encountered.

Mitigation Measures

Implementation of the following mitigation measures are required:

> **CUL-1:** The Qualified Paleontologist shall conduct the initial construction worker paleontological resources sensitivity training prior to the start of ground disturbing activities (including vegetation removal, pavement removal, etc.). In the event construction crews are phased, additional trainings shall be conducted for new construction personnel. Subsequent training sessions may be provided by a District approved representative or in a video format. The content of the training materials provided by a District approved representative or in a video shall require approval by the Qualified Paleontologist before being used in a training session. The training session shall focus on the recognition of the types of paleontological resources that could be encountered within the Project site and the procedures to be followed if they are found. Documentation shall be retained demonstrating that all construction personnel attended the training.

CUL-2: Paleontological monitoring of earth-moving activities in previously undisturbed sediments (both the Valmonte Diatomite and the Altamira Shale) shall be conducted full-time by a qualified paleontological monitor (SVP, 2010) under the supervision of the Qualified Paleontologist. Previous geotechnical studies of the site by Group Delta Consultants, Inc. (2016) identified depths of fill at boreholes across the site, which can be used as a guide for identifying sediments that have been previously disturbed. Monitors shall have the authority to temporarily halt or divert work away from exposed fossils in order to recover the fossil specimens. Any significant fossils collected during Project-related excavations shall be prepared to the point of identification and curated into an accredited repository with retrievable storage. Monitors shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The Qualified Paleontologist shall prepare a final monitoring and mitigation report to document the results of the monitoring effort.

CUL-3: If construction or other Project personnel discover any potential fossils during construction, regardless of the depth of work or location, work at the discovery location shall cease in a 50-foot radius of the discovery until the Qualified Paleontologist has assessed the discovery and made recommendations as to the appropriate treatment. If the find is deemed significant, it should be salvaged following the standards of the SVP (SVP, 2010) and curated with a certified repository.

Significance after Mitigation: Implementation of SC-CUL-14 and the associated mitigation measures CUL-1 through -3 would ensure that impacts would be less than significant.

Human Remains

Impact 3.5-4: The Project could disturb any human remains, including those interred outside of dedicated cemeteries.

While no known human remains have been identified in the Project site as a result of the cultural resources assessment for the Project, there is a possibility that ground-disturbing activities could encounter previously undocumented human remains. In the unexpected event that human remains are unearthed during construction activities, impacts would be potentially significant. If human remains are encountered, the District shall halt work in the vicinity (within 100 feet) of the discovery and contact the Los Angeles County Coroner in accordance with PRC Section 5097.98 and Health and Safety Code Section 7050.5. If the County Coroner determines that the remains are Native American, the NAHC will be notified in accordance with Health and Safety Code Section 7050.5, subdivision (c), and PRC Section 5097.98 (as amended by AB 2641). The NAHC will designate an MLD for the remains per PRC Section 5097.98. Until the landowner has conferred with the MLD, the contractor shall ensure that the immediate vicinity where the discovery occurred is not disturbed by further activity, is adequately protected according to generally accepted cultural, or archaeological, standards, or practices, and that further activities take into account the possibility of multiple burials. As described above, in the event that human remains are encountered, the District would comply with State Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98. Therefore, impacts related to the discovery of human remains would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Less Than Significant

3.2.6 Cumulative Impact Analysis

Historical and Archaeological Resources

As defined in Section 15355, a cumulative impact consists of an impact which is created as a result of the combination of the Project evaluated in the EIR together with other projects causing related impacts. A project would have a cumulatively considerable impact on cultural resources if it contributes to the cumulative loss of significant historical or archaeological resources. The cumulative context for this Project would be this and any future projects on the Campus that could significantly impact historic resources. Following this Project, there are no known or reasonably foreseeable projects identified for this Campus. It would be anticipated that minor maintenance activities may occur on the Campus following construction however, no other projects of the same type, or scale, are planned for the Campus at this time.

As the proposed Project largely complies with the SOI Standards for Rehabilitation, it would have a less-than-significant impact on historical resources (i.e., the Historic District) and, after Project completion the San Pedro HS Historic District would remain eligible for listing in the National Register or California Register. The Project would not have a cumulatively considerable impact to historic resources.

As the service area continues to develop with projected growth, new residential, commercial, and industrial developments would occur. The Project vicinity contains a significant paleontological and geological record that, in many cases, has not been well documented or recorded. Thus, there is the potential for ongoing and future development projects in the vicinity to destroy known or unknown paleontological resource sites or sites with unique geologic features. Future development assumed as part of the projected growth in the San Pedro Community Plan area, includes redevelopment within the City of Los Angeles. Development of the Project would contribute to cumulative impacts on archaeological resources if the Project and other projects in the area were to adversely affect such resources.

Past urban development that has occurred in the area may have resulted in damage and destruction of archaeological resources. For this reason, the cumulative effects of development to archaeological resources are considered significant. However, CEQA requires that development projects identify the potential for known archaeological resource impacts and further requires that those impacts are mitigated (CEQA § 21083.2 and CEQA *Guidelines* § 15064.5). While there exists the potential to encounter previously unrecorded archaeological resources, mitigation measures are typically included in environmental documents to prescribe what must occur in the event of an unanticipated discovery to reduce impacts to a less-than-significant level.

As discussed in Impact 3.2-2, no archaeological resources have been identified within the Project site. However, Project-related ground disturbing activities have the potential to impact previously

unidentified archaeological resources that could qualify as unique archaeological resources pursuant to CEQA. While there is the potential for impacts to unknown archaeological resources, such as those that might be discovered during ground-disturbing activities during Project construction, compliance with SC-CUL-7 through SC-CUL-13, would ensure that impacts are reduced to a less-than-significant level. These conditions require the District to halt work if any potential resources are discovered during construction. If it is determined that an archaeological resource may be present within the Project site, the District is required to retain the services of a qualified archaeological consultant to evaluate the find. Implementation of these conditions would effectively avoid damage to, or loss of, resources, and little to no residual impact would remain after implementation. With implementation of these standard conditions, Project impacts on historical and archaeological resources would not be cumulatively considerable. The Project would not have a significant cumulative impact associated with historical and archaeological resources. Therefore, the project's cumulative impact related to historical and archaeological resources would be less than significant.

Standard Conditions

LAUSD Standard Conditions of approval SC-CUL-1 through SC-CUL-13 and SC-N-8 would be implemented as part of the Project.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Less Than Significant

Paleontological Resources

The Project has the potential to disturb geological units that are conducive to retaining paleontological resources in the Monterey Formation (Valmonte Diatomite and Altamira Shale members). As future cumulative development occurs in the program area, there is a potential that future growth could require excavation activities. Generally, projects with the potential for substantial excavation would be subject to environmental review. Because of the potential for significant impacts on paleontological resources resulting from the Project, SC-CUL-14 and mitigation measures CUL-1 through -4) are required. Implementation of these measures would reduce the potential for adverse effects on fossil resources individually and cumulatively; and would preserve and maximize the potential of these resources to contribute to the body of scientific knowledge. Therefore, Project impacts on paleontological resources would not be cumulatively considerable.

Significance Determination: Potentially Significant

Standard Condition

LAUSD Standard Condition of approval SC-CUL-14 would be implemented as part of the Project.

Mitigation Measures

Implementation of mitigation measures CUL-1 through CUL-3 are required:

Significance after Mitigation: Implementation of SC-CUL-14 and the associated mitigation measures CUL-1 through -4 would ensure that impacts would be less than significant.

Human Remains

No known cemeteries, or other burial places, are known to exist within the Project site and the proposed Project is unlikely to disturb human remains. However, because the proposed Project would involve ground disturbing activities, it is possible that such actions could unearth, expose, or disturb previously unknown human remains. In the event that human remains are encountered, the District would comply with State Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98 resulting in a less than significant impact. Impacts would be less than significant. It is assumed that any other projects in the geographic scope of analysis would also follow state law. Therefore, Project impacts on human remains would not be cumulatively considerable.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Les Than Significant

3.2.7 References

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3.3 Energy

This section evaluates potential impacts related to energy use by construction and operation of the proposed Project. The analysis addresses the potential for wasteful, inefficient, and unnecessary consumption of energy and potential conflicts with, or obstruction of, a state, or local, plan for renewable energy, or energy efficiency.

Section 21100(b) of the state CEQA Guidelines requires that an EIR include a detailed statement setting forth mitigation measures proposed to minimize a Project's significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. Appendix F of the state CEQA Guidelines states that, in order to ensure that energy implications are considered in Project decisions, the potential energy implications of a Project shall be considered in an EIR, to the extent relevant and applicable to the Project. Appendix F further states that a Project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable, throughout this document.

In accordance with Appendix F of the state CEQA Guidelines, which requires an EIR to include a discussion of the potential energy impacts of a proposed Project with an emphasis on avoiding, or reducing, inefficient, wasteful, and unnecessary consumption of energy, this EIR includes relevant information and analyses that address the energy implications of the Project. This section represents a summary of the Project's anticipated energy needs, impacts, and conservation measures. Information found herein, as well as other aspects of the Project's energy implications, are discussed in greater detail elsewhere in this EIR, including Section 3.4, Greenhouse Gas Emissions of this Draft EIR.

3.3.1 Environmental Setting

Existing Conditions

Electricity

The Los Angeles Department of Water and Power (LADWP) is the utility provider for the City of Los Angeles (City). The annual electricity sale to customers for the 2015-2016 fiscal year was approximately 23,616 million kilowatt hours (kWh) (LADWP, 2016).

Natural Gas

Southern California Gas Company (SoCalGas) is responsible for providing natural gas supply to end-users in the City and is regulated by the California Public Utilities Commission and other state agencies. The annual natural gas sale to customers in 2015 was approximately 304,290 million kilo British thermal units (kBtu) (Sempra, 2016).

Transportation

According to the California Energy Commission, transportation accounts for nearly 37 percent of California's total energy consumption (CEC, 2016). Based on available fuel consumption data from the United States Energy Information Administration (USEIA), in 2015, California consumed a total of 342,523 thousand barrels of gasoline for transportation, which is equivalent

to a total annual consumption of approximately 14.4 billion gallons by the transportation sector (EIA, 2015). For diesel, California consumed a total of 80,487 thousand barrels for transportation, which is equivalent to a total annual consumption of approximately 3.4 billion gallons by the transportation sector (EIA, 2016). The existing San Pedro High School Campus generates transportation energy demand from vehicles traveling to and from the Site. Transportation fuels, primarily gasoline and diesel, would be provided by local, or regional, suppliers and vendors. According to the California Air Resources Board on-road vehicle emissions factor (EMFAC2014) model, the average fuel economy for the fleet-wide mix of vehicles operating in the South Coast Air Basin region is approximately 20.17 miles per gallon for gasoline-fueled vehicles and approximately 7.81 miles per gallon for diesel-fueled vehicles. Gasoline-fueled vehicles account for approximately 96 percent of the total vehicles and diesel-fueled vehicles account for approximately 3.6 percent of the total vehicles. Electric vehicles account for approximately 0.3 percent of the total vehicles.

The vehicles miles traveled (VMT) for the school was not estimated as part of the air quality and greenhouse gas (GHG) assessment conducted for the Project because the existing vehicle miles traveled would not change with the upgrade and modernization of the Campus.

3.6.2 Regulatory Setting

Federal

Fuel efficiency standards for medium- and heavy-duty trucks have been jointly developed by the United States Environmental Protection Agency (USEPA) and the National Highway Traffic Safety Administration (NHTSA). The Phase 1 standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018 and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type (US EPA, 2011). The USEPA and NHTSA are in the process of considering adoption of the Phase 2 standards, which would cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type (US EPA, 2016).

State

Senate Bill 1389

Senate Bill (SB) 1389, codified in Public Resources Code Sections 25300-25323, requires the California Energy Commission (CEC) to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (Public Resources Code Section 25301[a]). The 2015 Integrated Energy Policy Report provides the results of the CEC's assessments of a variety of energy issues facing California including energy efficiency, strategies related to data for improved decisions in the Existing Buildings Energy Efficiency Action Plan, building energy efficiency standards, the impact of drought on California's energy system, achieving 50 percent renewables by 2030, the California Energy Demand Forecast, the Natural Gas Outlook, the

Transportation Energy Demand Forecast, Alternative and Renewable Fuel and Vehicle Technology Program benefits updates, update on electricity infrastructure in Southern California, an update on trends in California's sources of crude oil, an update on California's nuclear plants, and other energy issues.

Senate Bill 1078 (Chapter 513, Statutes of 2002) and Senate Bill 107 (Chapter 464, Statutes of 2006) and Executive Order S-14-08

The state of California has adopted standards to increase the percentage that retail sellers of electricity, including investor-owned utilities and community choice aggregators, must provide from renewable sources. The standards are referred to as the Renewables Portfolio Standard and require 33 percent by 2020 and 50 percent by 2040. Refer to Section 3.4, Greenhouse Gas Emissions, for details regarding this regulation.

Title 24, Building Standards Code and California Green Building Standards Code

The CEC first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods. The California Building Standards Commission (CBSC) adopted Part 11 of the Title 24 Building Energy Efficiency Standards, referred to as the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices. Although the CALGreen Code was adopted as part of the state's efforts to reduce GHG emissions, the standards have co-benefits of reducing energy consumption from residential and nonresidential buildings subject to the standard. Refer to Section 3.4, Greenhouse Gas Emissions, for additional details regarding these standards.

California Assembly Bill No. 1493 (Chapter 200, Statutes of 2002)

In response to the transportation sector accounting for more than half of California's carbon dioxide (CO_2) emissions, Assembly Bill (AB) 1493 (Chapter 200, Statutes of 2002), enacted on July 22, 2002, required CARB to set GHG emission standards for passenger vehicles, light duty trucks, and other vehicles whose primary use is non-commercial personal transportation manufactured in and after 2009.

Senate Bill 375 (Chapter 728, Statutes of 2008)

SB 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle greenhouse gas emissions and was adopted by the State on September 30, 2008. Under SB 375, the target must be incorporated within that region's Regional Transportation Plan (RTP), which is used for long-term transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides the local land use plans and policies (e.g., general plan) are

not required to be consistent with either the RTP, or SCS. Refer to Section 3.4, Greenhouse Gas Emissions, for details regarding these standards.

California Health and Safety Code, Division 25.5 – California Global Warming Solutions Act of 2006

In 2006, the California State Legislature adopted AB 32 (codified in the California HSC, Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. Under HSC Division 25.5, CARB has the primary responsibility for reducing the state's GHG emissions, however, it also tasked the CEC and the California Public Utilities Commission (CPUC) with providing information, analysis, and recommendations to CARB regarding strategies to reduce GHG emissions in the energy sector.

In 2016, the California State Legislature adopted SB 32 and its companion bill AB 197; both were signed by Governor Brown. SB 32 and AB 197 amends HSC Division 25.5 and establishes a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and includes provisions to ensure that the benefits of state climate policies reach into disadvantaged communities. Refer to Section 3.4, Greenhouse Gas Emissions, for details regarding these regulations.

CARB Heavy-Duty On-Road and Off-Road Vehicle Regulations

In 2004, the CARB adopted an Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling in order to reduce public exposure to diesel particulate matter emissions (Title 13 California Code of Regulations [CCR] Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

In addition to limiting exhaust from idling trucks, CARB also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower (hp) such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-Road Diesel-Fueled Fleets regulation adopted by CARB on July 26, 2007 aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower, of older, dirtier engines with newer emission controlled models (13 CCR Section 2449). The compliance schedule requires full implementation by 2023 in all equipment for large and medium fleets and by 2028 for small fleets. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation has shown an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines.

Local

City of Los Angeles

The City of Los Angeles has incorporated the CALGreen Standards Code, with amendments in its 2017 Los Angeles Green Building Code. The City's ordinance requires applicable projects to comply with specified provisions to reduce energy consumption.

Los Angeles Unified School District Program EIR

The SUP PEIR includes Standard Conditions (SC) for minimizing impacts related to energy demand for future projects implemented under the SUP. Applicable SCs related to energy impacts associated with the proposed Project are provided in **Table 3.3-1***, Standard Conditions of* Approval. Projects implemented under the SUP are anticipated to have less than significant and potentially significant impacts related to energy demand within the LAUSD service area with the incorporation of SCs. The Project-specific analysis provided below determined that implementation of the proposed Project would have less-than-significant impacts related to energy demand with the incorporation of SCs.

TABLE 3.3-1
STANDARD CONDITIONS OF APPROVAL

Applicable SCs	Description
USS-0	School Design Guide & Specification 01340, Construction & Demolition Waste Management. Construction and demolition waste shall be recycled to the maximum extent feasible. LAUSD has established a minimum non-hazardous construction and demolition debris recycling requirement of 75% by weight as defined in Specification 01340, Construction & Demolition Waste Management.
SC-AQ-5	LAUSD shall encourage ride-sharing programs for students and teachers as well as maintain fleet vehicles such as school buses, maintenance vehicles, and other service fleet vehicles in good condition in order to prevent significant increases in air pollutant emissions created by operation of a new school.
SC-GHG-1	During school operation, LAUSD shall perform regular preventative maintenance on pumps, valves, piping and tanks to minimize water loss.
SC-GHG-2	LAUSD shall utilize automatic sprinklers set to irrigate landscaping during the early morning hours to reduce water loss from evaporation.
SC-GHG-3	LAUSD shall reset automatic sprinkler timers to water less during cooler months and rainy season.
SC-GHG-4	LAUSD shall develop a water budget for landscape (both non-recreational and recreational) and ornamental water use to conform to the local water efficient landscape ordinance. If no local ordinance is applicable, then use the landscape and ornamental budget outlined by the California Department of Water Resources.
SC-GHG-5	LAUSD shall ensure that the time dependent valued energy of the proposed Project design is at least 10 percent, with a goal of 20 percent less than a standard design that is in minimum compliance with the California Title 24, Part 6 energy efficiency standards that are in force at the time the Project is submitted to the Division of the State Architect..

3.3.3 Thresholds of Significance

Appendix F of the State CEQA Guidelines states that the evaluation of energy use should be evaluated in an EIR and provides guidance for consideration in this evaluation. While Appendix G of the State CEQA Guidelines does not provide specific thresholds for the evaluation of impacts related to energy resources, the Office of Planning and Research (OPR) released

proposed thresholds in November 2017. Pursuant to the proposed thresholds, the Project would result in a significant impact related to energy if it would:

- Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during Project construction or operation.
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

3.6.4 Methodology

The evaluation of the Project's potential impacts related to energy usage that may result from the construction and long-term operations of the Project has been conducted as described below. Calculations are provided in Appendix B.

Construction

The Project would be constructed in three phases with overlapping development activities. Construction is assumed to begin in 2020, pending Project approval and EIR certification, with completion of construction of the Project anticipated by the end of 2022. Construction energy consumption would result primarily from transportation fuels (e.g., diesel and gasoline) used for haul trucks, heavy-duty construction equipment, and construction workers traveling to and from the Site. Construction activities can vary substantially from day to day, depending on the specific type of construction activity and the number of workers and vendors traveling to the Site. This analysis considers these factors and provides the estimated maximum construction energy consumption for the purposes of evaluating the associated impacts on energy resources.

Energy use during construction is forecasted by assuming a conservative estimate of construction activities (i.e., maximum daily equipment usage levels). The energy usage required for Project construction has been estimated based on the number and type of construction equipment that would be used during Project construction, the extent that various equipment is utilized in terms of equipment operating hours, or miles driven, and the estimated duration of construction activities. Energy for construction worker commuting trips has been estimated based on the predicted number of workers for the various phases of construction and the estimated VMT.

The construction equipment would likely be diesel-fueled (with the exception of construction worker commute vehicles, which would primarily be gasoline-fueled). For the purposes of this assessment, it is conservatively assumed heavy-duty construction equipment and haul trucks would be diesel-fueled. This represents a worst-case scenario intended to represent the maximum potential energy use during construction. The estimated fuel economy for heavy-duty construction equipment is based on fuel consumption factors from the CARB off-road vehicle (OFFROAD) emissions model, which is a state-approved model for estimating emissions from off-road heavy-duty equipment. The estimated fuel economy for haul trucks and worker commute vehicles is based on fuel consumption factors from the CARB EMFAC emissions model, which is a state-approved model for estimating emissions for on-road vehicles and trucks. Both OFFROAD and EMFAC are incorporated into the California Emissions Estimator Model (CalEEMod), which is a state-approved emissions model used for the Project's air quality and GHG emissions assessment. Therefore, this energy assessment is consistent with the modeling

approach used for other environmental analyses in the EIR and consistent with general CEQA standards.

Operation

Operation of the Project would require energy in the form of electricity and natural gas for building heating, cooling, lighting, water demand and wastewater treatment, consumer electronics, and other energy needs, and transportation-fuels, primarily gasoline, for vehicles traveling to and from the Project Site.

The proposed Project would modify and renovate existing school facilities and the intensity of Project operations would remain the same. The Project would not generate any new vehicle trips and facilities would be upgraded to replace old, energy-inefficient systems. Therefore, a qualitative analysis of operational energy needs is included in this analysis

Project Sustainability Features

The Project would meet CALGreen Code as adopted and amended by the City of Los Angeles through the incorporation of green building techniques and other sustainability features, including those within the City of Los Angeles Green Building Code, where applicable. Additionally, the Project would be consistent with SCs, listed in Table 3.3-1, implemented by the Program EIR.

3.3.5 Impact Analysis

Energy Demand

Impact 3.3-1: The Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during Project construction, or operation.

Construction Emissions

Electricity

Electrical power would be consumed to construct the Project. The demand would be supplied from existing electrical services at the Project Site. Overall, demolition and construction activities would require minimal electricity consumption and would not be expected to have any adverse impact on available electricity supplies and infrastructure. The City's noise ordinance generally restricts construction during nighttime hours (see Los Angeles Municipal Code (LAMC) Section 41.40), which would minimize the need for nighttime lighting. Therefore, impacts on electricity supply and infrastructure associated with short-term construction activities would be less than significant.

Natural Gas

Natural gas is not expected to be consumed in any substantial quantities during construction of the Project. Therefore, Project impacts on energy and natural gas associated with construction activities would be less than significant.

Transportation Energy

The estimated fuel usage for off-road equipment is based on the number and type of equipment that would be used during construction activities, hour usage estimates, the total duration of construction activities, and hourly equipment fuel consumption factors from the OFFROAD model. On-road equipment would include trucks to haul material to and from the Project Site, vendor trucks to deliver supplies necessary for Project construction, and fuel used for employee commute trips. A summary of the annual fuel consumption during construction of the Project is provided in **Table 3.3-2**, *Project Construction Fuel Usage*. As shown in Table 3.3-2, on- and off-road vehicles would consume an estimated annual average of 58,717 gallons of diesel fuel and 66,057 gallons of gasoline for each year of Project construction. Compliance with the anti-idling regulation and the use of cleaner construction equipment would reduce the Project's annual average diesel fuel usage.

TABLE 3.3-2
PROJECT CONSTRUCTION FUEL USAGE

Source	Gallons of Diesel Fuel Per Year	Gallons of Gasoline Fuel Per Year
Construction:		
Heavy-Duty Construction Equipment	35,332	—
Haul Trucks	3,375	—
Vendor Trucks	20,010	—
Worker Trips	—	66,057
Annual Average (assuming a 36 Month construction duration)	**58,717**	**66,057**

SOURCE: ESA, 2017.

Construction of the Project would utilize fuel efficient equipment consistent with state and federal regulations, and would comply with State measures to reduce the inefficient, wasteful, and unnecessary consumption of energy. While these regulations are intended to reduce construction emissions, compliance with anti-idling and emissions regulations would also result in energy savings from the use of more fuel-efficient engines.

In addition, the Project would implement a construction waste management plan, pursuant to Program EIR SC USS-0, to divert mixed construction and demolition debris to City-certified construction and demolition waste processors. Implementation of the construction waste management plan would reduce truck trips to landfills, which are typically located some distance away from City centers, and increase the amount of waste recovered (e.g., recycled, reused, etc.) at material recovery facilities, thereby further reducing transportation fuel consumption.

Based on the available data, construction would utilize energy for necessary on-site activities and to transport construction materials and demolition debris to and from the Project Site. As discussed above, idling restrictions and the use of cleaner, energy-efficient equipment would result in less fuel combustion and energy consumption and thus minimize the Project's construction-related energy use. Therefore, construction of the Project would not result in the

wasteful, inefficient, and unnecessary consumption of energy and impacts would be less than significant.

