CITY OF LONG BEACH

DEPARTMENT OF PUBLIC WORKS

333 WEST OCEAN BOULEVARD • LONG BEACH, CA 90802 • (562) 570-6383 • FAX (562) 570-6012

~~C-10~~
UB-12

January 23, 2018

HONORABLE MAYOR AND CITY COUNCIL
City of Long Beach
California

RECOMMENDATION:

Authorize the City Manager, or designee, to accept an easement deed from Long Beach Unified School District, the owner of the property located at 4840 Lemon Avenue, for the installation of public utilities; and, accept Long Beach Unified School District's Initial Study and Mitigated Negative Declaration for a new early childhood learning center at Barton Elementary School. (District 8)

DISCUSSION

The Long Beach Unified School District (LBUSD), owner of the property at 4840 Lemon Avenue, is constructing a new early childhood learning center. To accommodate the new use, it is necessary that an easement be granted to the City to allow for the installation of a double-check detector valve (Exhibit A). This new line will provide backflow prevention to protect water supplies from contamination. Construction plans for the new school site include installing water lines.

City staff conducted a review of affected agencies and there were no objections to the proposed easement. The proposed easement is in conformance with LBUSD's Initial Study and Mitigated Negative Declaration issued for this project in March 2016 (Exhibit B).

This matter was reviewed by Deputy City Attorney Linda T. Vu on December 11, 2017 and by Budget Analysis Officer Julissa Jose-Murray on December 15, 2017.

TIMING CONSIDERATIONS

City Council action on this matter is not time critical.

FISCAL IMPACT

A grant of easement processing fee in the amount of $2,108 was deposited in the General Fund (GF) in the Public Works Department (PW). There is no local job impact associated with this recommendation.

SUGGESTED ACTION:

Approve recommendation.

Respectfully submitted,

CRAIG A. BECK,
DIRECTOR OF PUBLIC WORKS

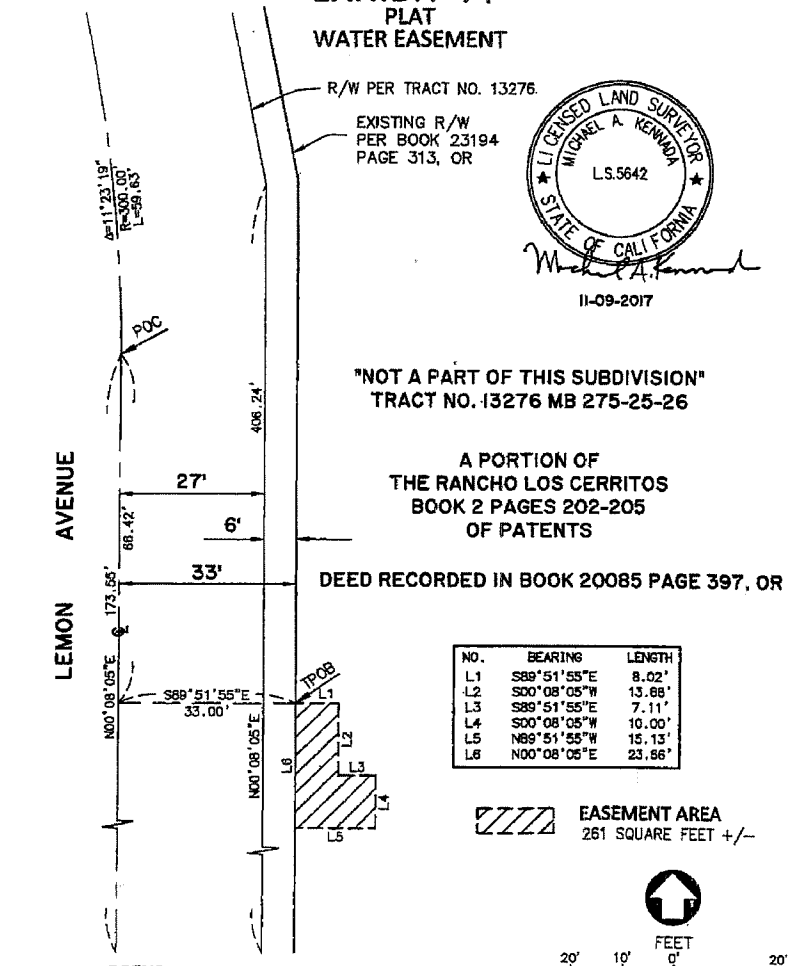
APPROVED:

PATRICK H. WEST
CITY MANAGER

EL:sdj

ATTACHMENTS: - EXHIBIT A – UTILITY EASEMENT
EXHIBIT B – MITIGATED NEGATIVE DECLARATION

EXHIBIT "A"
PLAT
WATER EASEMENT



LI CENSED LAND SURVEYOR
MICHAEL A. KENNADA
L.S.5642
STATE OF CALIFORNIA

11-09-2017

"NOT A PART OF THIS SUBDIVISION"
TRACT NO. 13276 MB 275-25-26

A PORTION OF
THE RANCHO LOS CERRITOS
BOOK 2 PAGES 202-205
OF PATENTS

DEED RECORDED IN BOOK 20085 PAGE 397, OR

NO.	BEARING	LENGTH
L1	S89°51'55"E	8.02'
L2	S00°08'05"W	13.68'
L3	S89°51'55"E	7.11'
L4	S00°08'05"W	10.00'
L5	N89°51'55"W	15.13'
L6	N00°08'05"E	23.56'

EASEMENT AREA
261 SQUARE FEET +/-

FEET
20' 10' 0' 20'
1" ½" 0" 1"
INCHES

LEGEND
POC POINT OF COMMENCEMENT
TPOB TRUE POINT OF BEGINNING

SKETCH NO. 802E
SKETCH SHOWING EASEMENT OVER A PORTION OF LOT B OF TRACT NUMBER 13276 GRANTED TO THE CITY OF LONG BEACH FOR WATER PURPOSES

DEPARTMENT OF PUBLIC WORKS
ENGINEERING BUREAU
CITY OF LONG BEACH, CALIFORNIA
EXHIBIT

DRAFT
INITIAL STUDY AND
MITIGATED NEGATIVE DECLARATION

FOR

EDUCARE FACILITY
4840 LEMON AVENUE, LONG BEACH, CA 90807

Prepared for:

Long Beach Unified School District
Facilities Development and Planning Branch
2425 Webster Avenue
Long Beach, CA 90810

Prepared by:

UltraSystems Environmental, Inc.
16431 Scientific Way
Irvine, CA 92618-4355
Telephone: 949.788.4900
FAX: 949.788.4901

March 2016
Project No. 5978

PROJECT INFORMATION SHEET

1. Project Title	Educare
2. Lead Agency and Address	Long Beach Unified School District Facilities Development and Planning Branch 2425 Webster Avenue Long Beach, CA 90810
3. Contact and Phone Number	Edith C. Florence (562) 997-7584
4. Project Location	4840 Lemon Avenue Long Beach, CA 90807 West and adjacent to the existing Barton Elementary School
5. Project Site General Plan Designation	Institutional land use
6. Project Site Zoning Designation	I-Institutional District
7. Surrounding Land Uses and Setting	Single-family residential housing
8. Description of Project	The District proposes to construct and operate a new 32,000-square-foot Educare facility within approximately 2.6 acres in the southwest corner of the existing Barton Elementary School property (project site). Educare is an early education program serving at-risk children from birth to five years old within the community. Major components of the project would include: • Construct approximately 32,000-square-foot facility with one two-story Administration Building, and three single-story buildings (total 16 permanent classrooms); • Demolish nine portable classrooms; • 191 Educare students (consisting of infants and preschoolers); • 48 Educare staff • Replace the existing 25-space parking lot with an 86-space parking lot that will be shared by the Educare facility and Barton Elementary School
9. Selected Agencies whose Approval is Required	• California Department of General Services – Division of State Architect (DSA) • Los Angeles California Regional Water Quality Control Board

- South Coast Air Quality Management District
- City of Long Beach Fire Department
- City of Long Beach Water Department

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TABLES

FIGURES

APPENDICES

COMMON ACRONYMS AND ABBREVIATIONS

ACRONYM/ ABBREVIATION	TERM
AB	Assembly Bill
AC	asphaltic concrete
ACM	asbestos-containing materials
ADA	Americans with Disabilities Act
ADT	average daily traffic
AHERA	Asbestos Hazard Emergency Response Act
AELUP	Airport Environ Land Use Plan
AIRS	Aerometric Information Retrieval Systems
A.M. of AM	ante meridiem
ANSI	American National Standards Institute
AQMP	Air Quality Management Plan
bgs	Below the ground surface
BMPs	best management practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Program
CALFIRE	California Department of Forestry and Fire Protection
Cal-OSHA	California Department of Industrial Relations
CalRecycle	California Department of Resources Recycling and Recovery
CAOs	Cleanup and Abatement Orders
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDE	California Department of Education
CDFW	California Department of Fish and Wildlife
CDOs	Cease and Desist Orders
CEC	California Education Code
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CFCs	chlorofluorocarbons
City	City of Long Beach
CGS	California Geological Survey
CH_4	methane
CICS	Chemicals in Commerce Information System