Operation

Electricity

Operational electricity demand includes electricity required for water supply, conveyance, distribution, and treatment. The proposed Project would replace, or upgrade, facilities on the San Pedro HS Campus, resulting in the upgrade, or replacement, of old, energy-inefficient structures that would use less electricity and water. The Project would comply with the applicable provisions of Title 24 and the CALGreen Code. Additionally, the Project would be subject to Program EIR SCs. Therefore, operational demand for electricity resources including for water supply, conveyance, distribution, and treatment would decrease as a result of the proposed Project. As such, the Project would minimize energy demand. Therefore, operation of the Project would not result in the wasteful, inefficient, or unnecessary, consumption of electricity.

Natural Gas

Project operation would require natural gas resources for heating. The proposed Project would replace, or upgrade, facilities on the San Pedro HS Campus. As would be the case with electricity, the Project would comply with, or exceed, the applicable provisions of Title 24 and the CALGreen Code to minimize natural gas demand. Additionally, the Project would be subject to Program EIR SCs. As such, the Project would minimize natural gas demand. Therefore, operation of the Project would not result in the wasteful, inefficient, and unnecessary consumption of natural gas.

Transportation Energy

Project operation would require transportation energy such as gasoline. The proposed Project would replace, or upgrade, facilities on the San Pedro HS Campus. Implementation of the proposed improvements would not result in increases in student capacity, or staff. As such, no increases in transportation energy demand would occur. Therefore, operation of the Project would not result in the wasteful, inefficient, and unnecessary consumption of transportation fuel and impacts would be less than significant.

Project Consistency with State or Local Plans

Impact 3.3-2: The Project would not conflict with, or obstruct, a state or local plan for renewable energy or energy efficiency.

The Project would comply with applicable CARB regulations restricting the idling of heavy-duty diesel motor vehicles and governing the accelerated retrofitting, repowering, or replacement of heavy duty diesel on- and off-road equipment. CARB has adopted an Airborne Toxic Control Measure (ATCM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other toxic air contaminants. The measure prohibits diesel-fueled commercial vehicles greater than 10,000 pounds from idling for more than five minutes at any given time. While intended to reduce construction emissions, compliance with the

above anti-idling and emissions regulations would also result in energy savings from the use of more fuel efficient engines. According to the CARB staff report that was prepared at the time the anti-idling ATCM was being proposed for adoption in late 2004/early 2005, the regulation was estimated to reduce non-essential idling and associated emissions of diesel particulate matter and nitrogen oxide (NO_X) emissions by 64 and 78 percent respectively in analysis year 2009 (CARB 2004). These reductions in emissions are directly attributable to overall reduced idling times and the resultant reduced fuel consumption.

CARB has also adopted emission standards for off-road diesel construction equipment of greater than 25 hp. The emissions standards are referred to as "tiers," with Tier 4 being the most stringent (i.e., least polluting). The requirements are phased in, with full implementation for large and medium fleets by 2023 and for small fleets by 2028. The Project would accelerate the use of cleaner construction equipment by using mobile off-road construction equipment (wheeled, or tracked) that meets, at a minimum, the Tier 3 off-road emissions standards as specified in SC-AQ-4. Field testing by construction equipment manufacturers has shown that higher tier equipment results in lower fuel consumption. For example, Tier 4 interim engines have shown a 5 percent reduced fuel consumption compared to a Tier 3 engine (Cummins, 2009). Similar reductions in fuel consumption have been shown for Tier 3 engines compared to a Tier 2 engine (John Deere, 2006).

Development of the proposed Project would replace and modernize facilities at San Pedro HS, but it would not increase the number of students, or faculty, at the school and therefore, would not increase vehicular fuel use. Additionally, SUP-related Projects, including the proposed Project, would comply with the District's energy efficiency measures. LAUSD's School Design Guide requires construction contractors to reuse, recycle, and salvage non-hazardous materials generated during demolition and/or new construction, as materials recovery would minimize the need to produce and transport new materials, thereby reducing transportation energy demand from mobile sources (LAUSD, 2015). With respect to all SUP Projects, implementation of SCs GHG-1 through GHG-5 would ensure that the proposed Project would not conflict with applicable plans, policies, or regulations, adopted for the purpose of reducing GHG emissions and minimizing energy use. Therefore, with Project implementation and adherence to SCs GHG-1 through GHG-5 and compliance with Title 24, the Project would not conflict with plans, policies, or regulations adopted for the purpose of efficient energy use. Although the Project does not include a photovoltaic system, the roofs of the new buildings will be "solar ready" with conduit pathway and space for future photovoltaic arrays, and Project implementation would not conflict with state, or local, plans to increase renewable energy supply. Therefore, the Project would not conflict with any plans related to energy efficiency, or renewable energy, and impacts would be less than significant.

3.3.6 Cumulative Impact Analysis

Energy Demand

Electricity

Operation of the proposed Project and related projects would require the use of electricity. Like the proposed Project, other future development Projects would be expected to incorporate energy

conservation features, comply with applicable regulations including CALGreen and state energy standards under Title 24, and incorporate mitigation measures, as necessary. In addition to compliance with existing energy standards, the proposed Project consists of the upgrade and/or replacement of older, energy-inefficient structures on the San Pedro HS Campus, resulting in reduced electricity demand as compared to existing conditions. Therefore, the proposed Project would not cause wasteful, inefficient, or unnecessary, consumption of energy and would not be cumulatively considerable.

Natural Gas

Operation of the proposed Project and related projects would require the use of natural gas. Like the proposed Project, other future development projects would be expected to incorporate energy conservation features, comply with applicable regulations including CALGreen and state energy standards under Title 24, and incorporate mitigation measures, as necessary. In addition, the proposed Project consists of the upgrade and/or replacement of older, energy-inefficient structures on the San Pedro HS Campus, resulting in reduced electricity demand as compared to existing conditions. Therefore, the proposed Project would not cause wasteful, inefficient, or unnecessary, consumption of energy and would not be cumulatively considerable.

Transportation Energy

Construction fuel demand associated with the proposed Project and related projects would be expected to comply with CARB regulations related to idling, engine retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment. These measures would result in fuel savings from use of more fuel-efficient engines. Additionally, the proposed Project would utilize Tier 3 equipment at a minimum, which results in a five percent reduction in fuel consumption compared to Tier 2 engines (John Deere, 2006). Therefore, the proposed Project would not cause wasteful, inefficient, or unnecessary, consumption of transportation fuel during construction and would not be cumulatively considerable.

Operation of San Pedro HS and related projects would require transportation fuel. Although LAUSD and operators of related projects would not be in control of the year, make, and model of personal vehicles, a fuel efficiency of 54.4 mpg would be required by the year 2025 based on USEPA measurements. The Project consists of the replacement, or upgrade, of existing school facilities on the San Pedro HS Campus. Implementation of the proposed Project would not result in greater student capacity, or increased staff. Therefore, operations would not increase and the consumption of transportation energy would not increase. Therefore, the proposed Project would not result in the wasteful, inefficient, or unnecessary, consumption of transportation fuel during operation and would not be cumulatively considerable.

Project Consistency with State or Local Plans

Electricity

The geographic context for the cumulative analysis of electricity is LADWP's service area. Like the proposed Project, other future development projects would be expected to incorporate energy conservation features, comply with applicable regulations including CALGreen and state energy standards under Title 24, and incorporate mitigation measures, as necessary. Therefore, the

impacts related to consistency with state, or local, plans would not be cumulatively considerable, and thus would be less than significant.

Natural Gas

The geographic context for the cumulative analysis of natural gas consumption is the SoCalGas's service area. Like the proposed Project, other future development projects would be expected to incorporate energy conservation features, comply with applicable regulations including CALGreen and state energy standards in Title 24, and incorporate mitigation measures, as necessary. Therefore, the Project would not have a cumulatively considerable impact related to natural gas consumption and impacts would not be cumulatively considerable.

Transportation Energy

Buildout of the Project would not increase overall VMT in the region as the Project would not result in increased employment, or enrollment, at San Pedro HS. Therefore, the proposed Project would not conflict with state, or local, plans related to transportation and VMT and would not be cumulatively considerable.

3.3.7 References

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3.4 Greenhouse Gas Emissions

This section evaluates the potential for impacts related to greenhouse gas (GHG) emissions and global climate change resulting from implementation of the proposed Project. The existing setting is described along with the relevant regulatory background. Project impacts and mitigation measures, as necessary, are presented.

3.4.1 Environmental Setting

Climate Change Overview

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation and storms. Historical records indicate that global climate changes have occurred in the past due to natural phenomena; however, data indicates that the current global conditions differ from past climate changes in rate and magnitude. The current changes in global climate have been attributed to anthropogenic (human-caused) activities by the Intergovernmental Panel on Climate Change (IPCC) (IPCC, 2007). The term greenhouse gas (GHG) refers to gases that trap long-wave radiation or heat in the atmosphere, which heats the surface of the Earth. Without human intervention, the Earth maintains an approximate balance between the GHG emissions in the atmosphere and the storage of GHGs in the oceans and terrestrial ecosystems. GHGs are the result of both natural and anthropogenic activities. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions.

The Federal Government and State of California recognized that anthropogenic GHG emissions are contributing to changes in the global climate, and that such changes are having and will have adverse effects on the environment, the economy, and public health. While worldwide contributions of GHG emissions are expected to have widespread consequences, it is not possible to link particular changes to the environment of California, or elsewhere, to GHGs emitted from a particular source or location. In other words, emissions of GHGs have the potential to cause global impacts, rather than local impacts. Increased concentrations of GHGs in the Earth's atmosphere have been linked to global climate change and such conditions as rising surface temperatures, melting icebergs and snowpack, rising sea levels, and the increased frequency and magnitude of severe weather conditions. Existing climate change models also show that climate warming portends a variety of impacts on agriculture, including loss of microclimates that support specific crops, increased pressure from invasive weeds and diseases, and loss of productivity due to changes in water reliability and availability. In addition, rising temperatures and shifts in microclimates associated with global climate change are expected to increase the frequency and intensity of wildfires.

State law defines GHGs to include the following compounds: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).[1] The most common GHG that results from human activity is CO_2, which

[1] CEQA Guidelines Section 15364.5; Health and Safety Code, Section 38505(g).

represents 76 percent of total anthropogenic GHG emissions in the atmosphere (as of 2010 data) (IPCC, 2014), followed by CH_4 and N_2O. Scientists have established a Global Warming Potential (GWP) to gauge the potency of each GHG's ability to absorb and re-emit long-wave radiation. The GWP of a gas is determined using CO_2 as the reference gas with a GWP of 1 over 100 years. For example, a gas with a GWP of 10 is 10 times more potent than CO_2 over 100 years. The sum of each GHG multiplied by its associated GWP is referred to as carbon dioxide equivalents (CO_2e). The measurement unit CO_2e is used to report the combined potency of GHG emissions.

These GWP ratios are available from the IPCC. Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report (SAR). In 2007, the IPCC updated the GWP values based on the latest science available at the time in its Fourth Assessment Report (AR4). The updated GWPs in the IPCC AR4 have begun to be used in recent GHG emissions inventories. In 2013, the IPCC again updated the GWP values based on the latest science in its Fifth Assessment Report (AR5) (IPCC, 2013). However, United Nations Framework Convention on Climate Change (UNFCCC) reporting guidelines for national inventories require the use of GWP values from the IPCC Fourth Assessment Report (AR4). To comply with international reporting standards under the UNFCCC, official emission estimates for California and the U.S. are reported by the United States using AR4 GWP values, which have replaced the previously required use of IPCC Second Assessment Report (SAR) GWP values. Therefore, statewide and national GHG inventories have not yet updated their GWP values to the AR5 values, and they continue to use the AR4 GWPs. By applying the GWP ratios, Project-related CO_2e emissions can be tabulated in metric tons per year. Typically, the GWP ratio corresponding to the warming potential of CO_2 over a 100-year period is used as a baseline. Compounds that are regulated as GHGs are discussed below.

Carbon Dioxide (CO_2): CO_2 is the most abundant GHG in the atmosphere and is primarily generated from fossil fuel combustion from stationary and mobile sources. CO_2 is the reference gas (GWP of 1) for determining the GWPs of other GHGs.

Methane (CH_4): CH_4 is emitted from biogenic sources (i.e., resulting from the activity of living organisms), incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. The GWP of CH_4 is 21 in the IPCC SAR, 25 in the IPCC AR4, and 28 in the IPCC AR5.

Nitrous Oxide (N_2O): N_2O produced by human-related sources including agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of N_2O is 310 in the IPCC SAR, 298 in the IPCC AR4, and 265 in the IPCC AR5.

Hydrofluorocarbons (HFCs): HFCs are fluorinated compounds consisting of hydrogen, carbon, and fluorine. They are typically used as refrigerants in both stationary refrigeration and mobile air conditioning systems.

Perfluorocarbons (PFCs): PFCs are fluorinated compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semiconductor manufacturing.

Sulfur Hexafluoride (SF_6): SF_6 is a fluorinated compound consisting of sulfur and fluoride. It is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity.

The California Air Resources Board (CARB) compiles the State's GHG emissions inventory. The most updated inventory is referred to as the 2017 edition, which reports the State's GHG emissions inventory from calendar year 2015. Based on the 2015 GHG inventory data (i.e., the latest year for which data are available from CARB), California emitted 440.4 million metric tons of CO_2e ($MMTCO_2e$) including emissions resulting from imported electrical power (CARB, 2017c). Between 1990 and 2015, the population of California grew by approximately 9.3 million (from 29.8 to 39.1 million) (US Census, 2009; DOF, 2015a; DOF, 2015b). This represents an increase of approximately 31 percent from 1990 population levels. In addition, the California economy, measured as gross state product, grew from $773 billion in 1990 to $2.49 trillion in 2015 representing an increase of approximately 222 percent (just over three times the 1990 gross state product) (CA Leg, 2015). Despite the population and economic growth, California's net GHG emissions only grew by approximately 2.2 percent. According to CARB, the declining trend coupled with the state's GHG reduction programs (such as the Renewables Portfolio Standard, LCFS, vehicle efficiency standards, and declining caps under the Cap and Trade Program) demonstrate that California is on track to meet the 2020 GHG reduction target codified in California Health and Safety Code (HSC), Division 25.5, also known as The Global Warming Solutions Act of 2006 (AB 32) (CEC, 2006). **Table 3.4-1,** *State of California Greenhouse Gas Emissions,* identifies and quantifies statewide anthropogenic GHG emissions and sinks (e.g., carbon sequestration due to forest growth) in 1990 and 2015. As shown in the table, the transportation sector is the largest contributor to statewide GHG emissions at 37 percent in 2015.

Effects of Global Climate Change

The scientific community's understanding of the fundamental processes responsible for global climate change has improved over the past decade, and its predictive capabilities are advancing. However, there remain significant scientific uncertainties in, for example, predictions of local effects of climate change, occurrence, frequency, and magnitude of extreme weather events, 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 Earth's climate system and inability to accurately model it, the uncertainty surrounding climate change may never be completely eliminated. Nonetheless, the IPCC's *Fifth Assessment Report, Summary for Policy Makers* states that, "it is *extremely likely* that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in greenhouse gas concentrations and other anthropogenic forc[es [*sic*] together." (IPCC, 2014) A report from the National Academy of Sciences concluded that 97 to 98 percent of the climate researchers most actively publishing in the field support the tenets of the IPCC in that climate change is very likely caused by human (i.e., anthropogenic) activity (Anderegg, 2010). According to CARB, the potential impacts in California due to global climate change may include: loss in snow pack; sea level rise; more extreme heat days per year; more high ozone days; increasing large forest fires; more drought years; increased erosion of California's coastlines and sea water intrusion into the Sacramento and San Joaquin Deltas and associated levee systems; and increased pest infestation

(Cal EPA, 2006). Below is a summary of some of the potential effects that could be experienced in California as a result of global warming and climate change.

TABLE 3.4-1
STATE OF CALIFORNIA GREENHOUSE GAS EMISSIONS

Category	Total 1990 Emissions ($MMTCO_2e$)	Percent of Total 1990 Emissions	Total 2015 Emissions ($MMTCO_2e$)	Percent of Total 2014 Emissions
Transportation	150.7	35%	164.6	36%
Electric Power	110.6	26%	83.7	20%
Commercial	14.4	3%	12.8	4%
Residential	29.7	7%	23.2	5%
Industrial	103.0	24%	91.7	21%
Recycling and Waste[a]	–	–	8.7	2%
High GWP/Non-Specified[b]	1.3	<1%	19.1	4%
Agriculture/Forestry	23.6	6%	34.7	8%
Forestry Sinks	-6.7	–	–[c]	–
Net Total (IPCC SAR)	**426.6**	**100%**	–	–
Net Total (IPCC AR4) [d]	**431**	**100%**	**440.4**	**100%**

[a] Included in other categories for the 1990 emissions inventory.
[b] High GWP gases are not specifically called out in the 1990 emissions inventory.
[c] Forestry sinks was not calculated for 2014 pending a revised methodology under development.
[d] CARB revised the State's 1990 level GHG emissions using GWPs from the IPCC AR4.

SOURCES: CARB 2007; CARB, 2017b.

In 2009, the California Natural Resources Agency (CNRA) published the *California Climate Adaptation Strategy* as a response to the Governor's Executive Order S-13-2008 (CNRA, 2009). In 2014, the CNRA rebranded the first update of the 2009 adaptation strategy as the *Safeguarding California Plan* (CNRA, 2017). A 2017 update to *Safeguarding California* is now undergoing public review (CNRA, 2017). In 2016, the CNRA released *Safeguarding California: Implementation Action Plans* in accordance with Executive Order B-30-15, identifying a lead agency to lead adaptation efforts in each sector. *Safeguarding California* lists specific recommendations for state and local agencies to best adapt to the anticipated risks posed by a changing climate. In accordance with the 2009 *California Climate Adaptation Strategy*, the CEC was directed to develop a website on climate change scenarios and impacts that would be beneficial for local decision makers. The website, known as Cal-Adapt, became operational in 2011.[2] The information provided on the Cal-Adapt website represents a projection of potential future climate scenarios comprised of local average values for temperature, sea level rise, snowpack and other data representative of a variety of models and scenarios, including potential social and economic factors. According to the Cal-Adapt website, the portion of the state in

[2] The Cal-Adapt website address is: http://cal-adapt.org.

which the Project site is located could result in an average increase in temperature of approximately 2°F) by 2070-2090, compared to the baseline 1961-1990 period.

3.4.2 Regulatory Setting

Federal

The US EPA is responsible for implementing federal policy to address global climate change. The federal government administers a wide array of public-private partnerships to reduce the GHG intensity generated by the United States. These programs focus on energy efficiency, renewable energy, methane and other non-carbon dioxide (CO_2) gases, agricultural practices, and implementation of technologies to achieve GHG reductions. The US EPA implements several voluntary programs that substantially contribute to the reduction of GHG emissions. All of these programs play a significant role in encouraging voluntary reductions from large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

- The State Climate and Energy Partner Network that allows for the exchange of information between federal and state agencies regarding climate and energy,
- The Climate Leaders program for companies,
- The Energy Star labeling system for energy-efficient products, and
- The Green Power Partnership for organizations interested in buying green power.

In *Massachusetts v. Environmental Protection Agency* (Docket No. 05–1120), the U.S. Supreme Court held in April of 2007 that the US EPA has statutory authority under Section 2020 of the federal CAA to regulate GHGs. The court did not hold that the US EPA was required to regulate GHG emissions; however, it indicated that the agency must decide whether GHGs cause or contribute to air pollution that is reasonably anticipated to endanger public health or welfare.

The President signed Executive Order 13432 on May 14, 2007, directing the USEPA, along with the Departments of Transportation, Energy, and Agriculture, to initiate a regulatory process that responds to the Supreme Court's decision. Executive Order 13432 was codified into law by the 2009 Omnibus Appropriations Law signed on February 17, 2009. The order sets goals in the areas of energy efficiency, acquisition, renewable energy, toxics reductions, recycling, sustainable buildings, electronics stewardship, fleets, and water conservation. In addition, the order requires more widespread use of Environmental Management Systems as the framework in which to manage and continually improve these sustainable practices. This Executive Order requires federal agencies to lead by example in advancing the nation's energy security and environmental performance by achieving the following goals:

- **Energy Efficiency:** Reduce energy intensity 30 percent by 2015, compared to an FY 2003 baseline.
- **Greenhouse Gases:** Reduce greenhouse gas emissions through reduction of energy intensity 30 percent by 2015, compared to an FY 2003 baseline.
- **Renewable Power:** At least 50 percent of current renewable energy purchases must come from new renewable sources (in service after January 1, 1999).

- **Building Performance:** Construct or renovate buildings in accordance with sustainability strategies, including resource conservation, reduction, and use; siting; and indoor environmental quality.
- **Water Conservation:** Reduce water consumption intensity 16 percent by 2015, compared to an FY 2007 baseline.
- **Vehicles:** Increase purchase of alternative fuel, hybrid, and plug-in hybrid vehicles when commercially available.
- **Petroleum Conservation:** Reduce petroleum consumption in fleet vehicles by 2 percent annually through 2015, compared to an FY 2005 baseline.
- **Alternative Fuel:** Increase use of alternative fuel consumption by at least 10 percent annually, compared to an FY 2005 baseline.
- **Pollution Prevention:** Reduce use of chemicals and toxic materials and purchase lower risk chemicals and toxic materials.
- **Procurement:** Expand purchases of environmentally sound goods and services, including bio-based products.
- **Electronics Management:** Annually, 95 percent of electronic products purchased must meet Electronic Product Environmental Assessment Tool standards where applicable; enable Energy Star® features on 100 percent of computers and monitors; and reuse, donate, sell, or recycle 100 percent of electronic products using environmentally sound management practices.

On December 7, 2009, the US EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the federal CAA. The US EPA adopted a Final Endangerment Finding for the six defined GHGs CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6 (US EPA, 2009). The Endangerment Finding is required before US EPA can regulate GHG emissions under Section 202(a)(1) of the CAA in fulfillment of the U.S. Supreme Court decision. The US EPA also adopted a Cause or Contribute Finding in which the US EPA Administrator found that GHG emissions from new motor vehicle and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare. These findings do not, by themselves, impose any requirements on industry or other entities. However, these actions were a prerequisite for implementing GHG emissions standards for vehicles.

On May 19, 2009, the President announced a national policy for fuel efficiency and emissions standards in the U.S. auto industry. The policy is a collaboration between the U.S. Department of Transportation (USDOT) and the US EPA. The proposed federal standards apply to passenger cars and light-duty trucks built in model years 2012 through 2016. The proposed rule would surpass the prior Corporate Average Fuel Economy (CAFE) standards and require an average fuel economy standard of 35.5 miles per gallon (mpg) and 250 grams of CO_2 per mile by model year 2016, based on USEPA calculation methods.

In August 2012, the US EPA and USDOT adopted standards for model year 2017 through 2025 for passenger cars and light-duty trucks. By 2020, vehicles are required to achieve a combined standard of 41.7 mpg and 213 grams of CO_2 per mile. By 2025, vehicles are required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and

163 grams of CO_2 per mile. According to the USEPA, a model year 2025 vehicle would emit one-half of the GHG emissions from a model year 2010 vehicle (US EPA, 2012). In 2017, the US EPA recommended no change to the GHG standards for light-duty vehicles for model years 2022-2025. On April 2, 2017, the US EPA announced that the current standards are not appropriate and should be revised. The US EPA announced a joint process with the National Highway Traffic Safety Administration (NHTSA) to develop more appropriate CAFE standards (US EPA 2018).

State

California has promulgated a series of executive orders, laws, and regulations aimed at reducing both the level of GHGs in the atmosphere and emissions of GHGs from commercial and private activities within the State.