ACRONYM/ ABBREVIATION	TERM
CIWMP	Countywide Integrated Waste Management Plan
CMP	Congestion Management Program
CHMIRS	California Hazardous Material Incident Report System
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	CO_2 equivalent
CPUC	California Public Utilities Commission
DAMP	Drainage Area Management Plan
dB	decibel
dBA	A-weighted decibel scale
DOC	Division of Oil, Gas and Thermal Resources
DPM	Diesel particulate matter
DSA	Division of State Architect
DTSC	Department of Toxic Substances Control
EI	Expansion Index
EIR	Environmental Quality Report
EPCRA	Emergency Planning Community Right to Know Act
ESA	Environmental Site Assessment
FATES	FIFRA Federal Insecticide Fungicide Rodenticide Act
FEMA	Federal Emergency Management Area
FHSZ	Fire Hazard Severity Zones
FINDS	Facility Index System
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Administration
FRA	Federal Railroad Administration
FRDS	Federal Reporting Data System
FTTS	FIFRA/TSCA Tracking System
FURS	Federal Underground Injection Control
FWPCA	Federal Water Pollution Control Act
GHG	greenhouse gas
GIS	Geographic Information System
GWP	global warming potential
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HFCs	Hydrofluorocarbons
HMBP	Hazardous Materials Business Plan

ACRONYM/ ABBREVIATION	TERM
HSC	Health and Safety Code
HSWA	Hazardous Solid Waste Act
Hz	hertz
ICU	Intersection Capacity Utilization
IEPR	California's Integrated Energy Policy Report
IPaC	Information, Planning and Conservation
IPCC	International Panel on Climate Change
IR	Interpretation of Regulations
IS	Initial Study
ITE	Institute of Transportation Engineers
JWPCP	Joint Water Pollution Control Plant
L_{90}	noise level that is exceeded 90 percent of the time at a given location
L_{dn}	day-night average noise
L_{eq}	equivalent noise level
LBFD	Long Beach Fire Department
LBP	lead-based paint
LBWD	Long Beach Water Department
LOS	level of service
LRAs	Local Responsibility Areas
LRP	Legally Responsible Person
LSTs	localized significance thresholds
LUST	leaking underground storage tank
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
MPE	Maximum Probable Earthquake
MSL	above mean sea level
MWD	Metropolitan Water District
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NCCP	Natural Community Conservation Plan
ND	Negative Declaration
NHD	National Hydrography Dataset
NO_2	nitrogen dioxide
NOI	Notice of Intent
NO_x	Nitrogen oxides
NPDES	National Pollutant Discharge Elimination

ACRONYM/ ABBREVIATION	TERM
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
O_3	ozone
OCPs	organochlorine pesticides
OPR	Office of Planning and Research
OSHA	Occupational Health and Safety
PA 5B	Planning Area 5B
Pb	Lead
PCB	polychlorinated biphenyl
PCC	Portland concrete cement
PCS	Permit Compliance System
PEL	permissible exposure limits
PFCs	perfluorocarbons
P.M.	post meridiem
PM	particulate matter
PM_{10}	respirable particulates
$PM_{2.5}$	fine particulate matter
PPV	peak particle velocity
PRC	Public Resources Code
PRDs	Permit Registration Documents
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information Systems
RECs	recognized environmental conditions
RMP	Risk Management Plan
ROG	Reactive organic gases
ROSB	Railroad Operations and Safety Branch
RWQCB	Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SF_6	sulfur hexafluoride
SIA	Surface Impoundments
SIP	California State Implementation Plan
SMARA	Surface Mining and Reclamation Act
SMARTS	Stormwater Multi-Application and Report Tracking System
SO_2	sulfur dioxide
SQG	Small Quantity Generators

ACRONYM/ ABBREVIATION	TERM
SRA	State Responsibility Area
SRAs	source receptor areas
STP	Standard temperature and pressure
SUSMP	Standard Urban Stormwater Mitigation Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TIA	Traffic Impact Analysis
TRIS	Toxic Release Inventory Systems
TSCA	Toxic Substances Control Act
UBC	Uniform Building Code
UCL	upper confidence limit
UNFCCC	United Nations Framework Convention on Climate Change
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VdB	vibration decibels
VMT	Vehicle Miles Traveled
VOC	volatile organic compound
WQMP	Water Quality Management Plan
ZEVs	Zero Emission Vehicles
§	Section
°F	Fahrenheit

EXECUTIVE SUMMARY

This Initial Study (IS) and Mitigated Negative Declaration (MND) was prepared by UltraSystems Environmental, Inc. (UltraSystems) for the Long Beach Unified School District (District) to (1) assess significant environmental impacts associated with construction and operation of a new Educare facility within approximately 2.6 acres in the west portion of the 7.3-acre Barton Elementary School campus, and (2) propose mitigating measures to reduce potential environmental impacts to less than significant levels. The District is the Lead Agency for this project pursuant to the California Environmental Quality Act (CEQA), and has the principal responsibility for implementing and approving the project.

Overview of Proposed Project

Educare is an early education program serving at-risk children from birth to five years old within the community. The Barton Elementary School currently has four permanent buildings, and 17 portable units that include 32 classrooms. The proposed project will not impact permanent structures, or displace teachers or students. The proposed project includes the following elements.

- Construct an approximately 32,000-square-foot facility with one two-story Administration Building, and three single-story buildings (total 16 permanent classrooms) surrounding a central open space near the southwest campus boundary.
- Demolish nine of 17 existing portable classrooms.
- Accommodate 191 Educare students consisting of infants and preschoolers, and 48 Educare staff.
- Replace the existing 25-space parking lot within the Educare facility footprint with a 68-space parking lot to be shared by Educare facility and Barton Elementary School staff, and an 18-space visitor and student drop-off parking lot for Educare facility personnel.

The proposed facilities are consistent with California Building Code (CBC) and American with Disabilities Act (ADA) standards. Proposed landscaping along the western, northern and southern boundaries will reduce the impervious area by approximately four percent within the Educare facility footprint.

During the summer of 2016, the Barton Elementary School playground will be re-configured to a new layout to allow room for the construction of the Educare Facility by relocating a lunch shelter, kickball backstop, tetherball posts, playground climbing apparatus and basketball hoops. Demolition activities within the Educare facility footprint will begin in January 2017, and construction should be completed by December 2017.

Initial Study

The IS was completed according to CEQA requirements, and evaluated the following:

- Aesthetics
- Agricultural & Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services

- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Recreation
- Transportation and Traffic
- Utilities and Service Systems

Mitigated Negative Declaration

Based on the IS findings, the project would have a less than significant impact on the following environmental categories listed in Appendix G of the CEQA Guidelines when proposed mitigation measures are adopted.

- Biological Resources
- Noise
- Transportation and Traffic
- Mandatory Findings of Significance

Mitigation measures proposed to reduce potential impacts are listed below.

Biological Resources
BR-1: Construction During Breeding Season
BR-2: General Plant and Wildlife Avoidance Measures
BR-3: Construction Best Management Practices (BMPs)

Noise
N-1 to N-5: Noise Controls during Construction

Transportation and Traffic
TT-1: Restricted Parking on Lemon Avenue

A detailed description of mitigation measures are included in this IS/MND, and will be listed along with the schedule for implementation in a CEQA-required Mitigation Monitoring and Reporting Program (MMRP) to be formally adopted by the District Board of Education prior to project implementation in conformance with § 21081.6 of the Public Resources Code and § 15097 of the CEQA Guidelines.

1.0 INTRODUCTION

1.1 Project Overview

This Initial Study (IS) was prepared by UltraSystems Environmental, Inc. (UltraSystems) for the Long Beach Unified School District (District) to assess significant environmental impacts associated with the proposed project pursuant to the California Environmental Quality Act (CEQA) and implementing regulations.[1] Based on the IS, the District has determined that a Mitigated Negative Declaration (MND) is the appropriate level of CEQA environmental documentation for this project because mitigation measures may be adopted during project construction and operation to reduce potential impacts to less than significant levels.

1.2 Lead Agency

The District is the Lead Agency for this project, and has the principal responsibility for implementing and approving a project that may have a significant effect on the environment. The purpose of an IS under § 15063(c) of the CEQA Statute and Guidelines is to:

- Provide the Lead Agency with information necessary to decide if an Environmental Impact Report (EIR), Negative Declaration (ND), or MND should be prepared.
- Enable the Lead Agency to modify a project to mitigate adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a ND or MND.
- Assist in the preparation of an EIR, if required, by focusing the EIR on adverse effects determined to be significant, identifying the adverse effects determined not to be significant, explaining the reasons for determining that potentially significant adverse effects would not be significant, and identifying whether a program EIR, or other process, can be used to analyze adverse environmental effects of the project.
- Facilitate an environmental assessment early during project design.
- Provide documentation in the ND or MND that a project would not have a significant effect on the environment.
- Eliminate unnecessary EIRs.
- Determine if a previously prepared EIR could be used for the project.