California Greenhouse Gas Reduction Targets

The Governor announced on June 1, 2005, through Executive Order S-3-05 (CA Gov, 2017), the following GHG emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels;
- By 2020, California shall reduce GHG emissions to 1990 levels; and
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

In accordance with Executive Order S-3-05, the Secretary of CalEPA is required to coordinate efforts of various agencies, which comprise the California Climate Action Team (CAT), in order to collectively and efficiently reduce GHGs. These agencies include CARB, the Secretary of the Business, Transportation and Housing Agency, Department of Food and Agriculture, the Resources Agency, the California Energy Commission, and the Public Utilities Commission. The CAT provides periodic reports to the Governor and Legislature on the state of GHG reductions in the state as well as strategies for mitigating and adapting to climate change. The first CAT Report to the Governor and the Legislature in 2006 contained recommendations and strategies to help meet the targets in Executive Order S-3-05. The 2010 CAT Report, finalized in December 2010, expands on the policies in the 2006 assessment (Cal EPA, 2010). The new information detailed in the CAT Report includes development of revised climate and sea-level projections using new information and tools that became available and an evaluation of climate change within the context of broader social changes, such as land-use changes and demographic shifts.

On April 29, 2015, Governor Brown issued Executive Order B-30-15. Therein, the Governor directed the following:

- Established a new interim statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030.
- Ordered all state agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets.
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

In response to the 2030 GHG reduction target, CARB released the 2017 Climate Change Scoping Plan Update in January 2017 and the proposed Final 2017 Climate Change Scoping Plan Update in December 2017 (CARB, 2017a). The Scoping Plan Update outlines the strategies the State will implement to achieve the 2030 GHG reduction target, which build on the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, improved vehicle, truck and freight movement emissions standards, increasing renewable energy, and strategies to reduce methane emissions from agricultural and other wastes by using it to meet our energy needs. The Scoping Plan Update also comprehensively addresses GHG emissions from natural and working lands of California, including the agriculture and forestry sectors. CARB considered the proposed scenario and alternatives and adopted the 2017 Climate Change Scoping Plan Update on December 14, 2017 The Scoping Plan Update considers the following scenarios:

- Scoping Plan Scenario: Continuing the Cap-and-Trade Program.
- Alternative 1: Direct regulations on a wide variety of sectors, such as specific required reductions for all large GHG sources, more renewables, etc.
- Alternative 2: A carbon tax to put a price on carbon, instead of the Cap-and-Trade Program.
- Alternative 3: All Cap-and-Trade. This would remove the refinery measure and keep the LCFS at 10 percent reduction in carbon intensity past 2020.
- Alternative 4: Cap-and-Tax. This would place a declining cap on industry, and natural gas and fuel suppliers, while also requiring them to pay a tax on each ton of GHG emitted.

California Health and Safety Code, Division 25.5 – California Global Warming Solutions Act of 2006

In 2006, the California State Legislature adopted Assembly Bill (AB) 32 (codified in the California Health and Safety Code [HSC], Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. HSC Division 25.5 defines GHGs as CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6 and represents the first enforceable statewide program to limit emissions of these GHGs from all major industries with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. Under HSC Division 25.5, CARB has the primary responsibility for reducing GHG emissions. CARB is required to adopt rules and regulations directing state actions that would achieve GHG emissions reductions equivalent to 1990 statewide levels by 2020. In 2016, the California State Legislature adopted Senate Bill (SB) 32 and its companion bill AB 197, and both were signed by Governor Brown. SB 32 and AB 197 amends HSC Division 25.5 and establishes a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and includes provisions to ensure the benefits of state climate policies reach into disadvantaged communities.

A specific requirement of AB 32 was to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020 (Health and Safety Code section 38561 (h)). CARB developed an AB 32 Scoping Plan that contains strategies to achieve the 2020 emissions cap (CARB, 2008). The initial scoping plan was approved in 2008. It contained a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs

calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives (CARB, 2008). The first update to the Scoping Plan was approved by CARB in May 2014 and built upon the initial Scoping Plan with new strategies and recommendations (CARB, 2014b).

As required by HSC Division 25.5, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was originally set at 427 $MMTCO_2e$ using the GWP values from the IPCC SAR. CARB also projected the state's 2020 GHG emissions under business-as-usual (BAU) conditions – that is, emissions that would occur without any plans, policies, or regulations to reduce GHG emissions. CARB originally used an average of the state's GHG emissions from 2002 through 2004 and projected the 2020 levels at approximately 596 $MMTCO_2e$ (using GWP values from the IPCC SAR). Therefore, under the original projections, the state must reduce its projected 2020 emissions by 28.4 percent in order to meet the 1990 target of 427 $MMTCO_2e$. In 2014, CARB revised the target using the GWP values from the IPCC AR4 and determined that the 1990 GHG emissions inventory and 2020 GHG emissions limit is 431 $MMTCO_2e$. CARB also updated the State's projected 2020 emissions estimate to account for the effect of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that were recently adopted for motor vehicles and renewable energy. CARB's projected statewide 2020 emissions estimate using the GWP values from the IPCC AR4 is 509.4 $MMTCO_2e$. Therefore, the emission reductions necessary to achieve the 2020 emissions target of 431 $MMTCO_2e$ would be 78.4 $MMTCO_2e$, or a reduction of GHG emissions by approximately 15.4 percent. In the 2017 Climate Change Scoping Plan Update, CARB provides the estimated projected statewide 2030 emissions and the level of reductions necessary to achieve the 2030 target of 40 percent below 1990 levels. CARB's projected statewide 2030 emissions takes into account 2020 GHG reduction policies and programs. A summary of the GHG emissions reductions required under HSC Division 25.5 is provided in **Table 3.4-2,** *Estimated Greenhouse Gas Emissions Reductions Required by HSC Division 25.5*.

In its Climate Change Scoping Plan, CARB has acknowledged that land use-driven emissions are highly complex: "While it is possible to illustrate the [GHG] inventory many different ways, no chart or graph can fully display how diverse economic sectors fit together. California's economy is a web of activity where seemingly independent sectors and subsectors operate interdependently and often synergistically." (CARB, 2008) GHG emissions and reductions in the land use sector are complicated to assess given that emissions are influenced by reduction measures separate from the land use sector, such as the LCFS, vehicle emissions standards, and entities regulated under the Cap-and-Trade program including refineries and utility providers. These measures will impact other sectors of the economy and will also impact existing development in addition to new land use development. In its report, *California Environmental Quality Act Guidelines Update Proposed Thresholds of Significance*, the Bay Area Air Quality Management District (BAAQMD) evaluated the reduction in land use emissions needed in order to be consistent with AB 32 (BAAQMD, 2010). CARB included the following sectors for land use emissions: Transportation (on-road passenger vehicles; on-road heavy-duty), electric power (electricity; cogeneration), commercial and residential (residential fuel use; commercial fuel use) and recycling and waste (domestic wastewater treatment). Table 2 of the BAAQMD document

presents the results of this analysis, which shows that the 26.2 percent reduction from statewide land-use driven GHG emissions would be necessary to meet the AB 32 goal of returning to the 1990 emission levels by 2020, which is lower than the statewide reduction of 28.5 percent required based on the original 2008 Climate Change Scoping Plan projections.

TABLE 3.4-2
ESTIMATED GREENHOUSE GAS EMISSIONS REDUCTIONS REQUIRED BY HSC DIVISION 25.5

Emissions Scenario	GHG Emissions ($MMTCO_2e$)
2008 Scoping Plan (IPCC SAR)	
2020 BAU Forecast (CARB 2008 Scoping Plan Estimate)	596
2020 Emissions Target Set by HSC Division 25.5 (i.e., 1990 Level)	427
Reduction below BAU Necessary to Achieve 1990 Levels by 2020	169 (28.4%) [a]
2011 Scoping Plan (GHG Estimates Updated in 2014 to Reflect IPCC AR4 GWPs)	
2020 BAU Forecast (CARB 2011 Scoping Plan Estimate)	509.4
2020 Emissions Target Set by HSC Division 25.5 (i.e., 1990 Level)	431
Reduction Necessary to Achieve 1990 Levels by 2020	78.4 (15.4%) [b]
2017 Scoping Plan Update [c]	
2030 BAU Forecast ("Reference Scenario" which includes 2020 GHG reduction policies and programs)	389
2030 Emissions Target Set by HSC Division 25.5 (i.e., 40% below 1990 Level)	260
Reduction Necessary to Achieve 40% below 1990 Level by 2030	129 (33.2%) [d]

[a] 596 – 427 = 169 / 596 = 28.4%
[b] 509.4 – 431 = 78.4 / 509.4 = 15.4%
[c] The 2017 Scoping Plan Update was adopted by CARB on December 14, 2017.
[d] 389 – 260 = 129 / 389 = 33.2%

SOURCE: CARB, 2011; CARB, 2014a; CARB, 2017a

Senate Bill 97

SB 97, enacted in 2007, directed the State Office of Planning and Research (OPR) to develop California Environmental Quality Act (CEQA) Guidelines "for the mitigation of GHG emissions or the effects of GHG emissions." In December 2009, OPR adopted amendments to the CEQA Guidelines, Appendix G Environmental Checklist, which created a new resource section for GHG emissions and indicated criteria that may be used to establish significance of GHG emissions. Appendix F of the CEQA Guidelines states that, in order to ensure that energy implications are considered in project decisions, the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable. In accordance with Appendix F of the CEQA Guidelines, relevant information that addresses the energy implications of the Project is provided in Section 3.3, *Energy* of the Draft EIR.

Title 24, Building Standards Code and CALGreen Code

The California Energy Commission first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality." (CBSC, 2010) The CALGreen Code is not intended to substitute for, or be identified as, meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. When the CALGreen Code went into effect in 2009, compliance through 2010 was voluntary. As of January 1, 2011, the CALGreen Code is mandatory for all new buildings constructed in the state. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality (CBSC, 2010). The CALGreen Code was most recently updated in 2016 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2017 (17 CCR §§ 95800 to 96023).

California Green Building Standard Code

In January 2011, the 2010 CALGreen became effective. Building off of the initial 2008 California Green Building Code, the 2010 CALGreen Code represents a more stringent building code that requires, at a minimum, that new buildings and renovations in California meet certain sustainability and ecological standards. The 2010 CALGreen Code has mandatory Green Building provisions for all new residential buildings that are three stories, or fewer (including hotels and motels), and all new non-residential buildings of any size that are not additions to existing buildings.

In January 2017, the 2016 California Building Standards Code became effective that also included the latest 2016 CALGreen Code. The mandatory provisions of the code are anticipated to reduce 3 MMT of GHG emissions by 2020, reduce water use by 20 percent, or more, and divert 50 percent of construction waste from landfills. In January 2017, the 2016 California Energy Code (Title 24, Part 6) became effective, which is also part of the CALGreen Code (Title 24, Part 11, Chapter 5.2).

Regional

South Coast Air Quality Management District

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. In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:

- Phase out the use and corresponding emissions of chlorofluorocarbons, methyl chloroform (1,1,1-trichloroethane or TCA), carbon tetrachloride, and halons by December 1995;
- Phase out the large quantity use and corresponding emissions of hydrochlorofluorocarbons by the year 2000;
- Develop recycling regulations for hydrochlorofluorocarbons (e.g., SCAQMD Rules 1411 and 1415);
- Develop an emissions inventory and control strategy for methyl bromide; and
- Support the adoption of a California GHG emission reduction goal.

After AB 32 was passed, SCAQMD formed a Climate Change Committee along with a Greenhouse Gases CEQA Significance Thresholds Working Group and the SoCal Climate Solutions Exchange Technical Advisory Group. On September 5, 2008, the SCAQMD Board approved the SCAQMD Climate Change Policy, which outlines actions the District will take to assist businesses and local governments in implementing climate change measures, decrease the agency's carbon emissions, and provide information to the public regarding climate change. In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds (SCAQMD, 2008a). On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for interim GHG significance thresholds for stationary source/industrial projects, and related rules, and plans where the SCAQMD is the lead agency. The GHG Significance Threshold Working Group evaluated potential GHG significance thresholds; however, the SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g., mixed-use/commercial projects) (SCAQMD, 2017). The aforementioned Working Group has been inactive since 2011.

Local

City of Los Angeles

Local jurisdictions, such as the City of Los Angeles, have the authority and responsibility to reduce GHG emissions through its land use decision-making authority. Specifically, the City is responsible for the assessment and mitigation of GHG emissions resulting from its land use decisions. The City's Green LA Plan outlines goals and actions the City has established to reduce the generation of GHGs. To achieve goals outlined in the Green LA Plan, in April 2008, the City of Los Angeles adopted the Green Building Program Ordinance to address the impact on climate change from new development. In 2011, the Green Building Program Ordinance was amended for consistency with the CalGreen Building Code. As of January 1, 2011, all new buildings (residential and non-residential) would be subject to the Los Angeles Green Building Code

(LAGBC). The LAGBC is based on the 2013 CalGreen Standards to increase energy efficiency and reduce waste.

The City of Los Angeles has incorporated the California Green Building (CALGreen) Standards Code, with amendments in its 2017 Los Angeles Green Building Code. The City's ordinance requires applicable projects to comply with specified provisions to reduce energy consumption.

Los Angeles Unified School District PEIR

The SUP Program EIR includes SCs for minimizing impacts related to GHG emissions in areas where future projects would be implemented under the SUP. Applicable SCs related to GHG emissions impacts associated with the proposed Project are provided in **Table 3.4-3,** *Greenhouse Gas Emissions Standard Conditions of Approval*. Projects implemented under the SUP are anticipated to have less than significant and potentially significant impacts related to climate change within the LAUSD service area with the incorporation of SCs. The Project-specific analysis provided below determined that implementation of the proposed Project would have less-than-significant impacts related to climate change with the incorporation of SCs.

TABLE 3.4-3
GREENHOUSE GAS EMISSIONS STANDARD CONDITIONS OF APPROVAL

Applicable SCs	Description
SC-GHG-1	During school operation, LAUSD shall perform regular preventative maintenance on pumps, valves, piping and tanks to minimize water loss.
SC-GHG-2	LAUSD shall utilize automatic sprinklers set to irrigate landscaping during the early morning hours to reduce water loss from evaporation.
SC-GHG-3	LAUSD shall reset automatic sprinkler timers to water less during cooler months and rainy season.
SC-GHG-4	LAUSD shall develop a water budget for landscape (both non-recreational and recreational) and ornamental water use to conform to the local water efficient landscape ordinance. If no local ordinance is applicable, then use the landscape and ornamental budget outlined by the California Department of Water Resources.
SC-GHG-5	LAUSD shall ensure that the time dependent valued energy of the proposed Project design is at least 10 percent, with a goal of 20 percent less than a standard design that is in minimum compliance with the California Title 24, Part 6 energy efficiency standards that are in force at the time the Project is submitted to the Division of the State Architect.

3.4.3 Thresholds of Significance

Pursuant to Appendix G of the State *CEQA Guidelines*, the Project would result in a significant impact related to GHG emissions if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment (see Impact 3.4-1, below);
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases (see Impact 3.4-2, below).

As discussed in the Program EIR, for projects that are not exempt, or where no qualifying GHG reduction plans are directly applicable, the SCAQMD proposed a "bright-line" screening-level threshold of 3,000 $MTCO_2e$ annually for all land use projects. The SCAQMD proposed this

"bright-line" screening-level threshold "to achieve the same policy objective of capturing 90 percent of the GHG emissions from new development projects in the residential/commercial sectors." (SCAQMD, 2008b) In the California Air Pollution Control Officers Association (CAPCOA) *CEQA and Climate Change* white paper (January 2008), CAPCOA suggested a possible quantitative threshold option that would capture 90 percent of GHG emissions from future discretionary development projects. According to CAPCOA, the "objective was to set the emission threshold low enough to capture a substantial fraction of future residential and nonresidential development that will be constructed to accommodate future statewide population and job growth, while setting the emission threshold high enough to exclude small development projects that will contribute a relatively small fraction of the cumulative statewide GHG emissions." (CAPCOA, 2008) A 90 percent capture rate would "exclude the smallest proposed developments from potentially burdensome requirements … to mitigate GHG emissions." (CAPCOA, 2008) The SCAQMD's proposed screening level of 3,000 $MTCO_2e$ per year is a South Coast Air Basin-specific level that would meet CAPCOA's intent for the suggested quantitative threshold option and is consistent with the Program EIR. Therefore, this threshold is used to evaluate Project GHG emissions.

3.4.4 Methodology

The Climate Action Registry General Reporting Protocol provides procedures and guidelines for calculating and reporting GHG emissions from general and industry-specific activities. Although no numerical thresholds of significance have been adopted, and no specific protocols are available for land use projects, the General Reporting Protocol provides a framework for calculating and reporting GHG emissions from the Project. The GHG emissions provided in this section is consistent with the General Reporting Protocol framework. This technical report provides an estimate of the GHG emissions from Project construction. The following Project-related emission sources have been evaluated:

1. Construction Activities – Fossil fueled on- and off-road vehicles and equipment needed for grading, building construction, paving, and architectural coating.

CARB believes that consideration of so-called indirect emissions provides a more complete picture of the GHG footprint of a facility: "As facilities consider changes that would affect their emissions – addition of a cogeneration unit to boost overall efficiency even as it increases direct emissions, for example – the relative impact on total (direct plus indirect) emissions by the facility should be monitored. Annually reported indirect energy usage also aids the conservation awareness of the facility and provides information" to CARB to be considered for future strategies by the industrial sector. For these reasons, CARB has proposed requiring the calculation of direct and indirect GHG emissions as part of the HSC Division 25.5 reporting requirements. Additionally, the Office of Planning and Research directs lead agencies to "make a good-faith effort, based on available information, to calculate, model, or estimate…GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities." Therefore, direct and indirect emissions have been calculated for the Project.

For purposes of this analysis, it is considered reasonable and consistent with criteria pollutant calculations to consider those GHG emissions resulting from Project-related incremental (net) increase in the use of on-road mobile vehicles, electricity, and natural gas compared to existing conditions. This includes Project construction activities such as demolition, hauling, and construction worker trips. Since potential impacts resulting from GHG emissions are long-term rather than acute, GHG emissions are calculated on an annual basis. CalEEMod outputs GHG emissions of CO_2, CH_4, N_2O, and CO_2e. In order to report total GHG emissions using the CO_2e metric, the GWP ratios corresponding to the warming potential of CO_2 over a 100-year period is used in this analysis.

The General Reporting Protocol provides a range of basic calculation methods. However, they are typically designed for existing buildings, or facilities, and are not directly applicable to planning and development situations where the buildings, or facilities, do not yet exist. As a result, this section relies on calculation guidance from state and regional agencies with scientific expertise in quantifying GHG emissions, such as CARB and the SCAQMD. GHG emissions for the Project are estimated using the CalEEMod (Version 2016.3.2) software.

The CAPCOA has provided guidance on mitigating, or reducing, GHG emissions from land use development projects. In September 2010, CAPCOA released a guidance document titled *Quantifying Greenhouse Gas Mitigation Measures* which provides GHG reduction values for recommended mitigation measures (CAPCOA, 2010). The CAPCOA guidance document was utilized in this analysis for quantifying reductions from physical and operational Project characteristics and Project Sustainability Features in CalEEMod.

Construction Emissions

Construction of the proposed Project has the potential to generate GHG emissions through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to, and from, the Project site. Construction emissions can vary from day to day, depending on the level of activity, the specific type of operation, and the prevailing weather conditions. The number and types of construction equipment, vendor trips (e.g., transport of building materials), and worker trips were based on relatively conservative assumptions for a project of this type and scale as provided in the CalEEMod model. A complete listing of the construction equipment by phase and construction phase duration assumptions used in this analysis is included in Appendix B of this Draft EIR.

The CO_2e emissions are calculated for the construction period. The SCAQMD guidance, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, recognizes that construction-related GHG emissions from projects "occur over a relatively short-term period of time" and that "they contribute a relatively small portion of the overall lifetime project GHG emissions." (SCAQMD, 2008b) The guidance recommends that construction project GHG emissions should be "amortized over a 30-year project lifetime, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies." (SCAQMD, 2008b) In accordance with SCAQMD guidance, GHG emissions from construction have been amortized over the 30-year lifetime of the Project (i.e., total construction

GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions, and the significance threshold).

Emissions Sources

Construction of the Project would result in one-time GHG emissions of CO_2 and smaller amounts of CH_4 from heavy-duty construction equipment. Construction emissions are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the off-road emissions factors. The output values used in this analysis are adjusted to be Project-specific based on equipment types and the construction schedule. These values are applied to the construction phasing assumptions to generate GHG emissions values for each construction year.

Construction of the Project would also contribute to regional GHG emissions from haul trucks and worker vehicles. The emissions from mobile sources were calculated with the trip rates, trip lengths and emission factors for running from EMFAC2014 through CalEEMod.

Operational Emissions

The proposed Project would replace or upgrade facilities on the Campus of San Pedro HS, but it would not increase the number of students, or faculty, at the high school, and would not introduce major new emission sources. No new vehicle trips would be generated, and there would be no increase in mobile source emissions. Furthermore, building upgrades and replacement of old, energy-inefficient structures with those that use less energy would reduce emissions from space heating and other on-site sources. Therefore, there would be no net increase in operational GHGs, and the impact would be less than significant. Additionally, the District is required to comply with all applicable SCs, which will further reduce Project-related operational impacts. Therefore, operational emissions are not discussed further in this section.

3.4.5 Impact Analysis

Greenhouse Gas Emissions

Impact 3.4-1: The Project would not generate greenhouse gas emissions, either directly or indirectly, and would not have a significant impact on the environment.

The proposed Project would replace and modernize existing structures at the San Pedro High School Campus. **Table 3.4-4,** *Project-Specific Construction GHG Emissions (metric tons)* shows the proposed Project's GHG emissions.

Although construction activities would increase GHG emissions, those emissions would be relatively minor and would cease after completion of construction. As shown in Table 3.4-4, the highest anticipated construction-related emissions associated with the proposed Project would be 1,269 $MTCO_2e$ in the year 2020, which includes construction activities from Phase 1A, Phase 1B, and Phase 2. Typically, GHG construction emissions are amortized over 30 years and added to operational emissions. The proposed Project is expected to add a total of 2,774 $MTCO_2e$ over the three years of construction. The total Project GHG emissions amortized over 30 years would be

the equivalent of 92 $MTCO_2e$ over the course of a 30-year period and would be less than the SCAQMD's interim threshold of 3,000 $MTCO_2e$ per year. Therefore, construction impacts would be less than significant with respect to greenhouse gas emissions.

TABLE 3.4-4
PROJECT-SPECIFIC CONSTRUCTION GHG EMISSIONS (METRIC TONS)

Emissions Source Year	CO_2e (metric tons) [a]
2020	1,269
2021	882
2022	624
Total	2,774
Annual (Amortized over 30 years)	92
Threshold	**3,000**
Threshold Exceeded?	**No**

[a] Totals may not add up exactly due to rounding in the modeling calculations

SOURCE: ESA, 2017

Mitigation Measures

No mitigation measures are required.

Significance Determination: Less than Significant

Emissions Reduction Planning

Impact 3.4-2: The Project would not conflict with any applicable plan, policy, regulation, or recommendation of an agency adopted for the purpose of reducing the emissions of GHGs.

As described in the Program EIR, implementation of the SUP would be consistent with plans adopted for the purpose of reducing GHG emissions, such as the SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), California Assembly Bill 32, California Air Resources Board Scoping Plan, and other statewide strategies to reduce GHG emissions (SCAQMD, 2008b). Development of the proposed Project would replace and modernize facilities at San Pedro HS, but it would not increase the number of students, or faculty, at the school, and, therefore, would not increase GHG emissions. As such, the Project would not conflict with the goals of the RTP/SCS.

Additionally, SUP-related projects, including the proposed Project, would comply with the District's GHG emission reduction measures. LAUSD's School Design Guide requires construction contractors to reuse, recycle, and salvage non-hazardous materials generated during demolition and/or new construction, as materials recovery would minimize the need to produce and transport new materials, thereby reducing emissions from mobile sources and energy use (LAUSD, 2015). With respect to all SUP projects, implementation of SCs GHG-1 through GHG-

5 would ensure that the proposed Project would not conflict with applicable plans, policies or regulations adopted for the purpose of reducing GHG emissions. Therefore, with adherence to SCs GHG-1 through GHG-5 and compliance with Title 24, the Project would not conflict with plans, policies, or regulations adopted for the purpose of reducing GHG emissions. Therefore, impacts would be less than significant with respect to plan and policy consistency.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Less than Significant

3.4.6 Cumulative Impact Analysis

In 2010, annual worldwide man-made emissions of GHGs were approximately 49,000 $MMTCO_2e$ including ongoing emissions from industrial and agricultural sources and emissions from land use changes (e.g., deforestation) (IPCC, 2014). Emissions of CO_2 from fossil fuel use and industrial processes account for 65 percent of the total while CO_2 emissions from all sources accounts for 76 percent of the total. CH_4 emissions account for 16 percent and N_2O emissions for 6.2 percent. In 2015, the United States was the world's second largest emitter of carbon dioxide at 5,200 MMT (China was the largest emitter of carbon dioxide at 10,700 MMT) (PBL, 2016).