In cases where no potentially significant impacts are identified, the Lead Agency may issue a ND, and no mitigation measures would be needed. Where potentially significant impacts are identified, the Lead Agency may determine that mitigation measures would adequately reduce these impacts to less than significant levels. The Lead Agency would then prepare a MND for the proposed project. If the Lead Agency determines that individual or cumulative effects of the proposed project would cause a significant adverse environmental effect that cannot be mitigated to less than significant levels, then the Lead Agency would require an EIR to further analyze these impacts.

1 Public Resources Code §§ 21000 - 21177 and California Code of Regulations Title 14, Division 6, Chapter 3.

1.3 Other Agencies

Other public agencies are provided the opportunity to review and comment on the IS/MND. Each of these agencies is described briefly below.

- A Responsible Agency (14 CCR § 15381) is a public agency, other than the Lead Agency, that has discretionary approval over the project, such as permit issuance or plan approval.

- A Trustee Agency[2] (14 CCR § 15386) is a state agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California.

- Public agencies have Jurisdiction by Law (14 CCR § 15366) if they have authority to (1) grant an entitlement for use; (2) provide funding for the project; or (3) exercise authority over resources which may be affected by the project. A city or county will have Jurisdiction by Law if they have primary jurisdiction over the areas where (1) the project is located, (2) major environmental effects would occur; and/or (3) citizens most directly concerned with environmental effects reside.

1.3.1 Requirements

CEQA Guideline § 15063(d) identifies the following specific contents of an IS.

- A description and location of the project.

- A description of the environmental setting.

- An assessment of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to indicate that there is some evidence to support the entries. The brief explanation may be either through a narrative or a reference to another information source such as an attached map, photographs, or an earlier EIR or ND. A reference to another document should include, where appropriate, a citation to the page or pages where the information is found.

- A discussion of measures to mitigate significant adverse environmental effects, if any.

- An examination of existing zoning, plans, and other land use controls that apply to the project.

- The names of persons that participated in the preparation of the document.

1.3.2 Mitigation Measures

According to 14 CCR § 15041, Authority to Mitigate, a Lead Agency for a project has authority to require feasible changes in any or all activities involved in the project in order to substantially lessen or avoid significant effects on the environment, consistent with applicable constitutional requirements such as "nexus" and "rough proportionality" standards. As defined by 14 CCR § 15040, "feasible" means capable of being accomplished in a successful manner within a

2 The four Trustee Agencies in California listed in CEQA Guidelines § 15386 are California Department of Fish and Wildlife, State Lands Commission, State Department of Parks and Recreation, and University of California.

reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

If significant impacts are identified, then mitigation measures are adopted to reduce the impact to less than significant levels. Mitigation measures must meet the following criteria:

- An essential nexus (i.e., connection) must be established between the mitigation measure and a legitimate governmental interest.

- The mitigation measure must be "roughly proportional" to the impacts of the project.

There are several forms of mitigation under CEQA (§ 15370). These are summarized below.

- ***Avoiding*** the impact by preservation and maintenance operations during the life of the 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 for, the impacted environment(s) having similar functions of equal or greater ecological value.

Avoiding impacts is the preferred form of mitigation measure, followed by minimizing and rectifying the impact to less than significant levels. Compensating for impacts would be used only when the other mitigation measures are not feasible.

Moreover, a lead agency may approve a project even though the project would cause a significant effect on the environment if the agency makes a fully informed and publicly disclosed decision that:

(a) There is no feasible way to lessen or avoid the significant effect.

(b) Specifically identify expected benefits from the project that outweigh the policy of reducing or avoiding significant environmental impacts of the project.

1.4 Incorporation by Reference

Pursuant to CEQA Guidelines, § 15150, this IS/MND incorporates by reference all or portions of other technical documents that are a matter of public record. Those documents either relate to the proposed project or provide additional information concerning the environmental setting for the project. Where all or a portion of another document is incorporated by reference, the full incorporated language shall be considered part of this IS/MND.

The information contained in this IS/MND (refer to **Section 5.0**, References) is based, in part, on the following planning documents and technical studies that provide information addressing the general project area:

- *City of Long Beach General Plan* adopted in 1973 with numerous supplements through 2014.[3]

- *City of Long Beach Municipal Code,* which included zoning and various development related requirements for the City.[4]

1.5 Organization of Initial Study/Mitigated Negative Declaration

This IS/MND is organized to satisfy CEQA requirements, and includes findings that no significant environmental impacts would occur when proposed mitigation measures are adopted. The IS/MND includes the following sections:

- Chapter 1*, Introduction*, which identifies the purpose and scope of the IS/MND.

- Chapter 2, *Environmental Setting*, which describes location, existing site conditions, land uses, zoning designations, topography, and vegetation associated with the project.

- Chapter 3, *Project Description*, which provides an overview of the project objectives, a description of the proposed development, project phasing during construction, and discretionary actions for the approval of the project.

- Chapter 4, *Environmental Checklist*, which presents checklist responses for each resource topic to identify and assess impacts associated with the proposed project, and proposes mitigation measures, where needed, to render potential environmental impacts less than significant, where feasible.

- Chapter 5, *References*, which includes a list of documents cited in the IS/MND.

- Chapter 6, *List of Preparers*, which identifies the persons who participated in preparing the IS/MND, and their technical specialties.

- Chapter 7, *Mitigation Monitoring and Reporting Plan* (MMRP), which specifies the recommended mitigation measures, the implementation stage, and the enforcement agency.

Technical studies and other documents, which include supporting information or analyses used to prepare the IS/MND, are included in the following appendices:

Appendix A - Site and Floor Plans

Appendix B - Phase I Environmental Site Assessment Addendum

Appendix C - Traffic Impact Analysis

Appendix D - Noise Analysis

3 http://www.lbds.info/planning/advance_planning/general_plan.asp. Accessed December 21, 2015.
4 https://www.municode.com/library/ca/long_beach/codes/municipal_code?nodeId=TIT18BUCO. Accessed December 21, 2015.

1.6 Findings from the Initial Study

1.6.1 No Impacts or Impacts Considered Less than Significant

Based on IS findings, the project would have no impact or less than significant impacts to the following environmental categories listed in Appendix G of the CEQA Guidelines.

- Aesthetics
- Agriculture/Forestry Resources
- Air Quality
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards/Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Mineral Resources
- Population Housing
- Public Services
- Recreation
- Utilities/Service Systems

1.6.2 Impacts Considered Less than Significant with Mitigation Measures

Based on IS findings, the project would have a less than significant impact on the following environmental categories listed in Appendix G of the CEQA Guidelines when proposed mitigation measures are adopted.

- Biological Resources
- Noise
- Transportation and Traffic
- Mandatory Findings of Significance

1.7 Process for Adoption of MND

Prior to MND and proposed project consideration, a Notice of Intent to Adopt a MND will be provided to Responsible Agencies, Trustee Agencies, Agencies with Jurisdiction by Law, and the public to allow 30 days to review and comment on the IS/MND.

Approval of the proposed project by the Lead Agency is contingent on adoption of the IS/MND after considering agency and public comments. By adopting the IS/MND, the Lead Agency certifies that the analyses provided in the IS/MND were reviewed and considered by the District Board of Education, and reflect its independent judgment and analysis.

2.0 PROJECT DESCRIPTION

2.1 Project Overview

The Long Beach Unified School District (District) proposes to construct and operate a new 32,000 square-foot Educare facility within approximately 2.6 acres in the west portion of the existing Barton Elementary School campus (project site). Educare is an early education program serving at-risk children from birth to five years old within the community. The Barton Elementary School occupies approximately 7.3 acres within one city block in Area 1 of the District (**Figure 2.1-1**). The school is bounded by Del Amo Boulevard to the north, Ridgewood Street to the south, Bentree Avenue to the east, and Lemon Avenue to the west in the City of Long Beach, California (**Figure 2.1-2**).[1] Currently, direct access to the Barton Elementary School is from East Ridgewood Street. Upon completion, the Educare Facility site access will be from Lemon Avenue.

The Barton Elementary School currently serves approximately 600 kindergarten to fifth grade students, and employs 29 administrators and 27 teachers. The school has four permanent buildings constructed in 1945, 1950, and 1969, and 17 portable classroom units that include 32 classrooms. The proposed project will not impact permanent structures, or displace teachers or students. The proposed project includes the following elements.