As previously discussed, CARB compiles GHG inventories for the State of California. In 2015, California emitted 440.4 $MMTCO_2e$ including emissions resulting from imported electrical power. Between 1990 and 2015, the population of California grew by approximately 31 percent. The California economy grew by 222 percent. Despite the population and economic growth, California's net GHG emissions only grew by approximately 2.2 percent.

A cumulatively considerable impact would occur where the impact of the Project in addition to the related projects would be significant. However, in the case of global climate change, a cumulative impacts analysis differs from other environmental issues areas, such as air quality. The proximity of the Project to other related projects, or other GHG emission generating activities, is not directly relevant to the determination of a cumulative impact because climate change is a global condition. According to CAPCOA, "GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective." (CAPCOA, 2008) Moreover, although the State requires MPOs and other planning agencies to consider how region-wide planning decisions can impact global climate change, there is currently no established non-speculative method to assess the cumulative impact of proposed independent private-party development projects.

Although HSC Division 25.5 sets a statewide target for 2020 GHG emissions, the implementing tools of the law (e.g., CARB's *Climate Change Scoping Plan*) are clear that the reductions are not expected to occur uniformly from all sources or sectors. CARB has set targets specific to the transportation sector (land use-related transportation emissions), for example, and under SB 375 SCAG must incorporate these GHG-reduction goals into the RTP and demonstrate that its SCS, or Alternative Planning Strategy, is consistent with the Regional Housing Needs Assessment. One of the goals of this process is to ensure that the efforts of State, regional and local planning

agencies accommodate the contemporaneous increase in population and employment with a decrease in overall GHG emissions. For example, adopting zoning designations that reduce density in areas which are expected to experience growth in population and housing needs, is seen as inconsistent with anti-sprawl goals of sustainable planning. Although development under a reduced density scenario results in lower GHG emissions from the use of that land compared to what is currently or hypothetically allowed (by creating fewer units and fewer attributable vehicle trips), total regional GHG emissions will likely fail to decrease at the desired rate or, worse, increase if regional housing and employment needs of an area are met with a larger number of less-intensive development projects. Therefore, it is not simply a cumulative increase in regional development or the resultant GHG emissions that threatens GHG reduction goals.

With implementation of effective planning policies, the land use sector can accommodate growth and still be consistent with statewide plans to reduce GHG emissions. To that end, various agencies are required to develop programs to guide future building and transportation development towards minimized resource consumption and lowered resultant pollution.

As discussed above, the Project would be consistent with plans adopted for the purpose of reducing GHG emissions, such as the SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), California Assembly Bill 32, California Air Resources Board Scoping Plan, and other statewide strategies to reduce GHG emissions (CAPCOA, 2008). Development of the proposed Project would replace and modernize facilities at San Pedro HS, but it would not increase the number of students, or faculty, at the school, and, therefore, would not increase GHG emissions. As such, the Project would not conflict with the goals of the RTP/SCS.

Additionally, SUP-related projects, including the proposed Project, would comply with the District's GHG emission reduction measures. LAUSD's School Design Guide requires construction contractors to reuse, recycle, and salvage non-hazardous materials generated during demolition and/or new construction, as materials recovery would minimize the need to produce and transport new materials, thereby reducing emissions from mobile sources and energy use (LAUSD, 2015). With respect to all SUP projects, implementation of SCs GHG-1 through GHG-5 would ensure that the proposed Project would not conflict with applicable plans, policies or regulations adopted for the purpose of reducing GHG emissions. Therefore, with adherence to SCs GHG-1 through GHG-5 and compliance with Title 24, the Project would not conflict with plans, policies, or regulations adopted for the purpose of reducing GHG emissions. Additionally, the Project would not exceed the implemented significance threshold of 3,000 MT CO_2e annually. Therefore, Project impacts are not cumulatively considerable.

3.4.7 References

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3.5 Noise

This section analyzes potential noise and vibration impacts that would result from the proposed Project. The analysis describes the existing noise environment in the Project area, estimates future noise and vibration levels at surrounding land uses resulting from construction and operation of the Project, and identifies the potential for significant impacts. An evaluation of the Project's contribution to potential cumulative noise impacts is also provided. Noise worksheets and technical information and data used in this analysis are provided in **Appendix E** of this Draft EIR.

3.5.1 Environmental Setting

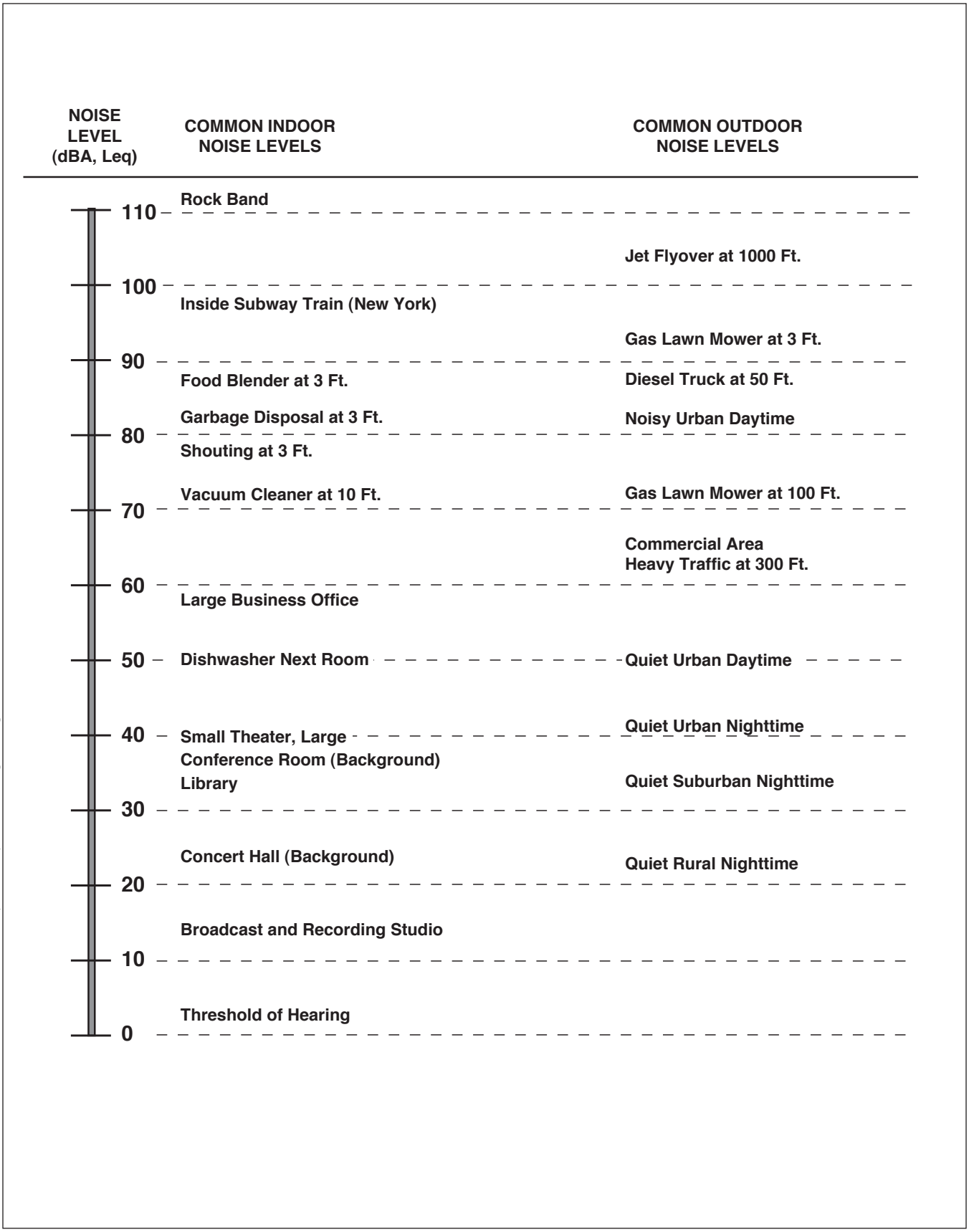
Fundamentals of Noise

Noise Principals and Descriptors

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid, or gaseous, medium (e.g., air). Noise is generally defined as unwanted sound (i.e., loud, unexpected, or annoying sound). Acoustics is defined as the physics of sound. In acoustics, the fundamental scientific model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions, or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. Acoustics addresses primarily the propagation and control of sound (Egan, 1988).

Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) that is measured in decibels (dB), which is the standard unit of sound amplitude measurement. The dB scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound, with 0 dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain. Pressure waves traveling through air exert a force registered by the human ear as sound (Egan, 1988).

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude, with audible frequencies of the sound spectrum ranging from 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum (Egan, 1988). The typical human ear is not equally sensitive to this frequency range. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that deemphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to these extremely low and extremely high frequencies. This method of frequency filtering, or weighting, is referred to as A-weighting, expressed in units of A-weighted decibels (dBA), which is typically applied to community noise measurements (Egan, 1988). Some representative common outdoor and indoor noise sources and their corresponding A-weighted noise levels are shown in **Figure 3.5-1**, *Decibel Scale and Common Noise Sources*.



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SOURCE: State of California, Department of Transportation (Caltrans), Technical Noise Supplement (TeNS). October 1998. Available: http://www.dot.ca.gov/hq/env/noise/pub/Technical Noise Supplement.pdf

San Pedro High School Comprehensive Modernization Project

Figure 3.5-1
Decibel Scale and Common Noise Sources

ESA

Noise Exposure and Community Noise

An individual's noise exposure is a measure of noise over a period of time; a noise level is a measure of noise at a given instant in time, as presented Figure 3.5-1. However, noise levels rarely persist at that level over a long period of time. Rather, community noise varies continuously over a period of time with respect to the sound sources contributing to the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with many of the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources, such as changes in traffic volume. What makes community noise variable throughout a day, besides the slowly changing background noise, is the addition of short-duration, single-event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual (Caltrans, 2013a).

These successive additions of sound to the community noise environment change the community noise level from instant to instant, requiring the noise exposure to be measured over periods of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. The following noise descriptors are used to characterize environmental noise levels over time, which are applicable to the Project (Caltrans, 2013a).

L_{eq}: The equivalent sound level, is used to describe noise over a specified period of time in terms of a single numerical value; the L_{eq} of a time-varying signal and that of a steady signal are the same if they deliver the same acoustic energy over a given time. The L_{eq} may also be referred to as the average sound level.

L_{dn}: the average A-weighted noise level during a 24-hour day, obtained after an addition of 10 dB to measured noise levels between the hours of 10:00 p.m. to 7:00 a.m. to account nighttime noise sensitivity. The L_{dn} is also termed the day-night average noise level (DNL).

CNEL: The Community Noise Equivalent Level (CNEL) is the average A-weighted noise level during a 24-hour day that is obtained after an addition of 5 dB to measured noise levels between the hours of 7:00 a.m. to 10:00 p.m. and after an addition of 10 dB to noise levels between the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.

Effects of Noise on People

Noise is generally loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity that is a nuisance, or disruptive. The effects of noise on people can be placed into four general categories:

- Subjective effects (e.g., dissatisfaction, annoyance);
- Interference effects (e.g., communication, sleep, and learning interference);
- Physiological effects (e.g., startle response); and
- Physical effects (e.g., hearing loss).

Although exposure to high noise levels has been demonstrated to cause physical and physiological effects, the principal human responses to typical environmental noise exposure are related to subjective effects and interference with activities. Interference effects interrupt daily activities and include interference with human communication activities, such as normal conversations, watching television, telephone conversations, and interference with sleep. Sleep interference effects can include both awakening and arousal to a lesser state of sleep (Caltrans, 2013a).

With regard to the subjective effects, the responses of individuals to similar noise events are diverse and influenced by many factors, including the type of noise, the perceived importance of the noise, the appropriateness of the noise to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity. Overall, there is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction on people. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted (i.e., comparison to the ambient noise environment). In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships generally occur: (Caltrans, 2013a)

- Except in carefully controlled laboratory experiments, a change of 1 dBA in ambient noise levels cannot be perceived;
- Outside of the laboratory, a 3 dBA change in ambient noise levels is considered to be a barely perceivable difference;
- A change in ambient noise levels of 5 dBA is considered to be a readily perceivable difference; and
- A change in ambient noise levels of 10 dBA is subjectively heard as doubling of the perceived loudness.

These relationships occur in part because of the logarithmic nature of sound and the decibel scale. The human ear perceives sound in a non-linear fashion; therefore, the dBA scale was developed. Because the dBA scale is based on logarithms, two noise sources do not combine in a simple additive fashion, but rather logarithmically. Under the dBA scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two sources are each producing sound of the same loudness, the resulting sound level at a given distance would be approximately 3 dBA higher than one of the sources under the same conditions. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA. Under the dB scale, three sources of equal loudness together produce a sound level of approximately 5 dBA louder than one source, and 10 sources of equal loudness together produce a sound level of approximately 10 dBA louder than the single source (Caltrans, 2013a).

Noise Attenuation

When noise propagates over a distance, the noise level reduces with distance depending on the type of noise source and the propagation path. Noise from a localized source (i.e., point source) propagates uniformly outward in a spherical pattern, referred to as "spherical spreading." Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (i.e., reduce) at a rate between 6 dBA for acoustically "hard" sites and 7.5 dBA for "soft" sites for each doubling of distance from the reference measurement, as their energy is continuously spread out over a spherical surface (e.g., for hard surfaces, 80 dBA at 50 feet attenuates to 74 at 100 feet, 68 dBA at 200 feet, etc.). Hard sites are those with a reflective surface between the source and the receiver, such as asphalt, or concrete, surfaces, or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the reduction in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees, which in addition to geometric spreading, provides an excess ground attenuation value of 1.5 dBA (per doubling distance) (Caltrans, 2013a).

Roadways and highways consist of several localized noise sources on a defined path, and hence are treated as "line" sources, which approximate the effect of several point sources. Noise from a line source propagates over a cylindrical surface, often referred to as "cylindrical spreading." (Caltrans, 2013a) Line sources (e.g., traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement (Caltrans, 2013a). Therefore, noise due to a line source attenuates less with distance than that of a point source with increased distance.

Additionally, receptors located downwind from a noise source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Atmospheric temperature inversion (i.e., increasing temperature with elevation) can increase sound levels at long distances (e.g., more than 500 feet). Other factors such as air temperature, humidity, and turbulence can also have significant effects on noise levels (Caltrans, 2013a).

Fundamentals of Vibration

Vibration can be interpreted as energy transmitted in waves through the ground, or man-made structures, which generally dissipate with distance from the vibration source. Because energy is lost during the transfer of energy from one particle to another, vibration becomes less perceptible with increasing distance from the source.

As described in the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment*, ground-borne vibration can be a serious concern for nearby neighbors of a transit system route, or maintenance facility, causing buildings to shake and rumbling sounds to be heard (FTA, 2006). In contrast to airborne noise, ground-borne vibration is not a common environmental problem, as 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 ground-borne vibration are trains, heavy trucks traveling on rough roads, and construction activities, such as blasting, pile-driving, and operation of heavy earth-moving equipment (Caltrans, 2013b).

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 in inches per second (in/sec), and is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure RMS. The relationship of PPV to RMS velocity is expressed in terms of the "crest factor," defined as the ratio of the PPV amplitude to the RMS amplitude. PPV is typically a factor of 1.7 to 6 times greater than RMS vibration velocity (FTA, 2006). The decibel notation VdB acts to compress the range of numbers required to describe vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include buildings where vibration would interfere with operations within the building, or cause damage (especially older masonry structures), locations where people sleep, and locations with vibration sensitive equipment (FTA, 2013).

The effects of ground-borne vibration include movement of the building floors, rattling of windows, shaking of items on shelves, or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. Annoyance from vibration often occurs when the vibration levels exceed the threshold of perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal buildings.

Existing Conditions

Some land uses are considered more sensitive to ambient noise levels than others are, due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. According to the General Plan, residential areas are to be the most sensitive type of land use to noise and industrial/commercial areas are considered to be the least sensitive. Existing noise sensitive uses on the Project site and in the immediate vicinity include:

- Onsite: School classrooms;
- To the North: a mix of single- and multi-family residences are located along West 14th Street, West 15th Street, and South Alma Street.
- To the South: a mix of single- and multi-family residences are located along West 17th Street.
- To the West: single-family residences are located along South Leland Street.
- To the East: a mix of single- and multi-family residences are located along West 17th Street, and Dana Middle School is located along South Cabrillo Avenue.

Ambient Noise Levels

Schools can generate noise from sports events, athletic fields, playgrounds and parking lot activity, and some of these features may potentially cause noise increases at nearby receptors, as

schools are typically located in residential areas (LAUSD, 2014). San Pedro HS is predominantly surrounded by single- and multi-family residential uses.

To establish existing ambient noise levels, ambient noise measurements were conducted at five locations, representing the nearest land uses in the vicinity of the Project site. The measurement locations, along with existing development, are shown on **Figure 3.5-2**, *Noise Measurement Locations*. Short-term (15-minute) noise measurements were conducted at locations R1 through R5 between approximately 8:30 A.M. and 10:00 A.M. on Friday, December 22, 2017, to characterize the existing noise environment in the Project vicinity. Because classes were not in session due to the winter break, typical school-related noise, such as student and staff trips, outdoor physical education activity, and student conversation, were not included in the ambient noise measurements. Therefore, the measured ambient noise levels represent a lower, more conservative baseline ambient noise environment from which to perform the noise analysis included herein.

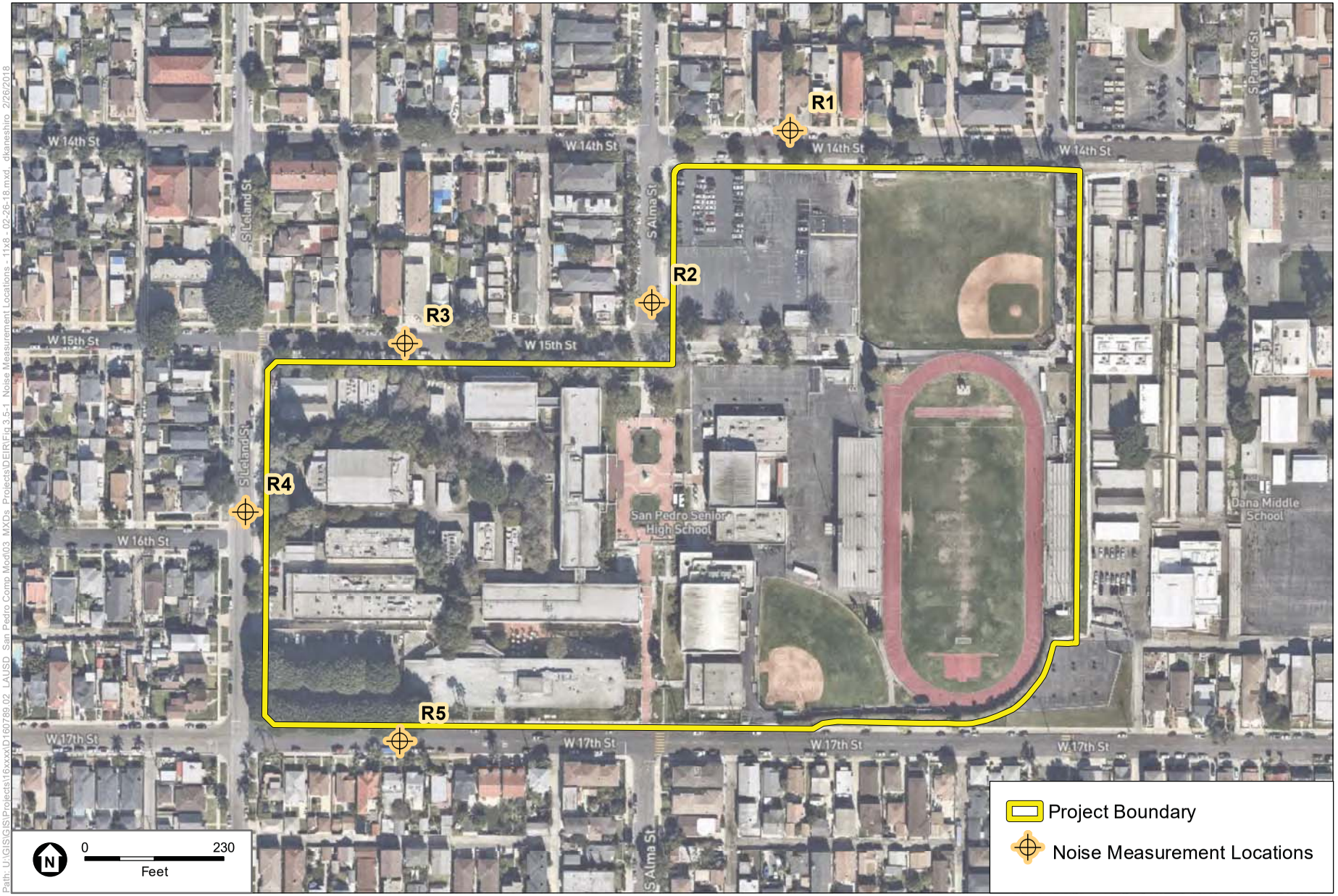
The ambient noise measurements were conducted using the Larson-Davis 820 Precision Integrated Sound Level Meter ("SLM"). The Larson-Davis 820 SLM is a Type 1 standard instrument as defined in the American National Standard Institute S1.4. All instruments were calibrated and operated according to the applicable manufacturer specification. The microphone was placed at a height of 5 feet above the local grade at the following locations, as shown in Figure 3.5-2:

- R1: Represents the existing noise environment of residential uses along West 14th Street, north of the Project site's existing north parking lot and baseball field.
- R2: Represents the existing noise environment of residential uses along South Alma Street, west of the Project site's existing northern parking lot.
- R3: Represents the existing noise environment of residential uses along West 15th Street, north of existing San Pedro HS buildings.
- R4: Represents the existing noise environment of residential uses along Leland Street, west of existing San Pedro HS Buildings.
- R5: Represents the existing noise environment of residential uses along West 17th Street, south of the Project site.

A summary of noise measurement data is provided in **Table 3.5-1,** *Summary of Ambient Noise Measurements*. As shown in Table 3.5-1, daytime ambient noise levels ranged from approximately 51 dBA to 54 dBA, L_{eq}.

Existing Groundborne Vibration Levels

Aside from periodic construction work that may occur throughout the City, other sources of groundborne vibration in the Project site vicinity may include heavy-duty vehicular travel (e.g., refuse trucks, delivery trucks, etc.) on local roadways. According to FTA, rubber-tire vehicles rarely create ground-borne vibration problems unless there is a discontinuity, or bump, in the road that causes the vibration. A typical bus operating on smooth roadway would generate groundborne vibration velocity levels of approximately 63 VdB (approximately 0.006 in/sec PPV) at 50 feet (FTA, 2006).



SOURCE: OpenStreetMap, 2018, ESA, 2017

San Pedro High School Comprehensive Modernization Project

Figure 3-5-2

Noise Measurement Locations

ESA

TABLE 3.5-1
SUMMARY OF AMBIENT NOISE MEASUREMENTS

Location, Duration, Existing Land Uses and, Date of Measurements	Measured Daytime Ambient Noise Levels (7 A.M. to 10 P.M.) Hourly dBA L_{eq}
R1 12/22/17 8:59 A.M. to 12/22/17 9:14 A.M.	53
R2 12/22/17 9:55 A.M. to 12/22/17 10:10 A.M.	54
R3 12/22/17 8:36 A.M. to 12/22/17 8:51 A.M.	51
R4 12/22/17 9:19 A.M. to 12/22/17 9:34 A.M.	54
R5 12/22/17 9:36 A.M. to 12/22/17 9:51 A.M.	54

SOURCE: ESA, 2017

3.5.2 Regulatory Setting

A number of statutes, regulations, plans and policies have been adopted which address noise and vibration concerns. Detailed below is a discussion of the relevant regulatory setting and noise and vibration regulations, plans, and policies.