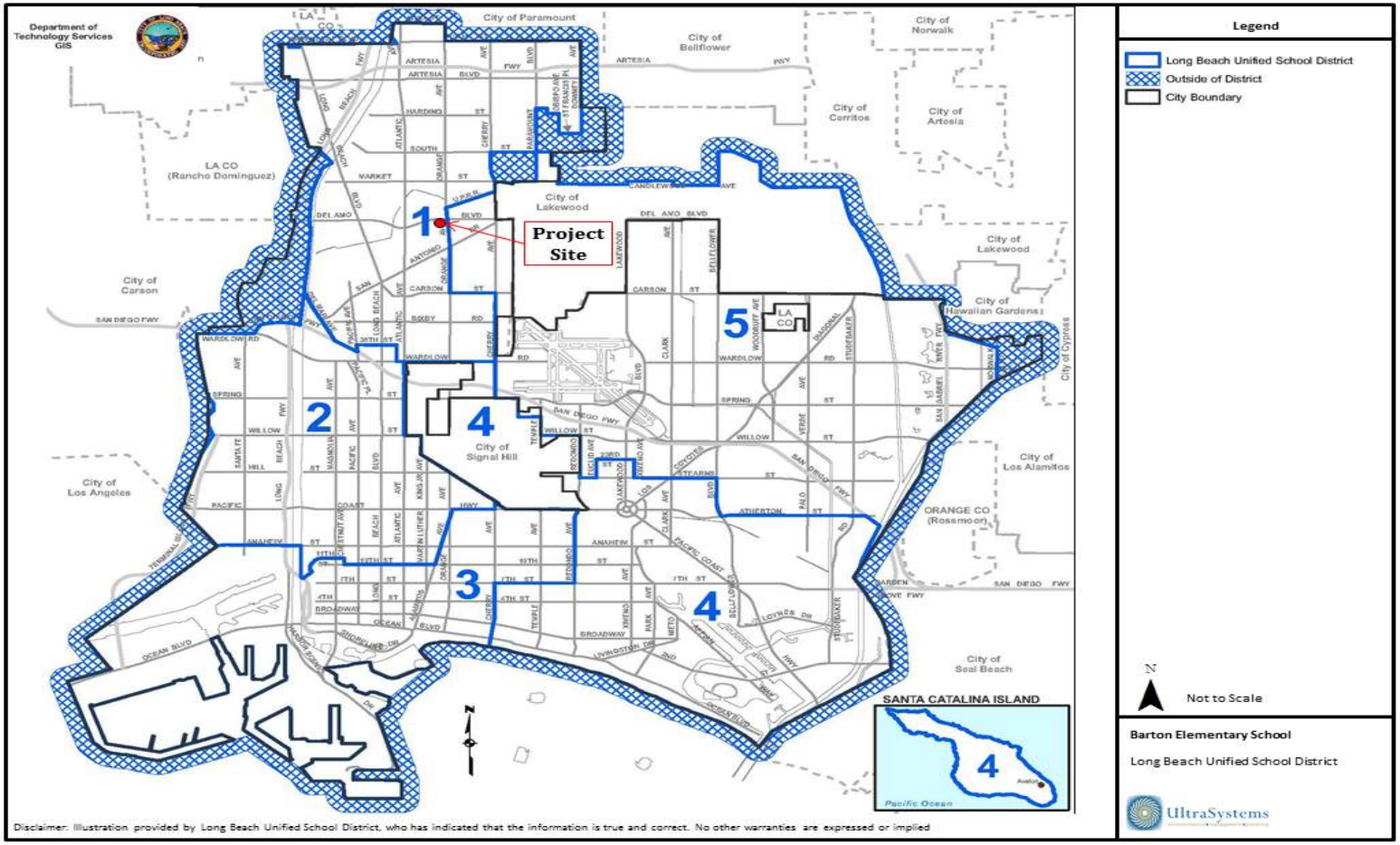
- Construct an approximately 32,000-square-foot facility with one two-story Administration Building, and three single-story buildings (total 16 permanent classrooms) surrounding a central open space near the south boundary.
- Demolish nine of 17 existing portable classrooms.
- Accommodate 191 Educare students consisting of infants and preschoolers, and 48 Educare staff.
- Replace the existing 25-space parking lot in the southwest portion of the project site with a 68-space parking lot to be shared by Educare facility and Barton Elementary school staff and an 18-space visitor and student drop-off parking lot for the Educare facility in the northwest portion of the project site.

2.2 Permanent Facilities

The proposed project will occupy the west portion of the existing Barton Elementary School campus (**Figure 2.2-1**). The structures associated with the proposed project are as follows.

1 The Project Site includes areas to be disturbed during construction outside the Educare Facility Boundary.

Figure 2.1-1
LONG BEACH UNIFIED SCHOOL DISTRICT MAP (DRAFT)



Modified from: http://www.longbeach.gov/uploadedImages/Pages/Departments/TI/media_library/Images/GIS_Map_Previews/LBUnifiedSchoolDistrictMap.jpg. Accessed October 15, 2015

Figure 2.1-2
PROJECT BOUNDARY

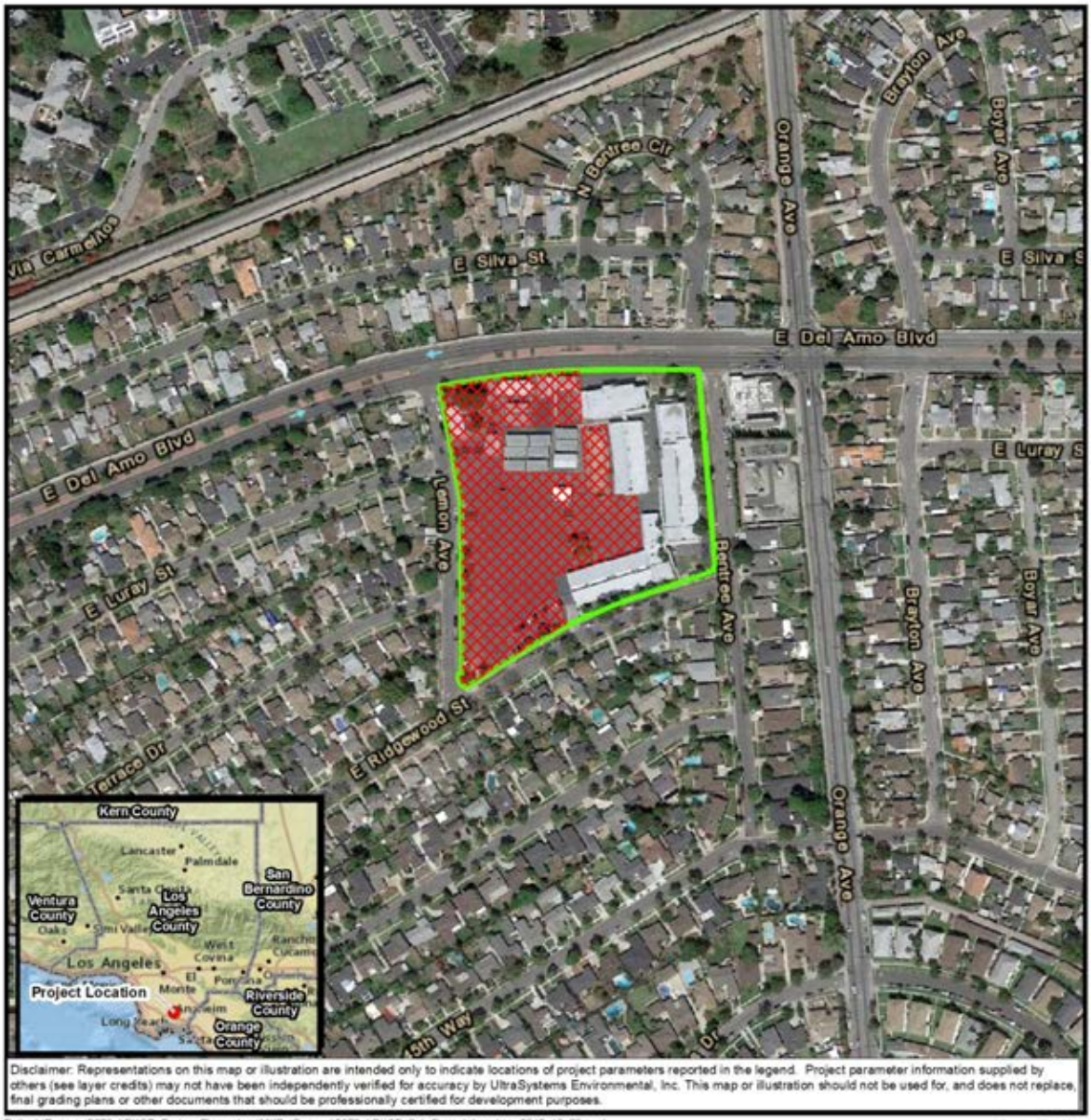


Figure 2.2-1
PROPOSED EDUCARE FACILITY

- The administration and training center will share a single two story building (Building A) near proposed project entrance along Lemon Avenue within the central portion of the project site. The amenities for Building A will include administrative office spaces; training and multipurpose spaces for use by parents, teachers and students; and other utility spaces such as kitchen and restrooms.

- Three one story classroom buildings (Building B, C, and D) will be located south of the administration building on the southwest corner of the proposed project site. These three buildings will include six classrooms for infants and ten classrooms for preschoolers.

Table 2.2-1 summarizes permanent building facilities and their functions. Detailed site and floor plans are provided in **Appendix A**.

Table 2.2-1
PROPOSED PERMANENT FACILITIES

USE	BUILDING NO.	NUMBER OF CLASSROOMS	APPROX. FOOTPRINT AREA (SQUARE FEET)
Administration and Training Center (two stories)	A	No dedicated classrooms	6,845*
Preschool and Infant Classrooms and ancillary services	B	Preschool – 4 Infant - 2	8,086
Preschool and Infant Classrooms	C	Preschool – 2 Infant - 2	4,741
Preschool and Infant Classrooms	D	Preschool – 4 Infant - 2	7,138
TOTAL		**16**	**26,810**

*First floor area. Second floor area is 5,553 square feet

2.2.1 Outdoor Play Areas and Amenities

The administration and three classrooms buildings will surround a central open-space outdoor play area for Educare students. The central open space will be a play area for infants and preschoolers. Additional green open space including the Educare garden will be located at the southwestern corner of the proposed project site adjacent to classroom Buildings C and D.

2.2.2 Access, Parking, and Drop-off/Pick-up

One 25-space parking lot is currently located along Ridgewood Street in the southwest portion of the Barton Elementary School campus. This parking lot will be demolished and a new parking lot will be constructed at the corner of Del Amo Boulevard and Lemon Avenue in the northwest portion of the Barton Elementary School campus. The proposed parking lot will include 68 (90-degree) parking stalls to be shared by Educare facility and Barton Elementary school staff, and will have a single point of vehicle access from Lemon Avenue. An additional visitor and student drop-off parking lot with 18 (90-degree) parking stalls for the Educare facility will also be accessible from the same access point along Lemon Avenue (see **Figure 2.2-1**).

Northbound vehicles on Lemon Avenue will make a right turn into the parking lot and southbound vehicles will make a left turn to enter the parking lot. Exiting vehicles from the parking lot may

make right or left turns onto Lemon Avenue to merge with northbound and southbound traffic, respectively. Parents or guardians will escort Educare students from the visitor and student drop-off parking lot to classroom facilities in the south portion of the campus.

2.2.3 Project Design Features

The proposed facilities will be designed and constructed in accordance with specifications in the current California Building Code (CBC) for the construction of public school buildings with paths and ramps to accommodate handicap access to buildings and between facilities in compliance with American with Disabilities Act (ADA) standards. Construction of school facilities will also follow the recommendations outlined in the Division of the State Architect (DSA)'s Interpretation of Regulations (IR). The IRs were created by DSA as an acceptable method for achieving compliance with applicable building codes and regulations including structural design, relocatable buildings, fire resistive building materials, fire alarms, fire suppression equipment, safe occupant egress, and firefighting equipment access.

The proposed project will comply with the current versions of the building standards applicable to public school buildings in Title 24 of California Code of Regulations (CCR), Part 2 Building Code, Part 3 Electrical Code, Part 4 Mechanical Code, Part 5 Plumbing Code, Part 6 Energy Code, Part 11 Green Building Standards Code (CALGreen Code), and Part 12 Reference Standards Code requirements. Satisfying these standards and code requirements will ensure implementation of structural safety, fire protection, energy efficient design, and water conservation measures, and will aid in the reduction of greenhouse gas emissions.

2.2.4 Lighting

Standard school lighting is planned for the interior and exterior of classrooms, administration, training center, kitchen, and corridors. Outdoor lighting will be designed and installed to confine lighting to the proposed project site, and will not illuminate adjacent properties.

2.2.5 Landscaping/Hardscaping

The proposed project will be largely hardscaped, except for selected areas for planters. Landscaping will be provided along the western, northern and southern boundaries of the facility. After construction, the impervious area within the project site will be reduced by approximately four percent from the current 286,959 to 274,579 square feet.[2]

2.2.6 Utility Improvements

Underground water and sewer utilities point of connection will be along Lemon Avenue between proposed Buildings A and D. Sewer utilities point of connection for proposed Buildings B and C will be along Ridgewood Street. Electrical power is available only from Del Amo Boulevard.2

2.2.7 Operation

The proposed project will operate throughout the year. Standard hours of operation will be from 7:30 a.m. to 6:30 p.m., Monday through Friday for students. Peak-hour drop-off and pickup time will be from 7:30 a.m. to 8:00 a.m. and 3:30 to 4:00 p.m., respectively. The administration staff, custodial staff, and teachers will be onsite from 6:00 a.m. to 6:00 p.m.

2 Email from Edith Florence (LBUSD) to Dan Herlihy (UltraSystems) dated November 11, 2015.

2.2.8 Security

The Educare security policies will require parents, guardians or pre-approved persons to sign-in students. For security and circulation, a receptionist in the lobby will direct persons to the facility, stairs or elevator to the second floor, where the training and Parent Resource Rooms are located. Other site security features include fencing between buildings, emergency communication systems, evacuation plan, and ability to lock-down the campus in case of an emergency.

2.3 Construction Activities and Schedule

During the summer of 2016, the Barton Elementary School playground will be re-configured to a new layout to allow room for the construction of the proposed project by relocating a lunch shelter, kickball backstop, tetherball posts playground climbing apparatus and basketball hoops.

Demolition of the existing parking lot is scheduled for January 2017. Following demolition activities, building pads, utility trenches, precise grading for drainage contours, landscaped areas and amenities for the project site will be prepared. After grading, infrastructure improvements such as water, sewer and drainage lines will be installed, and foundations will be poured. Pre-fabricated modular building components will be delivered to the site. Interior furnishings and detail work, playground, and landscaping will be then be completed. Following construction, nine portable buildings will be demolished, and the new parking lots will be constructed in the same area.

As currently planned, building construction will be completed before October 2017, and the new parking areas and other outside construction will be completed by December 2017. The scheduled start date for construction will depend on approvals from Division of the State Architect (DSA). The proposed Educare facility project is scheduled to begin operations for the 2017-2018 school year.

2.4 Reviewing Agencies

The following agencies will be provided an opportunity to review the IS/MND for compliance with applicable requirements, and to submit written comments, if any, to the Lead Agency.

State

- California Office of Planning and Research – State Clearinghouse.
- Native American Heritage Commission.
- Department of Conservation.
- California Department of Fish and Wildlife.
- Department of General Services.
- Department of Health Services.
- Office of Emergency Services.
- State Water Resources Control Board.

Regional and Local

- City of Long Beach Fire Department.
- City of Long Beach Development Services Department.
- City of Long Beach Police Department.
- City of Long Beach Water Department.

2.5 Discretionary Action

Following Lead Agency approval of this IS/MND (see **Section 1.0**), the following permits and approvals will be required prior to construction.

AGENCY	PERMIT OR APPROVAL
California Division of the State Architect (DSA)	Approval of site and plans
California Regional Water Quality Control Board – Los Angeles	Issuance of National Pollutant Discharge Elimination (NPDES) permit
South Coast Air Quality Management District	Issuance of applicable air quality permits
City of Long Beach Fire Department	Approval of emergency access
City of Long Beach Water Department	Approval of utility improvements

3.0 ENVIRONMENTAL SETTING

3.1 Surrounding Land Use and Zoning

The project site and the surrounding areas are developed. The Barton Elementary School campus is designated as Institutional Zoning District by the City of Long Beach. Areas immediately to the north, south, and west are zoned R-1-N, Single Family Residential District with standard lots. The project site occupies the west portion of the Barton Elementary School campus. The east portion of the campus incudes permanent buildings and temporary classroom structures. A small church and a Southern California Edison (SCE) electrical substation are east of the site.

The City's General Plan land use designations and zoning in the vicinity of the project site are listed in **Table 3.1-1**, and shown in **Figures 3.1-1** and **3.1-2,** respectively.

Table 3.1-1
SUMMARY OF LAND USES AND ZONING

AREA	EXISTING GENERAL PLAN LAND USE	ZONING	EXISTING USE[1]
Educare Facility Project Site	Institutional	I-Institutional District	Nine temporary classroom structures for Barton Elementary school, a 25 space surface parking lot and cemented play area
North	Single Family Residential	R-1-N-Single Family Residential District (Standard Lot)	Single family residences
East	Institutional and Single Family Residential	I-Institutional District, R-1-N-Single Family Residential District (Standard Lot)	Barton Elementary school permanent buildings and temporary classroom structures, and single family residences
West	Single Family Residential	R-1-N-Single Family Residential District (Standard Lot)	Single family residences
South	Single Family Residential	R-1-N-Single Family Residential District (Standard Lot)	Single family residences