Federal

The Program EIR uses the FTA's guidance, 2006 Transit Noise and Vibration Impact Assessment, to evaluate vibration levels resulting from Project construction activities on human annoyance and structural damage. Based on this guidance, the vibration standards are presented in **Table 3.5-2,** *Ground-Borne Vibration Criteria: Human Annoyance* and **Table 3.5-3**, *Ground-Borne Vibration Criteria: Architectural* Damage.

TABLE 3.5-2
GROUND-BORNE VIBRATION CRITERIA: HUMAN ANNOYANCE

Land Use Category	Max Lv (VdB)	Description
Workshop	90	Distinctly felt vibration. Appropriate to workshops and nonsensitive areas.
Office	84	Felt vibration. Appropriate to offices and nonsensitive areas.
Residential – Daytime	78	Barely felt vibration. Adequate for computer equipment.
Residential – Nighttime	72	Vibration not felt, but groundborne noise may be audible inside quiet rooms.

NOTE: Max Lv (VdB): Lv is the velocity level in decibels, as measured in 1/3-octave bands of frequency over the frequency ranges of 8 to 80 Hz.

SOURCE: FTA, 2006; PEIR 2014.

TABLE 3.5-3
GROUND-BORNE VIBRATION CRITERIA: ARCHITECTURAL DAMAGE

Building Category	PPV (in/sec)
I. Reinforced-concrete, steel or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

NOTE: Lv (VdB): Lv is the velocity level in decibels, as measured in 1/3-octave bands of frequency over the frequency ranges of 8 to 80 Hz.

SOURCE: FTA 2006; PEIR, 2014

State

Under California Code of Regulations (CCR) Title 5,[1] the California Department of Education (CDE) regulations require the school district to consider noise in the site selection process. As recommended by CDE guidance, if a school district is considering a potential school site near a freeway, or other source of noise, it should hire an acoustical engineer to determine the level of sound that the site is exposed to and to assist in designing the school should that site be chosen.

CCR Title 24 establishes the California Building Code (CBC). The most recent building standard adopted by the legislature and used throughout the state is the 2016 version, which took effect on January 1, 2017. The State of California's noise insulation standards are codified in the CBC (Title 24, Part 2, Chapter 12). These noise standards are for new construction in California for the purposes of interior compatibility with exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential, schools, or hospitals, are near major transportation noises, and where such noise sources create an exterior noise level of 60 dBA CNEL, or higher. Acoustical studies that accompany building plans must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

Local

While LAUSD is exempt from local jurisdictional municipal codes, the District typically considers local plans and policies for the communities surrounding its facilities. The proposed Project is located within the City of Los Angeles. Applicable City of Los Angeles and LAUSD noise standards and policies are described below.

City of Los Angeles Municipal Code

Chapter XI, Noise Regulation, of the Los Angeles Municipal Code (LAMC) establishes acceptable ambient sound levels to regulate intrusive noises (e.g., stationary mechanical

[1] California Code of Regulations, Title 5. Education, Division 1. California Department of Education, Chapter 13. School Facilities and Equipment, Subchapter 1. School Housing, Article 2. School Sites, 14010. Standards for School Site Selection.

equipment and vehicles other than those traveling on public streets) within specific land use zones and provides procedures and criteria for the measurement of the sound level of noise sources. These procedures recognize and account for differences in the perceived level of different types of noise and/or noise sources. In accordance with the Noise Regulations, a noise level increase from certain regulated noise sources of 5 dBA L_{eq} over the existing, or presumed, ambient noise level at an adjacent property line is considered a violation of the Noise Regulations. The 5 dBA L_{eq} increase above ambient is applicable to City-regulated noise sources (e.g., mechanical equipment), and it is applicable any time of the day.

To account for people's increased tolerance for short-duration noise events, the Noise Regulations provide a 5 dBA L_{eq} allowance for noise occurring more than 5 but less than 15 minutes in any 1-hour period and an additional 5 dBA L_{eq} allowance (total of 10 dBA L_{eq}) for noise occurring 5 minutes, or less, in any 1-hour period.

Section 41.40 of the LAMC prohibits any construction, or repair work, of any kind between the hours of 9:00 p.m. and 7:00 a.m. of the following day. It also prohibits construction activities before 8:00 a.m., or after 6:00 p.m. on any Saturday, or national holiday, or at any time on any Sunday.

Section 112.05 of the LAMC defines the maximum noise level of powered equipment, or powered hand tools. The noise level is limited to 75 dBA at 50 feet for construction, industrial, and agricultural machinery including crawler-tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, motor graders, paving machines, off-highway trucks, ditchers, trenchers, compactors, scrapers, wagons, pavement breakers, compressors and pneumatic, or other powered equipment, between the hours of 7:00 a.m. and 10:00 p.m., in any residential zone of the City, or within 500 feet. However, noise limitations shall not apply where compliance is technically infeasible, which means that noise limitations cannot be complied with despite the use of mufflers, shields, sound barriers and/or other noise reduction device, or techniques, during the operation of the equipment.

City of Los Angeles Guidelines for Noise-Compatible Land Uses

The City has adopted local guidelines based, in part, on the community noise compatibility guidelines established by the State Department of Health Services for use in assessing the compatibility of various land use types with a range of noise levels. These guidelines are set forth in the City of LA CEQA Thresholds Guide in terms of the CNEL. CNEL guidelines for specific land uses are classified into four categories: (1) "normally acceptable," (2) "conditionally acceptable," (3) "normally unacceptable," and (4) "clearly unacceptable." As shown in **Table 3.5-4,** *City of Los Angeles Land Use Compatibility for Community Noise,* a CNEL value of 70 dBA is the upper limit of what is considered a "conditionally acceptable" noise environment for hotel uses, although the upper limit of what is considered "normally acceptable" for hotel uses is set at 65 dBA CNEL (City of LA, 2006).

TABLE 3.5-4
CITY OF LOS ANGELES LAND USE COMPATIBILITY FOR COMMUNITY NOISE

	Community Noise Exposure CNEL (dBA)			
Land Use	**Normally Acceptable**	**Conditionally Acceptable**	**Normally Unacceptable**	**Clearly Unacceptable**
Single-Family, Duplex, Mobile Homes	50 to 60	55 to 70	70 to 75	Above 70
Multi-Family Homes	50 to 65	60 to 70	70 to 75	Above 70
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 to 70	60 to 70	70 to 80	Above 80
Transient Lodging—Motels, Hotels	50 to 65	60 to 70	70 to 80	Above 80
Auditoriums, Concert Halls, Amphitheaters	—	50 to 70	—	Above 65
Sports Arena, Outdoor Spectator Sports	—	50 to 75	—	Above 70
Playgrounds, Neighborhood Parks	50 to 70	—	67 to 75	Above 72
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 to 75	—	70 to 80	Above 80
Office Buildings, Business and Professional Commercial	50 to 70	67 to 77	Above 75	—
Industrial, Manufacturing, Utilities, Agriculture	50 to 75	70 to 80	Above 75	—

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 systems or air conditioning 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: City of Los Angeles, LA CEQA Thresholds Guide, 2006.

Los Angeles Unified School District Program EIR

The Program EIR for School Upgrade Program[2] establishes Standard Conditions (SCs) for reducing impacts on noise and vibration in areas where future projects would be implemented under the SUP. Applicable SCs related to noise impacts associated with the proposed Project are provided in **Table 3.5-5,** *Noise Standard Conditions of Approval*.

[2] The Standard Conditions of Approval have been updated since the adoption of the 2015 version in order to incorporate and reflect changes in the recent laws, regulations, and the Los Angeles Unified School District's standard policies, practices, and specifications.

TABLE 3.5-5
NOISE STANDARD CONDITIONS OF APPROVAL

Reference Number	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
SC-N-1	Exterior Campus Noise	Exterior noise levels are or would be greater than 70 dBA L_{10} or 67 dBA L_{eq}	During Project design	LAUSD shall include features such as sound walls, building configuration, and other design features in order to attenuate exterior noise levels on a school campus to less than 70 dBA L_{10} or 67 dBA L_{eq}.
SC-N-2	Interior Classroom Noise	Interior classroom noise levels would be greater than 55 dBA L_{10} or 45 dBA L_{eq}	During Project design	LAUSD shall analyze the acoustical environment of the site (such as traffic) and the characteristics of planned building components (such as heating, ventilation, and air conditioning [HVAC]), and design to achieve interior classroom noise levels of less than 55 dBA L_{10} or 45 dBA L_{eq} with maximum (unoccupied) reverberation times of 0.6 seconds. Noise reduction methods shall include, but are not limited to, sound walls, building and/or classroom insulation, HVAC modifications, double-paned windows, and other design features in order to achieve the noise standards. • The District should acknowledge the ANSI (American National Standards Institute) S12 standard as a District goal that may presently not be achievable in all cases. • Where economically feasible, new school design should achieve classroom acoustical quality consistent with the ANSI standard and in no event exceed the current CHPS (California High Performance Schools) standard of 45 dBA. • Where economically feasible, new HVAC (Heating, Ventilating, and Air Conditioning) installations should be designed to achieve the lowest possible noise level consistent with the ANSI standard. In no event should these installations exceed the current CHPS standard of 45 dBA. • To promote the development of lower noise emitting HVAC units, the District's purchase of new units should give preference to manufacturers producing the lowest noise level at the lowest cost. • Existing HVAC units operating in excess of 50 dBA should be modified.
SC-N-3	Traffic Noise	Project-related traffic noise level exceeds local noise standards, policies, or ordinances	Prior to Project approval	LAUSD shall require an acoustical analysis to identify feasible measures to reduce traffic noise increases to 3 dBA CNEL or less at the noise-sensitive land use. LAUSD shall implement recommended measures to reduce noise.
SC-N-4	Operational Noise	Operational noise levels exceeds local noise standards, policies, or ordinances at noise-sensitive land uses	During Project design and construction	LAUSD shall incorporate long-term permanent noise attenuation measures between playgrounds, stadiums, and other noise-generating facilities and noise-sensitive land uses, to reduce noise levels to meet jurisdictional standards or an increase of 3 dB or less over ambient. Operational noise attenuation measures include, but are not limited to: • buffer zones • berms

Reference Number	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
				• sound barriers: – buildings – masonry walls – enclosed bleacher foot wells – other site-specific Project design features.
SC-N-5	Construction Noise and Vibration (Annoyance)	Construction on an existing school campus	Prior to construction	LAUSD Facilities Division or its construction contractor shall consult and coordinate with the school principal or site administrator, and other nearby noise sensitive land uses prior to construction to schedule high noise or vibration producing activities to minimize disruption. Coordination between the school, nearby land uses and the construction contractor shall continue on an as-needed basis throughout the construction phase of the Project to reduce school and other noise sensitive land use disruptions.
SC-N-6	Vibration (Structural Damage)	Rock blasting or demolition activities	During construction	The LAUSD shall require the construction contractor to minimize blasting for all construction and demolition activities, where feasible. If demolition is necessary adjacent to residential uses or fragile structures, the LAUSD shall require the construction contractor to avoid using impact tools. Alternatives that shall be considered include mechanical methods using hydraulic crushers or deconstruction techniques.
SC-N-7	Vibration (Structural Damage)	Pile driving or heavy vibration activities	During construction (Construction)	For projects where pile driving activities are required within 150 feet of a structure, a detailed vibration assessment shall be provided by an acoustical engineer to analyze potential impacts related to vibration to nearby structures and to determine feasible mitigation measures to eliminate potential risk of architectural damage.
SC-N-8	Vibration (Structural Damage)	Vibration intensive activities are planned within 25 feet of a historic building or structure	Prior to and during demolition and construction (Construction)	LAUSD shall meet with the construction contractor to discuss alternative methods of demolition and construction for activities within 25 feet of a historic building to reduce vibration impacts. During the preconstruction meeting, the construction contractor shall identify demolition methods not involving vibration-intensive construction equipment or activities. For example: sawing into sections that can be loaded onto trucks results in lower vibration levels than demolition by hydraulic hammers. • Prior to construction activities, the construction contractor shall inspect and report on the current foundation and structural condition of the historic building. • The construction contractor shall implement alternative methods identified in the preconstruction meeting during demolition, excavation, and construction for work done within 25 feet of the historic building. • The construction contractor shall avoid use of vibratory rollers and packers adjacent to a historic building. • During demolition the construction contractor shall not phase any ground-impacting operations near a historic building to occur at the same time as any ground impacting operation associated with demolition and construction of a new building. During demolition and construction, if any vibration levels cause cosmetic or structural damage to a historic building the District shall issue “stop-work” orders to the construction contractor immediately to prevent further damage. Work shall not restart until the building is stabilized and/or preventive measures to relieve further damage to the building are implemented.

SC-N-9	Construction Noise	Exterior construction and the use of large, heavy or noisy construction equipment	During construction (Construction)	LAUSD shall prepare a noise assessment. If site-specific review of a school construction Project identifies potentially significant adverse construction noise impacts, then LAUSD shall implement all feasible measures to reduce below applicable noise ordinances. Exterior construction noise levels exceed local noise standards, policies, or ordinances at noise-sensitive receptors. LAUSD shall mandate that construction bid contracts include the measures identified in the noise assessment. Specific noise reduction measures include, but are not limited to, the following: <u>Source Controls</u> • Time Constraints – prohibiting work during sensitive nighttime hours • Scheduling – performing noisy work during less sensitive time periods (on operating campus: delay the loudest noise generation until class instruction at the nearest classrooms has ended; residential: only between 7:00 AM and 7:00 PM) • Equipment Restrictions – restricting the type of equipment used • Noise Restrictions – specifying stringent noise limits • Substitute Methods – using quieter methods and/or equipment • Exhaust Mufflers – ensuring equipment have quality mufflers installed • Lubrication & Maintenance – well maintained equipment is quieter • Reduced Power Operation – use only necessary size and power • Limit Equipment On-Site – only have necessary equipment on-site • Noise Compliance Monitoring – technician on site to ensure compliance • Quieter Backup Alarms – manually-adjustable or ambient sensitive types <u>Path Controls</u> • Noise Barriers – semi-permanent or portable wooden or concrete barriers • Noise Curtains – flexible intervening curtain systems hung from supports • Enclosures – encasing localized and stationary noise sources • Increased Distance – perform noisy activities farther away from receptors, including operation of portable equipment, storage and maintenance of equipment <u>Receptor Controls</u> • Window Treatments – reinforcing the building's noise reduction ability • Community Participation – open dialog to involve affected residents • Noise Complaint Process – ability to log and respond to noise complaints. Advance notice of the start of construction shall be delivered to all noise sensitive receptors adjacent to the Project area. The notice shall state specifically where and when construction activities will occur, and provide contact information for filing noise complaints with the contractor and the District. In the event of noise complaints, the LAUSD shall monitor noise from the construction activity to ensure that construction noise does not exceed limits specified in the noise ordinance. • Temporary Relocation – in extreme otherwise unmitigatable cases. Temporarily move residents or students to facilities away from the construction activity.

Reference Number	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
SC-AQ-2	Construction Noise	Requires large construction equipment	During Project construction	LAUSD's construction contractor shall ensure that construction equipment is properly tuned and maintained in accordance with manufacturer's specifications, to ensure excessive noise is not generated by unmaintained equipment.

SOURCE: LAUSD 2017

Projects implemented under the Program EIR are anticipated to result in potentially significant and unavoidable impacts related to construction noise and vibration and impacts related to increases in traffic noise and exposure to airport noise are anticipated to be less-than-significant. The Project-specific analysis provided below determined that noise and vibration impacts related to implementation of the proposed Project would be less than significant with incorporation of SCs N-1 through N-9 and Mitigation Measures NOISE-1 and NOISE-2.

3.5.3 Thresholds of Significance

According to Appendix G of the State CEQA Guidelines, the proposed Project could have a potentially significant impact with respect to noise if it would:

- Expose people to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies (see Impact 3.5-1, below);
- Expose people to or generate excessive groundborne vibration or groundborne noise levels (see Impact 3.5-2, below);
- Result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project (see Impact 3.5-3, below);
- Result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project (see Impact 3.5-4, below);
- Expose people residing or working in the Project area to excessive noise levels 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 (see Section 4.1 in Chapter 4.0, Other CEQA Considerations); or
- Expose people residing or working in the Project area to excessive noise levels for a Project within the vicinity of a private airstrip (see Section 4.1 in Chapter 4.0, Other CEQA Considerations).

City of Los Angeles

Operational Traffic Noise

A project would have a long-term operational noise impact if noise levels from project operations cause the ambient noise levels at the property line of affected uses to increase by 3 dBA CNEL, and noise levels reach, or are within the "normally unacceptable," or "clearly unacceptable" category, or increase by 5 dBA CNEL, or greater.

Operational Stationary Noise

Stationary noise sources are prohibited from causing the ambient noise level to increase by more than 5 dBA L_{eq}.

Construction Noise

Project construction-related activities would result in a significant noise impact at nearby sensitive uses if:

- Construction-related noise levels exceed 75 dBA L_{eq} measured at a distance of 50 feet from equipment when construction activities are located within 500 feet of a residential area unless technically feasible mitigation measures are incorporated;
- Construction activities lasting more than 1 day would exceed existing ambient exterior noise levels by 10 dBA L_{eq}, or more, at a noise sensitive use;
- Construction activities lasting more than 10 days in a 3-month period would exceed existing ambient exterior noise levels by 5 dBA L_{eq}, or more, at a noise sensitive use; or
- Construction activities would exceed the ambient noise level by 5 dBA L_{eq} at a noise sensitive use between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m., or after 6:00 p.m., on Saturday, or on a national holiday, or at any time on Sunday.

Los Angeles Unified School District

The Program EIR outlines the following LAUSD noise level thresholds for school sites according to Education Code Section 17215. The Project would result in a significant long-term noise impact if:

- Exterior noise levels exceed 67 dBA L_{eq};
- Interior classroom noise levels exceed 45 dBA L_{eq}; or
- Permanent increase noise levels at nearby noise-sensitive land uses exceed 3 dBA CNEL

Vibration Criteria

The *CEQA Guidelines* do not define the levels at which groundborne vibration or groundborne noises are considered "excessive." The City of Los Angeles currently does not have a significance threshold to assess vibration impacts during construction. However, the FTA has provided guidance for the analysis of vibration from transportation and construction-induced vibration sources. The Project is not subject to FTA, or Caltrans, regulations; nonetheless, the FTA guidance serve as a useful tool to evaluate vibration impacts. For the purpose of this analysis, the vibration criteria for human annoyance and structural damage established by the FTA, which are shown previously in Table 3.5-2 and Table 3.5-3, respectively, are used to evaluate the potential vibration impacts of the Project on nearby sensitive receptors.

3.5.4 Methodology

Construction Noise

Onsite Construction Noise

Project construction noise levels were estimated using the FHWA's Roadway Construction Noise Model (RCNM) and construction equipment information provided by the LAUSD. Predicted noise levels were identified for the nearest sensitive receptors, as well as for classrooms on Campus, based on their respective distances from the construction equipment. To present a conservative impact analysis, the estimated noise levels were calculated for a scenario in which the loudest equipment were assumed to be located at the construction area boundary closest to sensitive receptors. The remaining construction equipment were assumed to be located at the

approximate mid-point within the construction area boundary and at the furthest point within the construction area boundary relative to the sensitive receptor. These assumptions represent a reasonable worst-case noise scenario since the loudest construction equipment were assumed to be located closest to sensitive receptors. In reality, construction equipment operates throughout a construction area, and the loudest construction equipment would not always be located at the nearest distance to sensitive receptors, but would typically be active throughout the Project site, and would routinely be located further away from the affected sensitive receptors. The construction noise levels were calculated, in terms of maximum hourly L_{eq}, for sensitive receptor locations based on the standard point source noise-distance attenuation factor of 6.0 dBA for each doubling of distance. The estimated noise levels at the affected receptors were then analyzed against the construction noise standards. Detailed noise calculations are provided in **Appendix E**.

Offsite Construction Traffic Noise

Roadway noise impacts were evaluated using the Caltrans Technical Noise Supplement (TeNS) method based on the estimated maximum number of on-road haul trucks. This method allows for the definition of roadway configurations, barrier information (if any), and receiver locations. Roadway noise attributable to Project development was calculated and compared to baseline noise levels shown in Table 3.5-1.

Operational Noise

Onsite Stationary Source Noise

During operation of the Project, noise levels would be generated onsite by stationary noise sources, such as generators and air conditioning units, and student activities. The noise levels generated by the stationary noise sources are not assessed because the locations and specifications of equipment would not be available at this stage of the proposed Project. Instead, a qualitative assessment is used and the applicable SCs from the Program EIR are incorporated.

Groundborne Vibration

Groundborne vibration levels resulting from construction activities at the Project site were estimated using data in the FTA *Transit Noise and Vibration Impact Assessment* guidance document (FTA, 2006). Potential vibration levels resulting from construction of the Project are identified for offsite locations that are sensitive to vibration (i.e., existing residential buildings) based on their distance from construction activities, as well as classrooms on Campus.

3.5.5 Impact Analysis

Exceedance of Established Noise Standards

Impact 3.5-1: The Project could result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Construction Noise

Onsite Construction

Construction of the proposed Project would occur in 3 phases over a 3-year construction phasing schedule. The construction schedule includes overlap between phases with the most intensive activity occurring during summer break when school is not in session. All construction would occur during daytime hours, specifically 7:00 a.m. to 7:00 p.m. Monday through Friday. Construction is anticipated to begin in the first quarter of 2020 and to be completed in the first quarter of 2023.

Construction activities occurring during each of these phases would require the use of heavy equipment (e.g., excavators, backhoes, loaders, tractors, etc.) along with the use of smaller power tools, generators, and other sources of noise. During each construction phase there would be a different mix of equipment operating and noise levels would vary based on the amount of equipment in operation and the location of each activity. As such, construction activity noise levels during each phase would fluctuate depending on the particular type, number, and duration of use of the various pieces of construction equipment.

Table 3.5-6, *Construction Equipment Usage and Noise Levels*, lists the type, maximum noise level, quantity, usage factor, and estimated noise levels of construction equipment to be used for each phase of construction. It should be noted that maximum noise levels associated with construction equipment would only be generated when the equipment is operated at full power. Typically, the operating cycle for a piece of construction equipment would involve one, or two, minutes of full power operation followed by three, or four, minutes at lower power settings. As such, the maximum noise levels shown in Table 3.5-6 would occur occasionally throughout the construction day.

As discussed previously, the Project site is bounded by West 14th Street and West 15th Street to the north, South Leland Street to the west, West 17th Street to the south, and Dana Middle School to the east. Noise-sensitive receptors to the north, south, and west of the Project site consist of residential uses, located approximately 70 feet, 100 feet, and 100 feet from the nearest construction activity, respectively. The closest receptors to the east of the Project site are Dana Middle School, located approximately 350 feet from the nearest construction activity. To present a conservative impact analysis, the estimated noise levels were calculated for a scenario in which the loudest equipment were assumed to be located at the construction area boundary closest to sensitive receptors. The remaining construction equipment were assumed to be located at the approximate mid-point within the construction area boundary and at the furthest point within the construction area boundary relative to the sensitive receptor. Distances between the closest construction site and the receptors with estimated noise levels per construction phase are presented in **Table 3.5-7,** *Estimated Construction Noise Levels at Sensitive Receptors*. Calculated noise levels take into consideration noise shielding provided by existing buildings. However, any noise shielding provided by existing screening walls, or landscaping (such as trees), has not been considered. Vegetation can achieve reductions in noise if it is high enough, wide enough, and dense enough so that it cannot be seen over, or through (FHWA, 2017). Although trees currently line the boundaries of the school site, the height, width, and density of the vegetation is not sufficient to block the line-of-sight between the Campus and the public right-of-way. Therefore, it

is assumed that existing vegetation would not provide any noise shielding from onsite construction activity.

TABLE 3.5-6
CONSTRUCTION EQUIPMENT USAGE AND NOISE LEVELS

Activity and Equipment	Maximum Noise Level at 50 feet (dBA) [b]	Equipment Quantity (per Phase)	Usage Factor [b]
Demolition			
Excavator	81	1	40%
Other Construction Equipment	85	1	50%
Rubber Tired Dozer	82	1	40%
Crushing Equipment	84	1	10%
Concrete Saw	90	1	20%
Grading/Modernization			
Tractors/Loaders/Backhoes	80	1	25%
Rubber Tired Dozer	82	1	40%
Construction (Interim Housing/Portables)			
Forklift	75	1	10%
Crane	81	1	40%
Generator Sets	81	1	50%
Tractors/Loaders/Backhoes	80	1	25%
Welder	74	1	40%
Architectural Coating			
Air Compressor	78	1	50%
Paving			
Paver	77	2	50%
Roller	80	2	20%
Paving Equipment	90	2	20%

[a] Maximum Noise Levels and Usage Factor are derived from Federal Highway Administration's (FHWA) Roadway Construction Noise Model User's Guide. Noise levels for those equipment not included in this User's Guide are estimated based on similar equipment.

SOURCE: LAUSD 2016, ESA 2017

TABLE 3.5-7
ESTIMATED CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS

Receptor	Estimated Closest Distance (feet) [1]	Existing Ambient Noise Level (dBA L_{eq}) [2]	Threshold (dBA L_{eq}) [3]	Estimated Hourly Noise Levels (dBA L_{eq})	Reduced Hourly Noise Levels (dBA L_{eq}) [4]	Exceeds Threshold?
R1	70	53	58	75	52	No
R2	80	54	59	76	53	No
R3	80	51	56	77	54	No
R4	100	54	59	75	52	No
R5	100	54	59	76	53	No
Onsite Classrooms	25	--	67	87	64	No
Dana Middle School	350	--	67	59	--	No

NOTE: See Appendix A for detailed construction noise calculations.

[1] Distances shown represent the distance of the nearest construction activity to each receptor. Noise modeling accounted for equipment placed at the approximated closest, midpoint, and furthest points of the phase area.

[2] Ambient noise was not measured onsite at San Pedro High School or at Dana Middle School.

[3] Threshold for residential receptors +5 dBA over measured existing ambient noise level (see Table 3.5-1). Exterior Threshold for San Pedro High School and Dana Middle School 67 dBA as established in the LAUSD SUP PEIR per Education Code Section 17215.

[4] Assumes implementation of noise control measures: exhaust mufflers (- 3dBA) and sound barrier (-20 dBA).

SOURCE: ESA, 2017

Noise impacts are considered potentially significant when construction noise levels exceed the ambient noise levels by 5 dBA, or more (see Table 3.5-1). Pursuant to Education Code Section 17215 and the LAUSD SUP Program EIR, the exterior noise significance threshold for school sites is 67 dBA. As shown in Table 3.5-7, estimated construction noise levels would potentially exceed the applicable significance thresholds at all studied residential receptors and onsite classrooms. Therefore, the impact would be considered potentially significant before implementation of Program EIR SCs.

The proposed Project requires compliance with the Program EIR SCs, as shown in Table 3.5-5. SC-N-9 requires site-specific noise control measures to be implemented during construction. Such measures include installation of exhaust mufflers, proper maintenance of construction equipment, and the use of noise barriers. Absorptive noise mufflers are commercially available and can feasibly reduce noise emitted by heavy-duty construction equipment.[3] The City of Los Angeles recognizes that the use of mufflers can achieve noise reductions of up to 3 dBA (City of LA, 2006). In addition, installation of a temporary 15-foot high noise barrier with acoustical blankets with a minimum sound transmission class (STC) of 25 and noise reduction coefficient (NRC) of 0.75 can reduce noise levels by up to 20 dBA. Therefore, it is estimated that implementation of the Program EIR SCs would reduce Project-related construction noise by a total of 23 dBA.

[3] United Muffler Corp, https://www.unitedmuffler.com/; Auto-jet Muffler Corp, http://mandrelbending-tubefabrication.com/index.php; AP Exhaust Technologies, http://www.apexhaust.com/.

As shown in Table 3.5-7, construction noise levels would be reduced to acceptable levels after implementation of the Standard Conditions identified above. Therefore, impacts would be less than significant with respect to noise levels.

Offsite Construction Traffic Noise

Construction-related vehicular traffic including hauling activities would generate higher noise levels to the receptors along the access routes (i.e., West 17th Street, South Leland Street, West 15th Street, and West 14th Street). The maximum number of haul trucks accessing the Project site each day for the Soil Removal Phase would be 50 trucks, a total of 100 one-way trips. Assuming that 10 percent of daily trips would occur during the peak hour, 10 truck trips would occur during the peak hour.

Table 3.5-8, *On-Road Construction Traffic Noise* Levels summarizes anticipated construction traffic noise levels during the soil removal phase of construction. As shown in Table 3.5-8, noise level increases by truck trips would be below the significance threshold of a 5 dBA increase over existing ambient levels. Therefore, noise impacts would be less than significant with respect to offsite construction traffic.

TABLE 3.5-8
ON-ROAD CONSTRUCTION TRAFFIC NOISE LEVELS

				Leq (dBA)	
Roadway Segment (Receptor)	**Modeled Distance (feet)[1]**	**Existing Ambient[2]**	**Threshold[3]**	**Project Haul Truck Noise**	**Exceed Threshold?**
14th Street (R1)	40	53	58	56	No
Alma Street (R2)	50	54	59	55	No
15th Street (R3)	45	51	56	56	No
Leland Street (R4)	50	54	59	55	No
17th Street (R5)	30	54	59	58	No

See Appendix A.

1 Calculated distance for each roadway segment is based on the distance of the nearest receptor property line to the roadway centerline.

2 See Table 3.5-1

3 Existing Ambient +5 dBA

SOURCE: ESA, 2017.

Operational Noise

The Project would result in potentially significant impacts if there is a permanent increase of over 3 dBA in ambient noise levels within the Project vicinity above existing levels without the Project. To increase the future ambient noise by 3 dBA, in general, it would be necessary to double the number of students, double the school activities over existing conditions, or double the traffic volumes. Project implementation would not provide for an increase in the number of students attending the school, staff required to operate the school, or traffic volumes.

New structures would include stationary noise sources, such as a generator, or air conditioning units. Although the Project would result in the installation of new mechanical equipment, the

operation of older mechanical equipment currently occurs on the Campus. Therefore, no change in sources of stationary noise would occur due to the Project. Further, the proposed Project would comply with SC-N-2, which requires the purchase of the lowest noise-producing HVAC units emitting noise levels no greater than 50 dBA and SC-N-4, which requires that noise attenuation measures be incorporated to minimize permanent increases in ambient noise to less than 3 dBA. Therefore, impacts related to operational noise would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Less than Significant

Exposure to Vibration Levels

Impact 3.5-2: The Project could result in exposure of persons to, or generation of, excessive groundborne vibration.

Construction

Ground-borne vibration would be generated from the operation of heavy construction equipment at the Project site, which could potentially affect the existing sensitive land uses surrounding the site, as well as the students on Campus.

Construction equipment could be close to the residential structures in the Project vicinity. However, it should be noted that the existing structures on Campus would be closer than those residential structures. The construction equipment could be as close as 10 feet from existing onsite structures.

Ground-borne vibration levels resulting from construction activities at the Project site were estimated using data published by the Federal Transit Administration (FTA) in its Transit Noise and Vibration Impact Assessment (2006) document. The Program EIR has adopted vibration standards that are used to evaluate potential human annoyance and architectural damage impacts related to construction activities, which are shown in Table 3.5-2 and Table 3.5-3, respectively.

The various PPV and VdB levels for the general construction equipment that would operate during the construction of the proposed Project are identified in **Table 3.5-9**. Note that pile driving would not be required for the proposed Project.

Structural Damage

Construction activities associated with the proposed Project would have the potential to impact the existing school buildings and surrounding offsite structures. For existing school buildings, the construction equipment could be located within 15 feet of structures, which would result in a significant impact. Although the proposed Project would require compliance with SC-N-6 through SC-N-8, impacts would not be reduced to less than significant. Therefore, impacts would be potentially significant and mitigation would be required.

TABLE 3.5-9
VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Approximate PPV (in/sec) at 25 feet	Approximate RMS (VdB) at 25 feet
Large Bulldozer	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

SOURCE: FTA, 2006.

The offsite structures are considered to be non-engineered timber structures. The vibration impact threshold for the offsite structures would be 0.2 in/sec PPV. The PPV level of a large bulldozer at 25 feet would be 0.089 in/sec PPV. In order to exceed 0.2 in/sec PPV, a large bulldozer needs to be as close as 15 feet from the offsite structures. The closest offsite structure to the Project site is located greater than 50 feet away. Therefore, Project-related vibration levels of 0.2 in/sec PPV, or greater, would not be experienced at offsite structures and impacts would be less than significant.

Human Annoyance

Construction-related vibration could annoy people within a nearby building. The vibration impact threshold for human annoyance at a residential structure is 78 VdB. In order to exceed 78 VdB, a large bulldozer would need to be located as close as 50 feet from the structures. As stated above, the nearest residential structures are located greater than 50 feet from the Project site. Therefore, Project-related vibration levels of 78 VdB, or greater, would not be experienced at offsite structures and impacts would be less than significant. No mitigation nor further study is required.

Construction-related vibration could cause annoyance to onsite students while class is in session. The vibration impact threshold for human annoyance within classrooms is 84 VdB, considering the sensitivity would be similar to an office environment as presented in Table 3.5-2. In order to exceed 84 VdB, a large bulldozer would need to be located as close as 30 feet from classrooms. Given the configuration of the Project site, it would be possible for construction equipment to be within 30 feet from classrooms, therefore this impact would be considered potentially significant. Although the proposed Project would require compliance with SC-N-5, impacts would not be reduced to less-than-significant levels and mitigation would be required.

Operation

Once construction activities have been completed, there would be no sources of vibration at the Project site. Therefore, no impact would occur.

Significance Determination: Potentially Significant

Mitigation Measures

Implementation of the following mitigation measure is required to reduce impacts related to structural damage during construction:

NOISE-1: To avoid structural damage, when the construction equipment is within 15 feet of existing school buildings, large construction equipment (greater than 300 horsepower), such as large bulldozer and loaded trucks, should be replaced with smaller equipment (less than 300 horsepower) when feasible.

Implementation of the following mitigation measure is required to reduce impacts related to human annoyance:

NOISE-2: In the event that construction activity would occur within 30 feet of occupied classrooms, large construction equipment (greater than 300 horsepower), such as large bulldozer and loaded trucks, should be replaced with smaller equipment (less than 300 horsepower) when feasible.

Significance after Mitigation: After implementation of Mitigation Measure NOISE-1, impacts related to structural damage by vibration would be less than significant. This is vibrational energy from smaller construction equipment (less than 300 horsepower) at distances within 15 feet would be below the threshold of 0.2 in/sec.

After implementation of Mitigation Measure NOISE-2, impacts related to human annoyance from vibration would be reduced. This is because smaller construction equipment (less than 300 horsepower), at distances within 30 feet of classrooms, would generate vibrational velocity levels that would not trigger human annoyance. For instance, a small bulldozer, at a distance of 25 feet, would generate vibration velocity levels of approximately 58 (VdB), which is below the ground-borne vibration criteria regarding human annoyance of 84 (VdB). Therefore, impacts would be less than significant with respect to to human annoyance from vibration.

Permanent Increase in Ambient Noise Levels

Impact 3.5-3: The Project would not result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.

As previously described in the discussion for Impact 3.5-1, the proposed Project would not result in a 3 dBA increase in noise over existing ambient conditions. Therefore, impacts would be less than significant with respect to permanent increases in ambient noise levels.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Less than Significant

Temporary Increase in Ambient Noise Levels

Impact 3.5-4: The Project would not result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project.

As previously described in the discussion for Impact 3.5-1, the proposed Project would be expected to result in temporary increases in ambient noise levels during construction. However, implementation of SC-N-9 would reduce noise levels at neighboring residential receptors as well as onsite classrooms, not exceeding a 5 dBA increase over ambient levels. Therefore, impacts would be less than significant with respect to temporary increases in ambient noise levels.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Less than Significant

3.5.6 Cumulative Impact Analysis

As an active school campus, San Pedro HS is anticipated to have ongoing maintenance activities that will occur throughout the Campus. However, subsequent projects on the Campus would not have the same scope, or scale, associated with this Project and would generate little or no construction noise. In addition, the District has more than 22 comprehensive modernization, upgrade, or new development projects planned for campuses located within the District's boundaries but none of these would occur within one mile of the Campus. No other construction activities would occur on the Campus, other than activities described and analyzed herein, that would contribute to a cumulative construction noise environment. Additionally, the City of Los Angeles indicates that there are no ongoing or reasonably foreseeable projects that could involve concurrent construction activities within the San Pedro Community Area. Therefore, since the 2006 City of Los Angeles CEQA Thresholds Guide (LA CEQA Thresholds Guide) establishes the screening criterion of 500 feet for noise sensitive uses, the cumulative construction and operational noise and vibration impacts would be less than significant.

3.5.7 References

California Code of Regulations, Title 5. Education, Division 1. California Department of Education, Chapter 13. School Facilities and Equipment, Subchapter 1. School Housing, Article 2. School Sites, 14010. Standards for School Site Selection. Available: https://govt.westlaw.com/calregs/Document/I8037DA60D48011DEBC02831C6D6C108E?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default). Accessed September 2017.

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City of Los Angeles, 2006. LA CEQA Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles

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Los Angeles Unified School District (LAUSD), July 28, 2015. Character-Defining Features Memorandum (CDFM) for San Pedro High School, 1319 East 41st Street, Los Angeles, California 90011. Los Angeles, CA.

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——. January 2015. Los Angeles Unified School District Design Guidelines and Treatment Approaches for Historic Schools. Los Angeles, CA.

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United States Environmental Protection Agency (USEPA), 1974. *EPA Identifies Noise Levels Affecting Health and Welfare*.

3.6 Transportation and Traffic

This section provides an assessment of potential impacts related to transportation and traffic that could result from implementation of the proposed Project. Potential impacts addressed in this section are associated with conflicts with a plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system; introduction of safety/risk elements related to traffic hazards, and emergency vehicle access; and conflicts with adopted plans related to alternative transportation modes (transit, pedestrian, bicycle). The analysis in this section is primarily based on the San Pedro High School Traffic and Pedestrian Safety Memo (ESA, 2018), which is included as Appendix Q of this EIR.

The Los Angeles Unified School District (LAUSD) received scoping comments (Appendix A), including a comment from a homeowner on South Leland Street regarding Project-generated increases in traffic, the proposed addition of a new access driveway for the school on the corner of 17th Street and South Leland Street, and potential increased safety risks (particularly related to children playing in the neighborhood). The commenter requested that speed humps be installed on South Leland Street. These comments are addressed in this section.

3.6.1 Environmental Setting

Access to the Project site is provided by a series of local and regional roads. The roads that would be used by Project-related traffic (construction workers and trucks) are anticipated to be West 14th Street and West 17th Street (two-lane local streets) from Gaffey Street (four-lane arterial), and I-110 and SR 47 (regional freeways, located about two miles northeast of the Project site). The street intersections on the expected haul routes where Project truck traffic would turn generally are controlled by traffic signals, or by stop signs, on all approaches. Characteristics of the existing roadway system in the Project vicinity are shown in **Table 3.6-1**.

TABLE 3.6-1
STUDY AREA ROADWAY SYSTEM

Roadway	Designation	Number of Travel Lanes	Sidewalks	Bicycle Lanes
West 14th Street	Local Street (Standard)	2	Yes	No
West 17th Street	Collector	2	Yes	No
South Leland Street	Local Street (Standard)	2	Yes	No
Gaffey Street	Avenue II (Secondary Highway)	4	Yes	No

3.6.2 Regulatory Setting

State

There are no state regulatory transportation plans, or programs, that are applicable to potential impacts of the proposed Project's temporary construction-period activities. As described below in

Section 3.6.5, because the proposed Project would not increase capacity for enrollment, or staff, at the school, there would be no permanent increase in traffic generated by the Project, and no permanent (ongoing) transportation effects caused by the Project (i.e., after construction is complete).

Regional

There are no regional regulatory transportation plans, or programs, that are applicable to potential impacts of the proposed Project's temporary construction-period activities. As described below in Section 3.6.5, because the proposed Project would not increase capacity for enrollment, or staff, at the school, there would be no permanent increase in traffic generated by the Project and no permanent (ongoing) transportation effects caused by the Project (i.e., after construction is complete).

Local

City of Los Angeles Traffic Study Policies and Procedures. The significance of potential Project-generated traffic impacts on roadways under the jurisdiction of the City of Los Angeles is determined based on criteria established by that jurisdiction.

3.6.3 Thresholds of Significance

For the purposes of this EIR, LAUSD has used the checklist questions in Appendix G of the CEQA Guidelines as the significance criteria, along with applicable thresholds of significance established by the local jurisdiction (City of Los Angeles), to determine whether the Project would have a significant environmental impact regarding Transportation and Traffic. Based on the size and scope of the Project and the potential for impacts, the criteria identified below are included for evaluation in this EIR. Please see Section 4.1, *Impacts Found Not to Be Significant*, of this EIR, for a discussion of other issues associated with the evaluation of Transportation and Traffic where the characteristics of the Project made it clear that effects would not be significant and further evaluation in this section was not warranted.

- 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 (see Impact 3.6-1, below);
- 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 (see Impact 3.6-2, below);
- Result in a change in air traffic patterns, including either an increase in traffic levels, or a change in location that results in substantial safety risks (see Initial Study section 4.17 in Appendix A of this Draft EIR);
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections), or incompatible uses (e.g., farm equipment) (see Impact 3.6-3, below);
- Result in inadequate emergency access (see Impact 3.6-4, below); 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 (see Impact 3.6-5, below).

3.6.4 Methodology

It is anticipated that Campus operations would be more efficient, or would be otherwise improved, following implementation of the proposed Project, which would result in new and upgraded facilities, and would not result in substantive changes to the existing operation of the school. Project implementation would not provide for an increase in the number of students attending the school, or staff required to operate the school. As such, operational activities associated with the proposed Project are not additive to those operations analyzed in the Program EIR and would not result in substantial changes that have not previously been identified in the Program EIR. Specifically related to the traffic analysis presented herein, there would be no permanent increase in traffic generated by the school. Therefore, this analysis primarily focuses on potential impacts associated with temporary increases in traffic associated with Project construction activity. The exception to that focus is an evaluation of potential impacts associated with the proposed reconfiguration of the vehicular/bus drop-off and pickup zones, new driveway on West 17th Street for the parking lot at the southwest corner of the Campus, and the change to the main entrance to the Campus.

Included as part of the analysis is an estimate of construction trip generation using forecasts of construction workers and trucks provided by LAUSD; and evaluation of the effect of Project construction-generated traffic on traffic flow conditions on area roads, based on the general carrying capacities of two-lane and four-lane roadways; and evaluation of Existing with Project pedestrian safety conditions.

3.6.5 Impact Analysis

Traffic Increase

Impact 3.6-1: The Project would not 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.

Projects implemented under the Program EIR are anticipated to have less-than-significant impacts related to transportation and circulation within the LAUSD service area with the incorporation of Standard Conditions (SCs). Applicable SCs related to Project-specific impacts to transportation and circulation are provided in **Table 3.6-2**.

TABLE 3.6-2
TRANSPORTATION AND CIRCULATION STANDARD CONDITIONS OF APPROVAL

Applicable SCs	Description
SC-T-2	**School Design Guide** Vehicular access and parking shall comply with Section 2.3, Vehicular Access and Parking of the School Design Guide, January 2014. The Design Guide contains the following regulations related to traffic: • Parking Space Requirements • General Parking Guidelines • Vehicular Access and Pedestrian Safety • Parking Structure Security
SC-T-4	LAUSD shall require its contractors to submit a construction worksite traffic control plan to the local City or County jurisdiction for review prior to construction. The plan shall show the location of any haul routes, hours of operation, protective devices, warning signs, and access to abutting properties. LAUSD shall encourage its contractor to limit construction-related trucks to off-peak commute periods. As required by Caltrans, applicable transportation related safety measures shall be implemented during construction.

The proposed Project would occur on the existing San Pedro HS Campus. Because the proposed Project would not increase capacity for enrollment or staff at the school, there would be no permanent increase in traffic generated by the Project. However, there could be potential redistribution of traffic as a result of the proposed reconfiguration of the vehicular/bus drop-off and pickup zones, new driveway on West 17th Street for the parking lot at the southwest corner of the Campus, and the change to the main entrance to the Campus.

More people will likely use West 17th Street and South Leland Street (to access the new drop-off/pickup zone on South Leland Street), with decreased use of West 14th Street (to access the existing drop-off/pickup zone on South Alma Street / West 15th Street). After the Project is complete, the existing drop off/pickup zone on South Alma Street / West 15th Street will remain in place, and new drop off/pickup zones will be put in place on South Leland Street and West 17th Street, which will result in greater dispersal of vehicles dropping off and picking ups students. The increase to the traffic volume on West 17th Street and South Leland Street is not expected to be substantial, and West 17th Street and South Leland Street would continue to accommodate traffic within the roadways' carrying capacity.[1, 2] Regarding potential effects on traffic circulation associated with the proposed new driveway on West 17th Street for the parking lot, the number of vehicles travelling to and from the parking lot would be less than at present (i.e., there would be fewer parking stalls in the lot). For the above reasons, the Project would not cause substantial increases in traffic in relation to the existing traffic load and capacity of the street system. Impacts would be less than significant.

1 Available LADOT traffic volume data for West 17th Street indicates volume-to-capacity ratios of no higher than 0.300 (i.e., no higher than 30 percent of the carrying capacity of the street). Although no LADOT traffic volume data is available for South Leland Street, it is reasonable to judge a similar volume-to-capacity ratio (i.e., lower than the carrying capacity) for South Leland Street.

2 The Project would not cause a change in the driving habits of people traveling on the area roads (e.g., there is no basis for expecting higher travel speeds), and the Project would not create a situation whereby speed humps would be needed to slow travel speeds.

Construction of the proposed Project would include onsite demolition, excavation, stockpiling, grading, and building activities. In addition, trucks would intermittently deliver building materials to the site. The work hours would be such that construction workers would primarily travel to and from the Project site outside of morning and evening peak traffic hours. In most cases, truck loading / unloading would be conducted between the hours of 7:00 a.m. and 6:00 p.m., with truck trips spread throughout the day during work hours. To assist in site ingress and egress, flaggers provided by the Project contractor(s) may be used to assist, or direct, traffic flows to and from the local streets.

Based on information provided by LAUSD, the proposed Project would require a maximum of about 150 workers onsite on a given day during the summer break, generating a maximum of about 376 one-way trips per day.[3] During the one-week period of pre-construction removal of contaminated soil, there would be 4 to 6 workers onsite each day. The maximum number of daily truck trips would be about 100 one-way trips per day (for both the removal of contaminated soil and Project construction). It is anticipated that truck trips would be spread over the daily work hours. Conservatively assuming that the up to 476 one-way vehicle trips (376 worker trips plus 100 truck trips) would travel on all of the study roads, the resulting increase to v/c ratios under Existing with Project conditions would be 0.032 and 0.012 on the two-lane and four-lane roads, respectively. As such, study area roadways would continue to operate with a v/c ratio of less than 0.700 on a daily basis under the Existing plus Project conditions, and the temporary Project-related increases in v/c ratio would not exceed the threshold of significance established by the Los Angeles Department of Transportation (LADOT). Therefore, the roadways would continue to accommodate traffic within the roadways' carrying capacity, and Project construction traffic would not result in any significant traffic impacts at the study area roadways.

As shown in Table 3.6-2, LAUSD requires its contractors to submit a construction worksite traffic control plan to LADOT for review prior to construction, as required by SC-T-4. A "haul route permit" may be required and obtained from the Los Angeles Department of Building and Safety (LADBS). For reasons discussed above, and the SC-T-4 requirements, the Project would not cause substantial increases in traffic in relation to the existing traffic load and capacity of the street system. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Less than Significant

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[3] Daily trips by construction workers would consist of inbound and outbound commute trips (conservatively assumed to be each worker in their own vehicle), plus midday trips (lunch or other errands) by about 25% of the workers.

Congestion Management Program

Impact 3.6-2: The Project would not 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.

Level of service standards established by jurisdictions such as Los Angeles County are intended to regulate long-term (permanent) traffic increases associated with new development and do not apply to short-term (temporary) traffic increases that occur during construction.[4] As stated above, school enrollment and staff levels would remain the same at San Pedro HS following completion of the proposed Project, and there would be no permanent increase in traffic generated by the Project. Potential impacts associated with the proposed Project would be limited to construction activity. Specifically, increased vehicle trips and potential congestion generated by construction-related passenger vehicles and truck trips would cease when construction is complete. Implementation of the proposed Project would not result in any long-term, ongoing effects related to traffic and congestion. Therefore, no impacts would occur.