1 As of October 2015.

Figure 3.1-1
EXISTING GENERAL PLAN LAND USE DESIGNATIONS

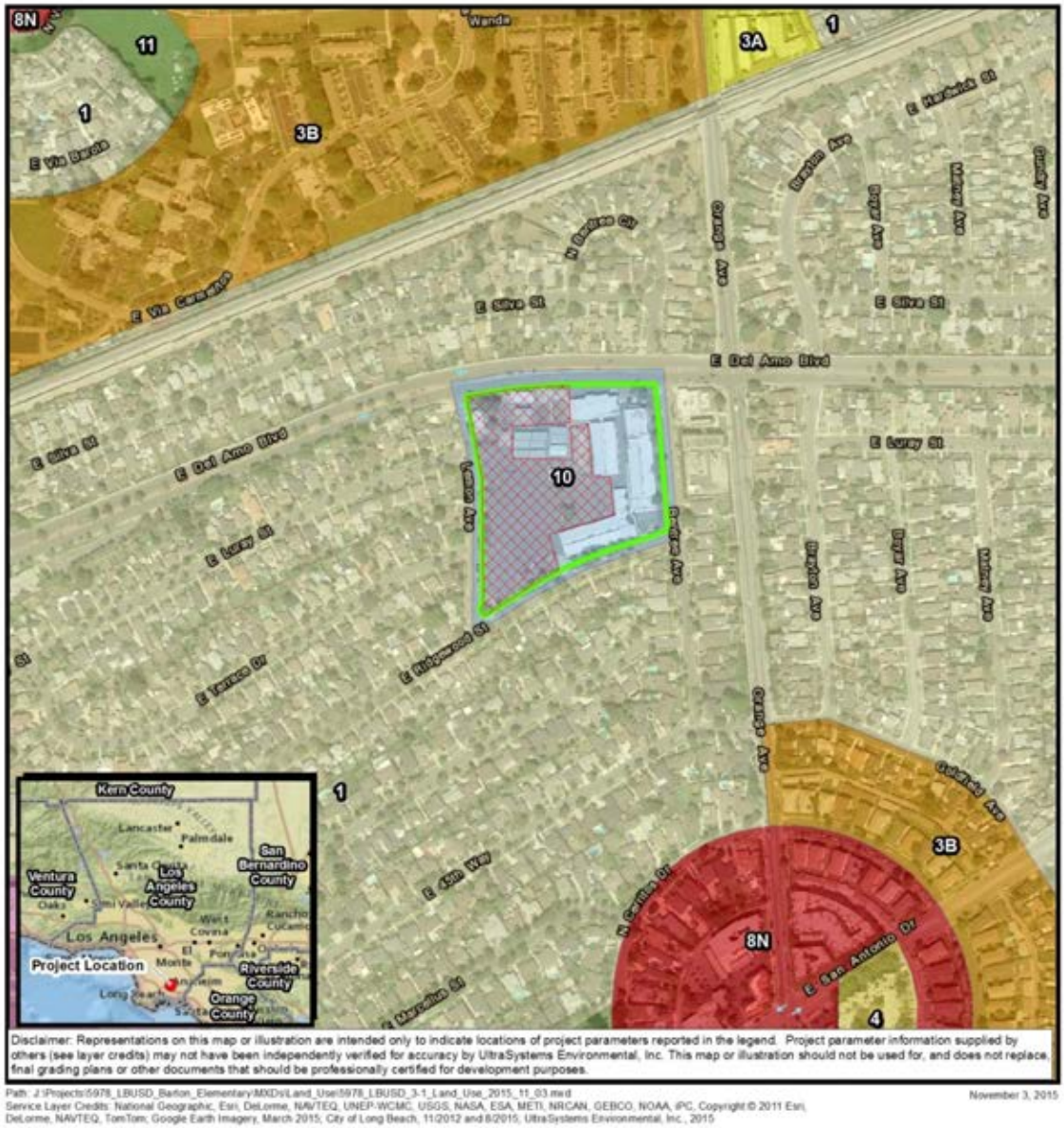
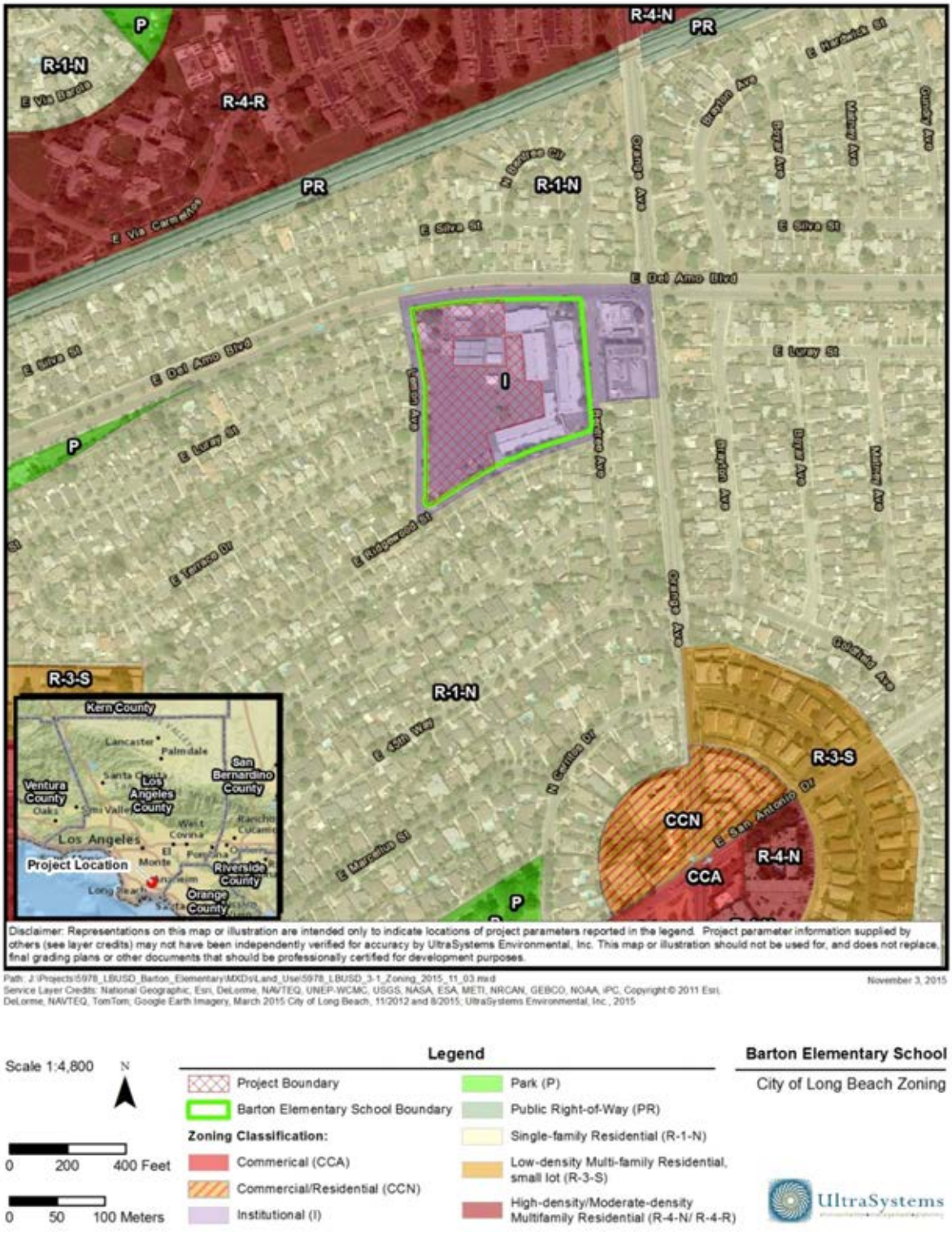


Figure 3.1-2
ZONING



3.2 Former Uses

Between the late 1920s and 1943, the Barton Elementary School property was vacant or possibly used as agricultural land, and included some bungalows or classrooms. The property was developed as part of a school campus in 1943.[2] The current classroom structures were constructed in approximately 1966 and after 1996. Two structures were removed in 2015. Other improvements on the property included a metal supply bin located at the southwest corner of the property, playground equipment, and a parking area (Leighton, 2015).

3.3 Existing Site Conditions

The Barton Elementary School is presently covered with buildings, modular structures and asphaltic concrete (AC) pavement, which is used primarily as a play area. Two metal backstops, four basketball hoops, three sets of volleyball poles, and three padded areas with jungle-gym apparatus are present in the play area. The southeasterly portion of the project site is currently used for on-site parking. The AC pavement visually appears to be in fair condition. Project site photographs are provided in **Figure 3.3-1**.

3.4 Climate

The annual average temperature in Long Beach is approximately 64 degrees Fahrenheit (°F), and annual average total precipitation is approximately 12 inches, which occurs mostly during the winter. Winds in this region are generally light, tempered by afternoon sea breezes.[3]

3.5 Geologic and Soil Setting

The Project site is in the Central Block of the Los Angeles Basin. The Los Angeles Basin is a northwest trending synclinal depression at the southern extent of the Transverse Ranges and north extent of the Peninsula Range geomorphic Provinces of California. The Central Block is bounded by the active Newport Inglewood Fault Zone approximately 1.6 miles (2.6 km) southwest and the active Whittier Fault Zone approximately 13.4 miles (21.6km) northeast of the project site. Native geologic and soil units beneath the project site are sands, silt and clays of Pleistocene alluvial and terrace deposits of the Long Beach plain (ASE, 2015).

Groundwater was not encountered to a depth of approximately 36 feet below the ground surface (bgs), which was the maximum depth explored during the 2015 geotechnical pre-construction investigation. Based on local groundwater levels reported at Well No. 924B on the north side of East Plymouth Street between Orange and North Walnut Avenues, the shallowest historic ground water level beneath the site was approximately 61 feet bgs (ASE, 2015).

3.6 Project Topography and Hydrology

The project site is relatively flat at an elevation of approximately 67 feet above mean sea level (MSL). The site is within the Lower Los Angeles River Watershed, which is under the jurisdiction of the Los Angeles Regional Water Quality Control Board (RWQCB). The nearest surface water body is the Scherer Park pond located approximately 0.4 mile to the west southwest and the Los Angeles

2 The school was historically identified as the Clara Barton Elementary School.
3 http://www.climate-zone.com/climate/united-states/california/long-beach/. Accessed 10/6/15.