Mitigation Measures

No mitigation measures are required.

Significance Determination: No Impact

Design Hazards

Impact 3.6-3: The Project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections), or incompatible uses (e.g., farm equipment).

The proposed Project would not result in any hazards due to design features or incompatible uses. The proposed Project would be implemented at an existing school site, and would not directly, or indirectly, alter the configuration of the existing street system (including sidewalks, crosswalks or traffic control devices at intersections). In addition, traffic generated during Project construction would be generally compatible with the mix of vehicle types (autos and trucks) currently using the regional and local roadways surrounding the Campus. Vehicular/bus drop-off and pickup zones would be designated in the curb lane adjacent to the Campus on South Leland Street and West 17th Street. The student drop-off and pickup operations have been planned to minimize vehicular queuing in traffic lanes on the local street system (and to reduce queuing that currently occurs on South Alma Street and West 15th Street).

[4] Per the Los Angeles County 2010 Congestion Management Program, analysis of the cause of a "deficiency" (i.e., when level of service standards are not maintained) shall exclude traffic generated by construction activity.

LAUSD would implement SC-T-2, which requires that the proposed new parking areas would be designed to meet the District's School Design Guidelines which provide requirements for campus designs that ensure that potential hazards, or incompatible uses, are avoided. The Project would alter vehicle access for the Campus by introducing a new driveway on West 17th Street for a reconfigured parking lot in the southwest corner of the Project site. The Project design would employ standard engineering practices, such as standard driveway widths and turning radii and the provision of adequate line of sight to avoid design elements that could result in hazards.[5]

The reconfigured parking lots would be designed per the requirements of LAUSD and the LADOT. Although the driveway on West 17th Street would create a new potential conflict point where it crosses the sidewalk, the associated potential hazards would not cause a significant pedestrian safety impact because (1) the driveway would be used only by school staff (i.e., predominantly during the periods before students arrive at, and after students depart from, the school); and (2) the number of vehicles travelling to and from the parking lot (and using the West 17th Street driveway) would be less than at present because there would be fewer parking stalls in the lot. In addition, the Project would reduce the relative potential for conflicts and pedestrian safety impacts on the South Leland Street side of the southwest parking lot because the same two driveways crossing the sidewalk would provide access only to the 7-space visitor parking lot, rather than the existing 83-space parking lot, greatly reducing the number of vehicles crossing the South Leland Street sidewalk.

For the above-stated reasons, the proposed Project would not substantially increase hazards (to vehicles or pedestrians, including people travelling to and from the Campus, and people in the surrounding neighborhood [including children]) due to a design feature or incompatible uses. Therefore, impacts from the Project would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Less than Significant

Emergency Access

Impact 3.6-4: The Project would not result in inadequate emergency access.

San Pedro HS is located in a developed urban area with an existing roadway network that accommodates the movements of emergency vehicles that travel in the area. Projects are required to provide emergency vehicle access for the Los Angeles Fire Department (LAFD). Conformance to District policies and local ordinances would ensure that adequate access would be maintained. Per SC-T-4, LAUSD requires its contractors to submit a construction worksite traffic control plan (including strategies to maintain emergency access at all times) to LADOT for review prior to

[5] LAUSD SUP Final Environmental Impact Report, September 2015, at pages 5.13-10 to 5.13-11.

construction. Staging areas for construction would be located on school property; therefore, emergency access to the site would not be adversely affected during Project construction. The proposed Project would not result in inadequate emergency access. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Less than Significant

Public Transit, Bicycle and Pedestrian Facilities

Impact 3.6-5: The Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance, or safety, of such facilities.

Projects implemented under the Program EIR are anticipated to have less-than-significant impacts to pedestrian safety within the LAUSD service area. The Project-specific analysis provided below determined that implementation of the proposed Project would also have less-than-significant impacts to pedestrian safety.

In general, adopted policies, plans, and programs pertaining to public transit, bicycle, and pedestrian travel are intended to be used for long-term planning purposes and do not apply to construction activities. The proposed Project would not directly, or indirectly, eliminate alternative modes of transportation, transportation corridors, or facilities (e.g., bus stops). Further, the proposed Project would not prevent the use of any roads on which public transit routes operate, school enrollment would remain the same following the Project as stated above, and there would be no permanent increase in traffic generated by the school.

Students, faculty and staff can currently travel to school using public transit routes, bicycles and by walking. As stated previously, there are sidewalks on all streets surrounding the school. In addition, LAUSD encourages ride-sharing programs for students and teachers, as well as walking and riding bicycles to school. The Project site vicinity is served by the City of Los Angeles DASH San Pedro Route, with bus stops at West 19th Street and South Leland and South Alma streets, and by the County of Los Angeles Metropolitan Transit Authority, with bus stops for Route 205 and 550 located on West 13th Street at South Leland Street.

During construction activities, the Project may affect sidewalk accessibility surrounding the San Pedro HS Campus. However, any effects on sidewalk accessibility would be temporary (limited to construction), and the construction contractor would be required to ensure safe alternative routes are available. Therefore, pedestrian access to the school during construction would be minimally altered, and as required by SC-T-4, contractors would be required to submit a

construction worksite traffic control plan (including strategies to manage pedestrian and bicycle circulation) to LADOT for review prior to construction.

As described under Impact 3.6-3, the proposed Project would not substantially increase pedestrian safety hazards. LAUSD would implement SC-T-2, which requires that the proposed new parking areas be designed to meet the District's School Design Guidelines by ensuring that potential hazards, or incompatible uses, are avoided. The Project would alter vehicle access for the Campus by introducing a new driveway on West 17th Street for a reconfigured parking lot in the southwest corner of the Project site. The potential hazards associated with this new driveway and its conflict point (where it crosses the sidewalk) would not cause a significant pedestrian safety impact because (1) the driveway would be used only by school staff (i.e., predominantly during the periods before students arrive at, and after students depart from, the school); and (2) the number of vehicles travelling to and from the smaller parking lot (fewer parking stalls) would be less than at present. In addition, the Project would reduce the relative potential for conflicts and pedestrian safety impacts on the South Leland Street side of the southwest parking lot because the same two driveways crossing the sidewalk would provide access only to the 7-space visitor parking lot, rather than the existing 83-space parking lot, greatly reducing the number of vehicles crossing the South Leland Street sidewalk.

Therefore, the Project would have a less-than-significant impact on the performance and safety of public transit, bicycle or pedestrian facilities.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Less than Significant

3.6.6 Cumulative Impact Analysis

The geographic scope for cumulative impacts to transportation and traffic is focused on projects (currently under construction, approved, or reasonably foreseeable) located such that traffic generated by those projects would use one or more of the area roadways that would be used for the proposed Project (i.e., the roadways analyzed in Section 3.6.4) during the anticipated 2019-2022 construction period. The temporal context for the cumulative transportation and traffic impacts includes the proposed Project's construction phases. The geographic scope and temporal context were selected because the potential for cumulative transportation impacts exists where there are multiple projects proposed in an area that have overlapping construction schedules and/or project operations that could affect similar resources. Projects with overlapping construction schedules could result in a substantial contribution to increased traffic levels and roadway hazards throughout the surrounding roadway network.

The temporary and short-term construction-related traffic impacts associated with the proposed Project would be related to truck routes and construction area access routes used by proposed Project workers and material haulers, and potential increased traffic safety hazards. In conjunction

with other projects identified in Table 3-1, *LAUSD Comprehensive Modernization Project List,* and projects identified in the San Pedro Community Plan Area, significant cumulative impacts could occur if construction activities (i.e., truck and worker trip-generating activities) for those other projects were to overlap (in time and place) with the proposed Project. The City of Los Angeles was contacted for a comprehensive list of current and pending projects for the San Pedro Community Plan Area; however, the City concluded that no major projects or project EIRs in San Pedro have been processed as of May 2018. Pursuant to SC-T-4, LAUSD shall require its contractors to submit a construction worksite traffic control plan to the City of Los Angeles for review prior to construction. The plan shall show the location of any haul routes, hours of operation, protective devices, warning signs, and access to abutting properties. LAUSD shall encourage its contractor to limit construction-related trucks to off-peak commute periods. Therefore, the proposed Project's contribution to any transportation and traffic-related cumulative impacts during construction would not be cumulatively considerable and the associated cumulative impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance Determination: Less than Significant

3.6.7 References

County of Los Angeles Metropolitan Transit Authority, 2017. Maps for Bus Routes 205 and 550, effective December 10, 2017. Available at https://www.metro.net/riding/maps/.

ESA, 2018, *San Pedro High School Comprehensive Modernization Traffic and Pedestrian Safety Analysis (Draft)*, March 15.

LADOT (Los Angeles Department of Transportation), 2014, *Traffic Study Policies and Procedures*, August.

LADOT/Transit, 2017, DASH San Pedro Route Map, effective July 1, 2017. Available at https://www.ladottransit.com/dash/routes/SanPedro/sanpedro.html.

CHAPTER 4
Other CEQA Considerations

This chapter presents the evaluation of other types of environmental impacts require by CEQA that are not covered within the other chapters of this Draft EIR. The other CEQA considerations include environmental effects that were found not to be significant, significant irreversible environmental changes that would be caused by the Project, growth-inducing impacts, and significant and unavoidable adverse impacts.

4.1 Effects Found not to be Significant

LAUSD, through the scoping process, determined the proposed Project has the potential to cause, or result in, significant environmental impacts, and warranted further analysis, public review, and disclosure through the preparation of an EIR. The Notice of Preparation (NOP), dated September 29, 2017, was forwarded to the California Office of Planning and Research, State Clearinghouse (SCH), and was circulated for public review and comment. The State Clearinghouse established the public comment period for the NOP as September 29, 2017 through October 28, 2017. The assigned State Clearinghouse reference for the Project is SCH No. 2017091080. The NOP and NOP responses are presented in Appendix A of this Draft EIR.

The Initial Study prepared for the Project, and circulated on September 29, 2017, determined that the impacts listed below would not occur, or would be less than significant; therefore, these topics have not been further analyzed in this Draft EIR. Please refer to Appendix A (Initial Study) for explanations of the basis for these conclusions.

Aesthetics

- **Scenic Vista** – No Impact
- **Scenic Resources** – No Impact
- **Visual Character** – Less Than Significant Impact
- **Light and Glare** - Less Than Significant Impact

Air Quality

- **Odors** – Less Than Significant Impact

Biological Resources

- **Sensitive Natural Communities** – No Impact

- **Riparian Habitat/Sensitive Natural Community** – No Impact
- **Wetlands** – No Impact
- **Wildlife Migration** - Less Than Significant Impact
- **Local Policies/Ordinances Protecting Biological Resources** – Less Than Significant Impact
- **Conservation Planning** – No Impact

Geology and Soils

- **Fault Rupture** – No Impact
- **Seismic Ground Shaking** – Less Than Significant Impact
- **Ground Failure** – Less Than Significant Impact
- **Landslides** – Less Than Significant Impact
- **Loss of Topsoil** – Less Than Significant Impact
- **Septic Tanks** – No Impact

Hazards and Hazardous Materials

- **Hazardous Materials Emissions** – Less Than Significant Impact
- **Release of Hazardous Materials** – Less Than Significant Impact
- **Release of Hazardous Materials Near Schools** – Less Than Significant Impact
- **Hazardous Materials Site** – No Impact
- **Airport Land Use Plan** – No Impact
- **Private Airstrips** – No Impact
- **Emergency Planning** - Less Than Significant Impact
- **Wildland Fires** – No Impact

Hydrology and Water Quality

- **Water Quality Standards** – Less Than Significant Impact
- **Groundwater Recharge** – Less Than Significant Impact
- **Drainage Pattern** – Less Than Significant Impact
- **On- and Offsite Erosion** – Less Than Significant Impact
- **Water Quality** – Less Than Significant Impact
- **100-Year Flooding and Housing** – No Impact
- **Dam or Levee Failure** – No Impact
- **Inundation by seiche, tsunami, or mudflow** – Less Than Significant Impact

Land Use and Planning

- **Divide a Community** – No Impact
- **Conflict with Applicable Plans and/or Policies** – No Impact
- **Habitat Conservation Plans** – No Impact

Mineral Resources

- **Regional Mineral Resources** – No Impact
- **Local Mineral Resources** – No Impact

Population and Housing

- **Population Growth** – No Impact
- **Displacement of Housing** – No Impact
- **Displacement of People** – No Impact

Public Services

- **Fire Protection** – Less Than Significant Impact
- **Police Protection** – Less Than Significant Impact
- **Schools** - Less Than Significant Impact
- **Parks** – No Impact
- **Other Public Facilities** – No Impact

Recreation

- **Deterioration of Existing Facilities** – No Impact
- **Adverse Physical Effect on Environment** – Less Than Significant Impact

Transportation and Traffic

- **Air Traffic** – No Impact

Tribal Cultural Resources

- **Tribal Cultural Resources** – No Impact

Utilities

- **Wastewater Treatment Requirements** – Less Than Significant Impact
- **Water or Wastewater Treatment Facilities** – Less Than Significant Impact
- **Stormwater Drainage Facilities** – Less Than Significant Impact
- **Water Supplies** – Less Than Significant Impact

- **Inadequate Capacity** – Less Than Significant Impact
- **Landfill Capacity** – Less Than Significant Impact
- **Solid Waste Regulations** – Less Than Significant Impact

4.2 Significant Environmental Effects

Table ES-1 (*Summary of Environmental Effects and Mitigation Measures*), which is contained in Chapter ES, *Executive Summary*, and Section 3.1 through Section 3.6 of this Draft EIR provide a comprehensive identification of the Project's environmental effects, including the level of significance both before and after mitigation.

4.3 Significant Environmental Effects That Cannot Be Avoided if the Project is Implemented

CEQA Guidelines § 15126.2(b) requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. Development of the Project would not result in significant and unavoidable Project-related and/or cumulative impacts. Section 3.1 through Section 3.6 of this Draft EIR provide a comprehensive identification of the Project's environmental effects, including the level of significance both before, and after, mitigation.

4.4 Significant Irreversible Changes

Pursuant to CEQA *Guidelines* § 15126.2(c), an EIR must consider any significant irreversible environmental changes that would be caused by the proposed Project should it be implemented. § 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. Irretrievable commitments of resources should be evaluated to ensure that such current consumption is justified.*

Resources that would be permanently and continually consumed by implementation of the proposed Project include energy, water, and fossil fuels; however, the amount and rate of consumption of these resources would not result in the unnecessary, inefficient, or wasteful use of resources, as discussed in Section 3.3, *Energy*.

4.5 Growth-Inducing Impacts

The California Environmental Quality Act (CEQA) Guidelines (Section 15126.2(d)) require that an EIR discuss the potential growth-inducing impacts of a proposed project. The CEQA Guidelines provide the following guidance for such discussion:

> *"Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."*

A project can have direct and/or indirect growth-inducement potential. Direct growth inducement would result if a project involved construction of new housing. A project can have indirect growth-inducement potential if it would establish substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises), or if it would involve a substantial construction effort with substantial short-term employment opportunities and indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, under CEQA, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. Under CEQA, growth is not considered necessarily detrimental, or beneficial.

Based on the CEQA definition above, assessing the growth-inducement potential of the proposed Project involves answering the question: "Would implementation of the proposed Project directly, or indirectly, support economic expansion, population growth, or residential construction?" Schools are one of the chief public services needed to support growth and community development. While schools play a role in supporting additional growth, it is not the single determinant of such growth. Other factors, including General Plan policies, land use plans, and zoning, the availability of solid waste disposal capacity, wastewater treatment, transportation services, and other important public infrastructure, also influence business and residential population growth. Economic factors, in particular, greatly affect development rates and locations.

Growth Projections

The State of California requires that cities plan for changes in population, housing, and employment. If growth is projected, each city must accommodate a share of the region's anticipated growth. The Southern California Association of Governments (SCAG) forecasts three major growth indicators including population, households, and employment. These forecasts are provided in the regional transportation plans that are periodically updated by SCAG. SCAG's 2030 forecasts for Los Angeles are based on historic and recent growth trends. The Department of City Planning refines the population and housing allocations within the City's thirty-five communities or community plan areas (CPAs) so that the projected growth is focused towards regional and commercial centers and is consistent with the City's General Plan Framework Element and other City policies. The SCAG projections for population, housing units, and employment in the CPA are shown in **Table 4-1,** *2030 Population, Housing, Employment*

Projections for the San Pedro Community Plan Area. The population and household projections were adjusted by the Department of City Planning on a citywide level to reflect increased growth in specific regional centers and lower growth rates in other community plan areas.

According to the Draft San Pedro Community Plan, the total population of San Pedro is projected to increase by 1,242 people from SCAG's 2005 estimated population to the City of Los Angeles' Department of City Planning's 2030 adjusted SCAG projection. During this 25-year period, the projected population growth rate would be 1.27 percent.

The total number of housing units in San Pedro is projected to increase by 4,736 dwelling units from SCAG's 2005 estimated number of dwelling units to the City of Los Angeles' Department of City Planning's 2030 adjusted SCAG projection. During this 25-year period, the projected housing growth rate would be 15.8 percent.

The total number of jobs in San Pedro is projected to increase by 6,610 jobs from SCAG's 2005 estimated employment to the City of Los Angeles' Department of City Planning's 2030 adjusted SCAG projection. During this 25-year period, the projected employment growth rate would be 49.7 percent.

TABLE 4-1
2030 POPULATION, HOUSING, EMPLOYMENT PROJECTIONS FOR THE SAN PEDRO COMMUNITY PLAN AREA

	2005 Estimate[1]	2030 Projection[2]	Plan Capacity
Population (persons)	82,112	83,152	83,354
Housing (dwelling units)	29,911	34,647	34,731
Employment (jobs)	13,307	19,917	19,074

NOTES

1 Southern California Association of Governments (SCAG), 2005 estimate
2 City of Los Angeles Department of City Planning, Adjusted SCAG projection

Implementation of the proposed Project would not result in substantial permanent, or even short-term, construction employment that could indirectly induce population growth by establishing new employment opportunities. The temporary construction employment opportunities are expected to be filled by workers within the local economy, and new housing for construction employees would not be required. Project implementation would not extend major infrastructure to places currently unserved by such facilities. The Project would not develop a new school on a new school site. Further, the Project would not provide additional capacity. The surrounding area is developed and served by existing infrastructure and utilities. Therefore, the Project would not be removing obstacles to growth. Based on this, the proposed Project would not have substantial direct, or indirect, growth-inducing impacts.

CHAPTER 5
Alternatives

5.1 Introduction

This section addresses alternatives to the proposed Project, describes the rationale for their evaluation in the Draft Environmental Impact Report (EIR), evaluates the potential environmental impacts associated with each alternative, and compares the relative impacts of each alternative to those of the proposed Project. In addition, this section analyzes the extent to which each alternative meets the Project's objectives identified in Chapter 2, *Project Description*.

The California Environmental Quality Act (CEQA) requires that an EIR consider a reasonable range of feasible alternatives (State CEQA Guidelines, Section 15126.6(a)). According to the State CEQA Guidelines, alternatives should be those that would attain most of the basic project objectives and avoid, or substantially lessen, one, or more, significant effects of the project (State CEQA Guidelines, Section 15126.6). The "range of alternatives" is governed by the "rule of reason," which requires the EIR to set forth only those alternatives necessary to permit an informed and reasoned choice by the lead agency and to foster meaningful public participation (State CEQA Guidelines, Section 15126.6(f)).

CEQA also requires the feasibility of alternatives be considered. Section 15126.6(f)(1) states that among the factors that may be taken into account in determining feasibility are: site suitability; economic viability; availability of infrastructure; general plan consistency; other plans and regulatory limitations; jurisdictional boundaries; and (when evaluating alternative project locations) whether the proponent can reasonably acquire, control, or otherwise have access to an alternative site. Furthermore, an EIR need not consider an alternative whose effects could not be reasonably identified, whose implementation is remote, or speculative, or that would not achieve the basic project objectives.

The alternatives addressed in this EIR were identified in consideration of the following factors:

- The extent to which the alternative could avoid, or substantially lessen, the identified significant environmental effects of the proposed Project
- The extent to which the alternative could accomplish basic objectives of the proposed Project
- The feasibility of the alternative
- The requirement of the State CEQA Guidelines to consider a "no project" alternative

CEQA Guidelines Section 15126.6(e)(1) states that a no project alternative shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow

decision makers to compare the impacts of approving the proposed Project with the impacts of not approving the proposed Project. The no project alternative analysis is not the baseline for determining whether the proposed Project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline.

5.2 Project Objectives

LAUSD has established the following objectives for the proposed Project; they serve as basis for comparing the alternatives, and for the evaluation of associated environmental impacts:

- Objective #1: Increase the safety and security of the staff and students through the Campus modifications and configuration
- Objective #2: Repair and seismically retrofit aging facilities while also bringing buildings into compliance with the Americans with Disabilities Act (ADA) programmatic access requirements
- Objective #3: Upgrade buildings to include modern classroom spaces that can accommodate the California Department of Education's and District's standard classroom space of 960 square feet and modern technology and efficiencies to meet San Pedro HS's priority and specialty campus programs
- Objective #4: Promote a healthier environment through the use of green technology
- Objective #5: Design buildings and facilities that align with the current programmatic and operational needs of the Campus while retaining or enhancing opportunities for future planning
- Objective #6: Respect the history of the Campus through the rehabilitation, retention and reuse of features that have been established as character-defining or otherwise relevant to the school community (i.e., current and former students, alumni, staff, etc.) to the extent feasible, while modernizing the Campus to address the current needs of the Campus
- Objective #7 Eliminate reliance on portable classrooms.

5.3 Alternatives Not Further Evaluated in This EIR

An EIR must briefly describe the rationale for selection and rejection of alternatives. The lead agency may make an initial determination as to which alternatives are potentially feasible and, therefore, merit in-depth consideration, and which are clearly infeasible. Alternatives that are remote, or speculative, or the effects of which cannot be reasonably predicted, need not be considered (CEQA Guidelines, Section 15126.6[f][3]).

An alternative site, or location, for the Project need not be considered when its implementation is "remote and speculative" such as the site being out of the purview of the lead agency, or beyond the control of a project applicant. Alternative sites were not selected for evaluation. CEQA Guidelines Section 15126.6(f)(2) specifies that the key question with alternative sites is "whether any of the significant effects of the project would be avoided or substantially lessened by putting the project at another location." The proposed Project is being implemented as part of the LAUSD SUP, which is intended to provide improvements, repairs, and maintenance to existing LAUSD schools and future school expansions and to benefit current and future students in the

District. Therefore, implementation of the proposed comprehensive modernization of San Pedro High School could not be implemented on an alternative site.

5.4 Review of Significant Environmental Impacts

Based on the CEQA Guidelines, several factors need to be considered in determining the range of alternatives to be analyzed in an EIR and the level of analytical detail that should be provided for each alternative. These factors include: (1) the nature of the significant impacts of the proposed Project, (2) the ability of alternatives to avoid, or lessen, the significant impacts associated with the Project, (3) the ability of the alternatives to meet the objectives of the Project, and (4) the feasibility of the alternatives.

The alternatives examined in this chapter would lessen cultural resource and noise impacts associated with implementation of the proposed Project; however, they would not meet the Project objectives. Implementation of the proposed Project would not result in significant and unavoidable impacts. Impacts would be less than significant with mitigation related to the following environmental topic areas: cultural resources and noise.

This chapter includes a discussion of whether the alternatives would lessen these impacts. As the lead agency, the District will decide whether to proceed with the proposed Project, or whether to accept, or reject, an alternative identified in this chapter. As required by the CEQA Guidelines, if the District ultimately rejects an alternative, the rationale for the rejection will be presented in the findings that are required to be made before the District certifies the EIR and takes action on the Project.

5.5 Alternatives Selected for Analysis

The No Project Alternative and two project alternative scenarios, representing a range of reasonable alternatives to the proposed Project, were selected for detailed analysis. The goal for evaluating these alternatives is to identify ways to avoid, or lessen, the significant environmental effects resulting from implementation of the proposed Project, while attaining most of the Project objectives.