River approximately 1.3 miles to the west. Surface runoff from the project site generally flows to the north-northeast (Leighton, 2015), and enters storm drains along the north property boundary.

3.7 Biological Setting

The project site is located within an urban area, which provides low habitat value for special-status plant and wildlife species. Ornamental vegetation and structures within the project site could potentially provide cover and nesting habitat for bird species that have adapted to urban areas.

Figure 3.3-1
PHOTOS OF EXISTING SITE

PHOTO 1: Parking lot on E. Ridgewood St. (looking north)

PHOTO 2: School building on E. Ridgewood St. (looking east)

PHOTO 3: Playground on E. Ridgewood St./Bentree Ave. (looking east)

PHOTO 4: Drainage between two northern buildings in walkway (looking west)

PHOTO 5: Dirt lot where centrally located building was removed/Portable buildings in background (looking southwest)

PHOTO 6: buildings north of lunch shelter (looking north)

4.0 ENVIRONMENTAL CHECKLIST

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or as a "Potentially Significant Unless Mitigation Incorporated," as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Greenhouse Gas Emissions	☐ Population and Housing
☐ Agricultural Resources	☐ Hazards and Hazardous Materials	☐ Public Services
☐ Air Quality	☐ Hydrology and Water Quality	☐ Recreation
☒ Biological Resources	☐ Land Use and Planning	☒ Transportation and Traffic
☐ Cultural Resources	☐ Mineral Resources	☐ Utilities and Service Systems
☐ Geology and Soils	☒ Noise	☒ Mandatory Findings of Significance

Determination (To Be Completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLRATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	Date
Printed Name	Long Beach Unified School District For

Evaluation of Environmental Impacts

(1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

(2) All answers must take into account the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

(3) After the lead agency has determined that a particular physical impact may occur then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

(4) "Negative Declaration: Less than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to less than significant level.

(5) Earlier analyses may be use where, pursuant to the tiering, program EIR, or other CEQA process, an affect has been adequately analyzed in an earlier EIR or negative declaration. (See § 15063(c)(3)(D) of the CEQA Guidelines. In this case, a brief discussion should identify the following:

   (a) Earlier Analyses Used. Identify and state where the earlier analysis available for review.

   (b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   (c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

(6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated. A source list should be

attached and other sources used or individuals contacted should be cited in the discussion.

(7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

(8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

(9) The explanation of each issue should identify:

(a) The significance criteria or threshold, if any, used to evaluate each question; and

(b) The mitigation measure identified, if any, to reduce the impact to less than significant.

4.1 Aesthetics

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?				**X**
b) Substantially damage scenic resources, including, but not limited to, trees, outcroppings, and historic buildings within a state scenic highway?				**X**
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			**X**	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			**X**	

A "visual environment" includes the built environment (development patterns, buildings, parking areas, and circulation elements) and natural environment (such as hills, vegetation, rock outcroppings, drainage pathways, and soils) features. Visual quality, viewer groups and sensitivity, duration, and visual resources characterize views. Visual quality refers to the general aesthetic quality of a view, such as vividness, intactness, and unity. Viewer groups identify who is most likely to experience the view. High-sensitivity land uses include residences, schools, playgrounds, religious institutions, and passive outdoor spaces such as parks, playgrounds, and recreation areas. Duration of a view is the amount of time that a particular view can be seen by a specific viewer group. Visual resources refer to unique views, and views identified in local plans, from scenic highways, or of specific unique structures or landscape features.

(a) Would the project have a substantial adverse effect on a scenic vista?

No Impact

Topography in the City of Long Beach is relatively flat with scenic vistas of the Ocean and Palos Verdes in the southern part and western parts of the City. View from public roadways, thoroughfares and open spaces in the City include distant views of the San Gabriel and San Bernardino Mountains to the north and Santa Monica Mountains to the east.

The proposed project is located in a highly developed urban area in the northern part of the City. The project proposes the construction and operation of three one-story classroom buildings, one two-story administration, and parking areas on the grounds of an existing elementary school campus. The City of Long Beach General Plan does not identify scenic vistas in the project area. Distant views of the San Gabriel, San Bernardino or Santa Monica Mountains are not available from public thoroughfares and residences surrounding the project site. The project will not have a substantial adverse effect on a scenic vista because there are no scenic vistas in the area.

(b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact

The project site does not contain notable visual resources such as rock outcroppings, trees, or historic buildings. According to the California Department of Transportation, the project site is not located in the vicinity of an officially designated or eligible state scenic highway, designated as part of the California Scenic Highway Program. The closest officially designated scenic highway is State Route 55 approximately 20 miles to the east and south of the proposed project site.[1]

The City of Long Beach Scenic Routes Element[2] depicts a system of scenic routes and corridors which may have merit for inclusion in a designated system, establishes criteria and design standards to protect scenic corridors, and identifies scenic assets of historical, cultural, recreational, industrial and aesthetic importance. The City of Long Beach Mobility Element (adopted in 2013) provides information on street classification and scenic routes in the City. The Long Beach Mobility Element, classifies streets within the City as freeways, regional corridors, boulevards, major avenues and minor avenues, and identifies boulevards and regional corridors as likely and possible scenic routes.[3] Streets located in immediate proximity of the project site comprise major and minor avenues. Therefore, none of the scenic routes identified by the City are located near the project site. The nearest locally designated scenic route is Ocean Boulevard which is located approximately six miles to the south of the project site.[4]

The project would be consistent with the City's General Plan (2035) and Zoning Ordinances which impose development guidelines and standards to preserve scenic resources and reduce the obstruction of public views from locally designated scenic highways. Therefore, no impact would occur.

(c) Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Less than Significant Impact

The project site is located in an urban setting characterized by a mix of single family and multi-family residential buildings, and an existing elementary school. Most buildings are well maintained with appealing facades. Views of the existing streetscape include well maintained sidewalks with tree lined streets. Lighting poles are visible along the street frontage.

The proposed one- and two-story Educare facility building would be similar in character to the surrounding uses, and the facility would be landscaped. For this reason, the proposed project would not significantly impact the visual character or quality of the site and its surroundings.

1 California Department of Transportation, Scenic Highways, Los Angeles County, Available online at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/cahisys.htm, Accessed October 27, 2015.
2 City of Long Beach Scenic Routes Element, Adopted 1975.
3 City of Long Beach Mobility Element, Adopted 2013.
4 Ibid.

(d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than Significant Impact

The project site is located in a developed urban area and sources of ambient nighttime lighting exist in the project area due to building security, vehicular, and pedestrian lighting. Existing sources of light in the vicinity of the project include lighting fixtures for temporary classroom structures, and from surrounding elementary school and residential developments. Under the proposed project, existing sources of light on-site would be replaced by new and additional outdoor lighting fixtures.

Standard school lighting is planned for exterior lighting of classrooms, administration, training center, kitchen, and corridors. Exterior lighting for parking lots, walkways and playgrounds will comply with requirements of the City of Long Beach Municipal Code, which require outdoor lighting for parking facilities to be directed and shielded to prevent light and glare to adjacent sites.[5] For outdoor lighting and signage, the City has development standards for light and glare control, reduction of light trespass onto adjacent properties, and reduction of night-sky pollution.[6] Outdoor lighting fixtures would be installed in accordance with applicable Long Beach Municipal Code and District standards to ensure that the light does not illuminate nearby and adjacent properties and residences. Adherence to applicable City Municipal Codes and District standards would ensure that new sources of light or glare would not adversely affect day or nighttime views in the area. Therefore, impacts from a new source of substantial light or glare which would adversely affect day or nighttime views in the area would be less than significant.

5 See Long Beach Municipal Code Section 21.41.259 Parking Areas Lighting.
6 See Long Beach Municipal Code Chapter 21.44 On-Premises Signs.

4.2 Agriculture and Forestry Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				**X**
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				**X**
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code § 12220(g)), timberland (as defined by Public Resources Codes § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?				**X**
d) Result in the loss of forest land or conversion of forest land to non-forest use?				**X**
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				**X**

(a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact

The project site is located on campus of Barton Elementary school in a completely urban setting containing a mix of institutional and residential uses. The project is proposed on site of existing temporary classroom structures, surface parking and play areas covered with asphaltic concrete. Therefore, the project site is already developed and would not convert prime, unique, or farmland of statewide importance to urban use. No impacts to farmland would occur as a result of the proposed project.

(b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact

According to the 2012 State of California Williamson Act Contract Land Map,[1] the project site is identified as "Urban and Built-Up Land"[2] and does not contain land enrolled in a Williamson Act contract. The project site is not located within an area zoned for agricultural use and is currently zoned as Industrial District. Therefore, no impact would occur.

(c) Would the project (c) conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code § 12220(g)), timberland (as defined by Public Resources Codes § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?

No Impact

The project site is located in a developed urban area within an existing elementary school campus with single family residential uses on all sides. The site's existing zoning "I- Institutional District" does not support the definitions provided by Public Resources Code § 42526 for timberland, PRC § 12220(g) for forestland, or Government Code § 51104(g) for timberland zoned for production. Therefore, no impacts related to the conversion of timberlands or forest land would occur.