- **Alternative 1: No Project/No Build Alternative,** in which no Project or Project alternative, would be adopted. The Project site would remain as it is in existing conditions. No demolition, or construction of new buildings, would occur on the Project site and the existing facilities and infrastructure would continue to deteriorate. Essential repairs such as repair of portable classrooms, replacement of lead pipes, and maintenance of fire alarm and fire suppression systems would occur over time.
- **Alternative 2: No Demolition and No New Building Construction.** Under this alternative, permanent buildings would not be demolished, or removed, and new buildings would not be constructed. This alternative would consist of the modernization and/or upgrades of the Home Economics Building, Administration Building, Classroom Building 1, and Physical Education Building (Old Gymnasium). Upgrades entail seismic retrofits, retrofits in compliance with American with Disabilities Act (ADA), and infrastructure upgrades such as electrical, storm drain, gas, sewer, and water.

- **Alternative 3: Reduced Project.** Under this alternative, only portable buildings would be demolished and one new building would be constructed in the former location of the portables. This alternative would include the modernization and/or upgrades of the Home Economics Building, Administration Building, Classroom Building 1, and Physical Education Building (Old Gymnasium). Upgrades entail seismic retrofits, retrofits in compliance with American with Disabilities Act (ADA), and infrastructure upgrades such as electrical, storm drain, gas, sewer, and water.

Section 5.8 provides a comparative summary of the alternatives, including a summary of the ability of the alternatives to meet the Project objectives and a summary comparison of the potential impacts associated with the alternatives and the proposed Project.

5.6 Environmental Analysis of Alternative 1 (No Project/No Build)

Under Alternative 1, the Project site would remain as it is under existing conditions. No demolition of existing permanent structures, or construction of new buildings, would occur on the Project site and the existing facilities would continue to deteriorate. Essential repairs such as repair of portable classrooms, replacement of lead pipes, and maintenance of fire alarm and fire suppression systems would occur over time. The following sections provide an analysis of the No Project/No Build Alternative.

Air Quality

Alternative 1 would not result in any demolition, grading, or building construction. Campus structures as they exist currently would remain and be repaired as they deteriorate. Existing conditions would persist and no new criteria pollutant emissions associated with operation of heavy-duty construction equipment, or haul trucks, would be generated. Further, no new odors would be introduced to the Project site. The Project's less than significant impacts would be reduced under the No Project/No Build Alternative. Alternative 1 would result in lesser impacts that the proposed Project.

Cultural Resources

The Campus is considered a historical resource. The Campus has been assigned a California Historic Resources status code of 2S2, noting that the campus appears individually eligible for the National Register of Historic Places (NRHP) by a consensus through the Section 106 process and is listed in the California Register. Figure 2-4 in Chapter 2, *Project Description*, shows the Campus and character-defining features that account for its eligibility as a historical resource. None of the significant buildings would be demolished as part of the Project. However, a contributing building would be demolished and the landscape would be modified in certain areas. The proposed Project would not affect the resource's integrity and would not result in a substantial adverse change in its significance. Consequently, the impacts are considered less than significant.

No archaeological resources were identified in the Project area, and the Project would not result in an impact to known archaeological resources. However, there is potential for the Project to

encounter unknown subsurface archaeological resources during ground disturbance. Implementation of Standard Conditions SC-CUL-7 through SC-CUL-13, would reduce potentially significant impacts to previously unknown archaeological resources that could qualify as historical resources, or unique archaeological resources, under CEQA to a less-than-significant level.

No vertebrate fossil localities lie directly within the Project area; however, the Project site is considered highly sensitive for paleontological resources. Implementation of SC-CUL-14 and Mitigation Measures CUL-1 through -4, would reduce potentially significant impacts to fossil resources to a less than significant level.

There is a possibility that ground-disturbing activities could encounter previously undocumented human remains. In the unexpected event that human remains are unearthed during construction activities, impacts would be potentially significant. The proposed Project would comply with applicable laws and regulations. Impacts to human remains would be less than significant.

Under the No Project/No Build Alternative, no impacts to historical, archaeological, or paleontological resources would occur, because no development would ensue that would result in construction and operation of buildings. The No Project/No Build Alternative would not result in cultural resources impacts. For this reason, impacts to cultural resources would be less under this alternative when compared to the proposed Project.

Energy

Under the No Project/No Build Alternative, the existing conditions on the Project site would remain, and replacement of aging energy inefficient infrastructure would not occur. With respect to transportation fuels, existing operational trips would remain unchanged, as with the proposed Project. Existing conditions would persist and no installation of energy efficient technology meeting current building codes reducing the demand of electricity, natural gas, or water would occur. The Project's less than significant impacts would be increased.

Greenhouse Gas Emissions

Similar to air quality issues, under the No Project/No Build Alternative, the existing conditions on the Project site would remain, and no demolition, grading, or building construction would occur. Heavy-duty construction equipment and haul trucks would not be used. Therefore, Alternative 1 would not result in any local emissions of GHGs because it would not generate emission from heavy-duty construction activity in the project vicinity. However, the No Project/No Build Alternative would not replace older, inefficient structures with new structures built to meet current energy and water efficiency standards. Energy and water efficiency are key contributors to GHG emissions. Therefore, the Project's less than significant long-term operational impact would be increased under this alternative and short-term construction impact would be reduced.

Noise

Under Alternative 1, existing site conditions would continue and no changes to ambient noise, whether permanent, periodic, or temporary, would occur. In addition, no construction activity

would occur, eliminating construction noise and vibration associated with the proposed Project. While the Project's impacts have been reduced to a less than significant level with the incorporation of Standard Conditions, these less than significant impacts would be reduced under Alternative 1. None of the noise impacts associated with the proposed Project would occur under the No Project/No Build Alternative.

Transportation and Traffic

Under the No Project/No Build Alternative, existing site conditions would remain unchanged, and there would be no changes to existing external transportation and traffic conditions, such as would occur during construction activity associated with the proposed Project. While the Project's impacts have been reduced to a less than significant level with the incorporation of Standard Conditions, none of the transportation and traffic effects associated with the proposed Project would occur under the No Project/No Build Alternative.

Conclusion

Potential impacts associated with the implementation of development under Alternative 1 are compared to the potential impacts of development of the proposed Project. Compared to the proposed Project, impacts associated with air quality, cultural resources, energy, greenhouse gas emissions, and transportation and traffic would not occur. The impacts related to the regional construction emissions would be substantially reduced from less than significant under the proposed Project to no impact.

The implementation of this Alternative would result in less environmental impacts compared to the proposed Project. However, this Alternative would not meet any of the Project objectives.

5.7 Environmental Analysis of Alternative 2 (No Demolition and No New Building Construction)

Under Alternative 2, permanent buildings would not be demolished, or removed, and new buildings would not be constructed. This Alternative would consist of the modernization and/or upgrades of the Home Economics Building, Administration Building, Classroom Building 1, and Physical Education Building (Old Gymnasium).

Upgrades to the Home Economic Building, Administration Building (which includes the main classroom building), Classroom Building 1, and Physical Education (PE) Building (Old Gym) would entail seismic retrofits. Seismic retrofitting would be completed in compliance with the seismic safety requirements of the LAUSD Supplemental Geohazard Assessment Scope of Work, California Building Code, Division of State Architect, and CDE.

This Alternative includes Americans with Disabilities Act (ADA) upgrades in the Auditorium. Auditorium ADA upgrades would include accessible seating in the Auditorium; as well as accessibility improvements to the main entry, restrooms, and possibly the ticket area. Badly damaged, or missing, seats may be replaced with matching seats in District storage.

Upgrades that would be completed throughout the Campus include:

- Site-wide infrastructure, including electrical, storm drain, gas, sewer, and water improvements
- Site-wide upgrades to remove identified and prioritized barriers to program accessibility
- Student drop off area, landscape, hardscape, and exterior paint

Improvements required by the ADA, Division of the State Architect, CEQA, and the Office of the Independent Monitor for program accessibility, would ensure compliance with local, state, and/or federal facilities requirements.

Air Quality

With Alternative 2, no demolition, grading, or building construction would occur. Building upgrades such as seismic retrofit and infrastructure upgrades, which were anticipated as part of the proposed Project, would occur. This would result in less construction activity, and therefore, reduced regional construction emissions from construction equipment and employee vehicle trips.

Under Alternative 2, sensitive receptors would be exposed to reduced concentrations of toxic air contaminants and respirable particulate matter during construction activities due to reduced construction activity required. Alternative 2 would not create objectionable odors.

Cultural Resources

Alternative 2 could result in a similar or slightly reduced level of impacts to archaeological and paleontological resources, as well as human remains, in comparison to the proposed Project because this Alternative would have a slightly reduced level of ground-disturbing construction, which could encounter previously unrecorded resources. Similar to the proposed Project, implementation of Standard Conditions and mitigation measures CUL-1 through CUL-4, would also reduce the impacts of Alternative 2 to a less-than-significant level by ensuring appropriate treatment of the unanticipated discoveries of such resources. In addition, all buildings, structures, and landscape features that contribute to the significance of San Pedro HS would be retained and rehabilitated in conformance with the Secretary of the Interior's Standards for Rehabilitation. This alternative would result in no impacts to historic resources which would be a reduced impact than the proposed Project.

Energy

Under Alternative 2, no demolition, grading, or building construction would occur. Therefore, Alternative 2 would result in reduced construction impacts due to reduced construction activity. Building upgrades such as seismic retrofit and infrastructure upgrades, which were anticipated as part of the proposed Project, would occur. It is assumed that upgrades to energy and water efficiency systems to meet current code would be installed. Therefore, Alternative 2 would result in similar less than significant operational impacts as compared to the proposed Project.

Greenhouse Gas Emissions

Development under Alternative 2 and the proposed Project would not conflict with any applicable plan, policy, or regulation. Similar to air quality issues, Alternative 2 would result in decreased construction emissions because it would require reduced construction activity. It is assumed that upgrades to the existing energy and water systems, which would be included as part of the proposed Project, would increase energy and water efficiency similar to the proposed Project. Therefore, Alternative 2 would result in reduced construction impacts and similar operational impacts.

Noise

Under Alternative 2, no demolition, grading, or building construction would occur, and would not require the use of heavy-duty construction equipment, or haul trucks. Therefore, short-term construction-related noise impacts would be reduced. Consequently, construction noise impacts under the Alternative 2 would be reduced when compared to the proposed Project.

In addition, because the construction activity would be limited to building retrofit and upgrades, impacts associated with vibration during construction activities would be reduced and would be less than significant.

Under both the proposed Project and Alternative 2, no increase in operations such as vehicle trips, or outdoor activities, would occur. Therefore, operational impacts would be similar.

Transportation and Traffic

Under Alternative 2, there would be changes to existing external transportation and traffic conditions, such as would occur during construction activity associated with the proposed Project. Impacts under Alternative 2would be reduced to a less-than-significant level with the incorporation of Standard Conditions. Similarly, some of the transportation and traffic effects associated with the proposed Project would occur under Alternative 2 during construction. Since the construction activity would be limited to building retrofit and upgrades, impacts associated with construction traffic would be reduced and would be less than significant.

Under Alternative 2, the existing main entrance on the north side accessed from the intersection of West 15th Street and South Alma Street would be maintained, and therefore, would not result in changes to offsite circulation. Therefore, operational impacts would be similar to the proposed Project.

Conclusion

Potential impacts associated with the implementation of development under Alternative 2 are compared to the potential impacts of development of the proposed Project. Compared to the proposed Project, impacts associated with air quality, cultural resources, energy, greenhouse gas emissions, noise, transportation and traffic would result in less impacts.

The implementation of this Alternative would result in less environmental impacts compared to the proposed Project. However, this Alternative would not meet the majority of Project objectives.

5.8 Environmental Analysis of Alternative 3 (Reduced Project)

Under Alternative 3, permanent buildings would not be demolished, portables buildings would be removed, and one new building would be constructed. This Alternative would also consist of the modernization and/or upgrades of the Home Economics Building, Administration Building, Classroom Building 1, and Physical Education Building (Old Gymnasium).

Upgrades to the Home Economic Building, Administration Building (which includes the main classroom building), Classroom Building 1, and Physical Education (PE) Building (Old Gym) would entail seismic retrofits. Seismic retrofitting would be completed in compliance with the seismic safety requirements of the LAUSD Supplemental Geohazard Assessment Scope of Work, California Building Code, Division of State Architect, and CDE.

This Alternative includes ADA upgrades in the Auditorium. Auditorium ADA upgrades would include accessible seating in the Auditorium; as well as accessibility improvements to the main entry, restrooms, and possibly the ticket area. Badly damaged, or missing, seats may be replaced with matching seats in District storage.

Upgrades that would be completed throughout the Campus include:

- Site-wide infrastructure, including electrical, storm drain, gas, sewer, and water improvements
- Site-wide upgrades to remove identified and prioritized barriers to program accessibility
- Student drop off area, landscape, hardscape, and exterior paint

Improvements required by the ADA, Division of the State Architect, CEQA, and the Office of the Independent Monitor for program accessibility, would ensure compliance with local, state, and/or federal facilities requirements.

Air Quality

With Alternative 3, removal of the portable buildings, grading, and building construction of one building would occur. Building upgrades such as seismic retrofit and infrastructure upgrades, which were anticipated as part of the proposed Project, would occur. This would result in less construction activity over a shorter duration, and therefore, reduced regional construction emissions from construction equipment and employee vehicle trips.

Under Alternative 3, sensitive receptors would be exposed to reduced concentrations of toxic air contaminants and respirable particulate matter during construction activities due to reduced construction activity required. Alternative3 would not create objectionable odors.

Cultural Resources

Alternative 3 could result in a lesser level of impacts to archaeological and paleontological resources, as well as human remains, in comparison to the proposed Project because this Alternative would result in less ground-disturbing construction, which could encounter previously unrecorded resources. Similar to the proposed Project, implementation of: Standard Conditions and mitigation measures CUL-1 through CUL-4, would also reduce the impacts of Alternative 3 to a less-than-significant level by ensuring appropriate treatment of the unanticipated discoveries of such resources. In addition, all buildings, structures, and landscape features that contribute to the significance of San Pedro HS would be retained and rehabilitated in conformance with the Secretary of the Interior's Standards for Rehabilitation. This alternative would result in no impacts to historic resources which would be a reduced impact than the proposed Project.

Energy

Under Alternative 3, no demolition would occur, portables would be removed offsite, minimal grading would occur, and one new building would be constructed. Therefore, Alternative 3 would result in reduced construction impacts due to reduced construction activity. Building upgrades such as seismic retrofit and infrastructure upgrades, which were anticipated as part of the proposed Project, would occur. It is assumed that upgrades to energy and water efficiency systems to meet current code would be installed. Therefore, Alternative 3 would result in similar less than significant operational impacts as compared to the proposed Project.

Greenhouse Gas Emissions

Development under Alternative 3 and the proposed Project would not conflict with any applicable plan, policy, or regulation. Similar to air quality issues, Alternative 3 would result in decreased construction emissions because it would require reduced demolition and construction activity. It is assumed that upgrades to the existing energy and water systems, which would be included as part of the proposed Project, would increase energy and water efficiency similar to the proposed Project. Therefore, Alternative 3 would result in reduced construction impacts and similar operational impacts.

Noise

Under Alternative 3, no demolition, minor grading and building construction would occur, and the use of heavy-duty construction equipment and haul trucks would be required for a shorter duration than with the proposed Project. Therefore, short-term construction-related noise impacts would be reduced. Consequently, construction noise impacts under the Alternative 3 would be reduced when compared to the proposed Project.

Based on existing site conditions, the potential location for a new building in the northwest portion of the site would be located greater than 15 feet away from the nearest classroom. Therefore, impacts associated with vibration during construction activities would be reduced and would be less than significant.

Under both the proposed Project and Alternative 3, no increase in operations such as vehicle trips, or outdoor activities, would occur. Therefore, operational impacts would be similar.

Transportation and Traffic

Under Alternative 3, there would be changes to existing external transportation and traffic conditions, such as would occur during construction activity associated with the proposed Project due to a reduction in the scope of work. Impacts under Alternative 3 would be reduced to a less-than-significant level with the incorporation of Standard Conditions. Similarly, some of the transportation and traffic effects associated with the proposed Project would occur under Alternative 3 during construction. Since the construction activity would be limited to removal of portables and construction of one building, impacts associated with construction traffic would be reduced and would be less than significant.

Under Alternative 3, the existing main entrance on the north side accessed from the intersection of West 15th Street and South Alma Street would be maintained, and therefore, would not result in changes to offsite circulation. Therefore, impacts would be less than the proposed Project. There would be no impact to traffic volume.

Conclusion

Potential impacts associated with the implementation of development under Alternative 3 are compared to the potential impacts of development of the proposed Project. Compared to the proposed Project, impacts associated with air quality, cultural resources, energy, greenhouse gas emissions, noise, transportation and traffic would result in less impacts.

The implementation of this Alternative would result in less environmental impacts compared to the proposed Project. However, this Alternative would not meet all of the majority of Project objectives.

5.9 Comparative Summary of the Alternatives

Table 5-1 below provides the significance determinations for each environmental impact discussion for each of the alternatives as compared to the proposed Project. The table provides a ready means for the reader to review and compare the alternatives with each other, and with the proposed Project. **Table 5-2** demonstrates each alternative's consistency with the Project objectives.

TABLE 5-1
ALTERNATIVE COMPARISON

Environmental Issue	Proposed Project	Alternative 1: No Project/ No Development	Alternative 2: No Demolition and No New Building Construction	Alternative 3: Reduced Project
Air Quality				
Air Quality Plan	LS	NI (L)	LS (L)	LS (L)
Air Quality Standards/Violations	LS	NI (L)	LS (L)	LS (L)
Criteria Pollutant	LS	NI (L)	LS (L)	LS (L)
Sensitive Receptors	LS	NI (L)	LS (L)	LS (L)
Cultural Resources				
Historical Resources	LS	NI (L)	NI (L)	LS (L)
Archaeological Resources	LS	NI (L)	LS (L)	LS (L)
Paleontological Resources	LSM	NI (L)	LS (L)	LS (L)
Human Remains	LS	NI (L)	LS (L)	LS (L)
Energy				
Energy Conservation Plans	LS	NI (L)	LS (L)	LS (L)
Unnecessary Consumption of Energy	LS	NI (L)	LS (L)	LS (L)
Construction of New Energy Facilities	LS	NI (L)	LS (L)	LS (L)
Greenhouse Gases				
Greenhouse Gas Emissions	LS	NI (L)	LS (L)	LS (L)
Conflict with Plan, Policy, or Regulation that Reduces Greenhouse Gas Emissions	LS	NI (L)	LS (L)	LS (L)
Noise and Vibration				
Noise Levels in Excess of Standards	LS	NI (L)	LS (L)	LS (L)
Excessive Ground-Borne Vibration	LSM	NI (L)	LS (L)	LS (L)
Permanent Increase in Ambient Noise Levels	LS	NI (L)	LS (L)	LS (L)
Temporary or Periodic Increase in Ambient Noise Levels	LS	NI (L)	LS (L)	LS (L)
Transportation and Traffic				
Traffic Increase	LS	NI (L)	LS (L)	LS (L)
Congestion Management Program	NI	NI (E)	NI (E)	LS (L)
Design Hazards	LS	NI (L)	LS (E)	LS (L)
Emergency Access	LS	NI (L)	LS (E)	LS (L)
Public Transit, Bicycle and Pedestrian Facilities	LS	NI (L)	LS (E)	LS (L)

NOTES:

NI = No Impact (L) = Less than Project

LS = Less than Significant (G) = Greater than Project

LSM = Less than Significant with Mitigation (E) = Equivalent to Project

SU = Significant and Unavoidable

TABLE 5-2
CONSISTENCY WITH PROJECT OBJECTIVES

Objective	Proposed Project	Alternative 1: No Project/No Build	Alternative 2: No Demolition and No New Building Construction	Alternative 3: Reduced Project
Increase the safety and security of the staff and students through the campus modifications and configuration	The Project would demolish and replace buildings and provide modifications to buildings to ensure safety standards are met	**Inconsistent:** No buildings would be renovated, demolished or replaced.	**Semi-consistent:** Would not replace school buildings.	**Semi-consistent:** Would not replace school buildings.
Repair and seismically retrofit aging facilities while also bringing buildings into compliance with the Americans with Disabilities Act (ADA) programmatic access requirements	The Project would remodel buildings for ADA compliance within the buildings and entry access. The parking lots would be upgraded and parking spaces, including ADA-compliant parking spaces would be modified.	**Inconsistent:** None of the ADA-compliant campus features would be implemented. The campus would remain the same and several areas would not accommodate disabled students.	**Consistent:** Would improve student safety by upgrading campus features.	**Consistent:** Would improve student safety by upgrading campus features.
Upgrade buildings to include modern classroom spaces that can accommodate the California Department of Education's and District's standard classroom space of 960 square feet and modern technology and efficiencies to meet San Pedro HS's priority and specialty campus programs	The Project would renovate and remodel and upgrade several buildings. The Project would provide adequate building space for modern technology and education needs	**Inconsistent:** Not all of the technology upgrade goals would be met because the existing spaces would not facilitate new technology.	**Semi-consistent:** modern technology would be provided to the extent feasible without new buildings.	**Semi-consistent:** modern technology would be provided to the extent feasible with one new building.
Promote a healthier environment through the use of green technology	The Project would provide upgraded technology such as lighting, heating, ventilation, water systems, and windows.	**Inconsistent:** No building features or infrastructure would be upgraded.	**Semi-consistent:** modern building technology would be provided to the extent feasible without new buildings.	**Semi-consistent:** modern building technology would be provided to the extent feasible and would be implemented in the new building.

Objective	Proposed Project	Alternative 1: No Project/No Build	Alternative 2: No Demolition and No New Building Construction	Alternative 3: Reduced Project
Design buildings and facilities that align with the current programmatic and operational needs of the campus while retaining or enhancing opportunities for future planning	The Project would create new and updated general classroom spaces and larger specialty spaces to align with the current programmatic needs of the Campus and that would also allow for future uses. The Project would include ADA compliance improvements, use of green technologies, and safety and security improvements that will align with operational needs of the Campus and reduce operational costs.	**Inconsistent:** No new buildings would be constructed and no buildings would be updated.	**Semi-consistent:** Buildings would be renovated and upgraded; however, no new buildings would be constructed to allow for future opportunities.	**Semi-consistent:** One new building would be constructed and existing buildings would be renovated and upgraded. However, not all upgrades would be fulfilled that would align with the current programmatic and operational needs and would not fully provide space for future opportunities.
Respect the history of the campus through the rehabilitation, retention and reuse of features that have been established as character-defining or otherwise relevant to the school community (i.e., current and former students, alumni, staff, etc.) to the extent feasible, while modernizing the campus to address the current needs of the campus	The Project would retain character-defining features and would ensure new and renovated buildings would be consistent with the general character of existing buildings on campus and the surrounding neighborhood in terms of architectural style, density, bulk, and setback.	**Consistent**: No buildings would be demolished and no new building would be added.	**Consistent**: No buildings would be demolished and no new building would be added.	**Consistent**: No buildings would be demolished and one new building would be added and would be consistent with the general character of existing buildings on campus and the surrounding neighborhood in terms of architectural style, density, bulk, and setback.
Eliminate reliance on portable classrooms	The Project would remove portable classrooms and provide new buildings with new classrooms.	**Inconsistent:** Portables would remain and no new buildings would be constructed.	**Inconsistent:** No buildings would be provided for new classrooms. Portables would continue to be required.	**Consistent:** Portables would be removed and a new building would be constructed for new classrooms.

5.10 Environmental Superior Alternative

An EIR must identify the environmentally superior alternative. The No Project Alternative would reduce, or eliminate, all proposed Project impacts. However, the No Project Alternative does not meet any of the Project objectives. In addition, CEQA Guidelines (Section 15126.6[c]) requires that, if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

As such, Alternative 2 would be the superior alternative as it would result in the greatest reduction in air quality, cultural resources, energy, greenhouse gas, noise, and traffic impacts, when compared to the proposed Project. Alternative 2, the No Demolition and No New Building Alternative, would be the environmentally superior alternative among the other alternatives. Under Alternative 2, no new buildings would be provided on the Campus. Therefore, Objectives #s 1, 3, 4, and 8 would not be entirely met. These objectives' goals are to increase safety for staff and students by providing upgraded buildings and to reduce the reliance on portable buildings. Further, these objectives aim to provide larger classroom spaces that could accommodate modern and efficient technology. Therefore, this alternative would meet some of the objectives but not to the same degree as the proposed Project.

CHAPTER 6
Report Preparation

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