(d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact

As previously stated in the above **Section 4.2(c)**, the project site is located in a developed urban area within an existing elementary school campus. Implementation of the project would not result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur.

(e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact

As discussed in **Sections 4.2(a) and (c)** above, the project site is located on campus of an existing elementary school in a completely urban setting containing a mix of institutional and residential uses. No forest land is located within the project boundary or in the vicinity of the project site. Implementation of the proposed project would not result in changes to the environment which, due to its location or nature, could result in the conversion of farmland to non-agricultural use or converting forest land to non-forest use. Therefore, no impact would occur.

1 ftp://ftp.consrv.ca.gov/pub/dlrp/wa/2012%20Statewide%20Map/WA_2012_36x42.pdf . Accessed on October 20, 2014.

2 Urban and Built-Up Land is occupied by structures with a building density of at least 1unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.

4.3 Air Quality

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			**X**	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			**X**	
c) 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)?			**X**	
d) Expose sensitive receptors to substantial pollutant concentrations?			**X**	
e) Create objectionable odors affecting a substantial number of people?			**X**	
f) Is the boundary of the proposed school site within 500 feet of the edge of the closest traffic lane of a freeway or busy traffic corridor? If yes, would the project create an air quality health risk due to the placement of the school?				**X**
g) Create an air quality hazard due to the placement of a school within one-quarter mile of: (i) permitted and non-permitted facilities identified by the jurisdictional air quality control board or air pollution control district; (ii) freeways and other busy traffic corridors; (iii) large agricultural operations; and/or (iv) a rail yard, which might reasonably be anticipated to emit hazardous air emissions?				**X**

4.3.1 Pollutants of Concern – Criteria Pollutants

The criteria air pollutants of concern are nitrogen dioxide (NO_2), carbon monoxide (CO), particulate matter (PM), sulfur dioxide (SO_2), lead (Pb), and ozone (O_3), and their precursors. Criteria pollutants are air pollutants for which acceptable levels of exposure can be determined and an ambient air quality standard has been established by the U.S. Environmental Protection Agency (USEPA) and/or the California Air Resources Board (ARB). Because the proposed project would not generate appreciable SO_2 or Pb emissions, it is not necessary for the analysis to include those

two pollutants.[1] Presented below is a description of the air pollutants of concern and their known health effects.

Nitrogen oxides (NO_x): NO_x serve as integral participants in the process of photochemical smog production, and are precursors for certain particulate compounds that are formed in the atmosphere.[2] The two major forms of NO_x are nitric oxide (NO) and NO_2. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO_2 is a reddish-brown pungent gas formed by the combination of NO and oxygen. NO_2 acts as an acute respiratory irritant and eye irritant, and increases susceptibility to respiratory pathogens. A third form of NO_x, nitrous oxide (N_2O), is a greenhouse gas (GHG).

Carbon monoxide (CO): CO is a colorless, odorless non-reactive pollutant produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel, and biomass). CO levels tend to be highest during the winter months and at low wind speeds, when the meteorological conditions favor the accumulation of the pollutants. This occurs when relatively low inversion levels trap pollutants near the ground and concentrate the CO. CO is essentially inert to plants and materials, but can have significant effects on human health. The primary adverse health effect associated with CO is its binding with hemoglobin in red blood cells, which decreases the ability of these cells to transport oxygen throughout the body. Prolonged exposure can cause headaches, drowsiness, or loss of equilibrium. High concentrations are lethal.

Particulate matter (PM): PM is a mixture of microscopic solids and liquid droplets suspended in air. This pollution is made up of a number of components, including acids and their derivatives (such as nitrates and sulfates), organic chemicals, metals, soil or dust particles, and allergens (such as fragments of pollen or mold spores). Two forms of fine particulate matter are now regulated. Respirable particles, or PM_{10}, include that portion of the particulate matter with an aerodynamic diameter of 10 micrometers (i.e., 10 one-millionths of a meter or 0.0004 inch) or less. Fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 micrometers (i.e., 2.5 one-millionths of a meter or 0.0001 inch) or less. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind action on the arid landscape also contributes substantially to the local particulate loading. Fossil fuel combustion accounts for a significant portion of $PM_{2.5}$. In addition, particulate matter forms in the atmosphere through reactions of NO_x and other compounds (such as ammonia) to form inorganic nitrates. Both PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in those people who are naturally sensitive or susceptible to breathing problems.

Reactive organic gases (ROG): ROG are compounds comprised primarily of atoms of hydrogen and carbon that have high photochemical reactivity. The largest source of ROG is the incomplete combustion of fossil fuels in internal combustion engines. Other sources of ROG include the evaporative emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products. Adverse effects on human health are not caused directly by ROG, but rather by reactions of ROG to form secondary pollutants. ROG are also transformed into organic aerosols in the atmosphere, contributing to higher levels of fine particulate matter and lower visibility. The term ROG is used by the ARB for air quality analysis, and is defined essentially the same as the federal term volatile organic compound (VOC).

1 Worst-case sulfur dioxide emissions will be approximately 0.12 pound per day.

2 A precursor is a directly emitted air contaminant that, when released into the atmosphere, forms, causes to be formed, or contributes to the formation of a secondary air contaminant for which an ambient air standard has been adopted, or whose presence in the atmosphere will contribute to the violation of one or more standards.

Ozone (O_3): O_3 is a secondary pollutant produced through a series of photochemical reactions involving ROG and NO_x. O_3 creation requires ROG and NO_x to be available for approximately three hours in a stable atmosphere with strong sunlight. Because of the long reaction time, peak O_3 concentrations frequently occur downwind of the sites where the precursor pollutants are emitted. Thus, O_3 is considered a regional, rather than a local, pollutant. The health effects of O_3 include eye and respiratory irritation, reduction of resistance to lung infection, and possible aggravation of pulmonary conditions in persons with lung disease. O_3 is also damaging to vegetation and untreated rubber.

4.3.2 Meteorology and Climate

Air quality is affected by both the rate and location of pollutant emissions and by meteorological conditions that influence movement and dispersal of pollutants. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients, along with local topography, provide the link between air pollutant emissions and air quality.

The South Coast Air Basin (SCAB) is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the southwest and high mountains around its remaining perimeter. The general region lies in the semi-permanent high pressure zone of the eastern Pacific resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds.

The vertical dispersion of air pollutants in the SCAB is hampered by the presence of persistent temperature inversions. An upper layer of dry air that warms as it descends characterizes high-pressure systems, such as the semi-permanent high-pressure zone in which the SCAB is located. This upper layer restricts the mobility of cooler marine-influenced air near the ground surface and results in the formation of subsidence inversions. Such inversions restrict the vertical dispersion of air pollutants released into the marine layer and, together with strong sunlight, can produce worst-case conditions for the formation of photochemical smog.

The atmospheric pollution potential of an area is largely dependent on winds, atmospheric stability, solar radiation, and terrain. The combination of low wind speeds and low inversions produces the greatest concentration of air pollutants. On days without inversions, or on days of winds averaging over 15 miles per hour, smog potential is greatly reduced.

Climatological data were obtained from the Western Regional Climate Center's Cooperative Climatological Data Summaries.[3] The annual average temperature, as recorded at the Long Beach Daugherty Field (2.99 miles south of the proposed project site, at 33.81167° N, -118.14639° W), is 65 degrees Fahrenheit (°F). The station has an average winter (December, January, and February) temperature of approximately 57°F and an average summer (June, July, and August) temperature of approximately 72°F. The average maximum recorded temperatures are 81°F during the summer and 67°F during the winter.[4] The annual average of total precipitation in the proposed project area is 12.01 inches, which occurs mostly during the winter and relatively infrequently during the summer. Precipitation averages 7.33 inches during the winter, 2.72 inches during the spring

3 http://www.wrcc.dri.edu/climatedata/climsum/. Accessed November 18, 2015.
4 http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5085. Accessed November 18, 2015.

(March, April, and May), 1.81 inches during the fall (September, October, and November), and 0.14 inch during the summer.[5]

Winds in the SCAB are generally light, tempered by afternoon sea breezes. Severe weather is uncommon in the Basin, but strong easterly winds known as the Santa Ana winds can reach 25 to 35 miles per hour below the passes and canyons. During the spring and summer months, air pollution is carried out of the region through mountain passes in wind currents or is lifted by the warm vertical currents produced by the heating of the mountain slopes. From the late summer through the winter months, because of the average lower wind speeds and temperatures in the proposed project area and its vicinity, air contaminants do not readily disperse, thus trapping air pollution in the area.

4.3.3 Regional Air Quality

Table 4.3-1 shows the area designation status of the SCAB for each criteria pollutant for both the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). Based on regional monitoring data, the SCAB is currently designated as a non-attainment area for O_3 and $PM_{2.5}$; a federal maintenance area for CO and NO_2; and an attainment area for PM_{10} and SO_2.[6] Designation of the SCAB as a maintenance area means that, although the Basin has achieved compliance with the NAAQS for CO and NO_2, control strategies that were used to achieve compliance must continue. The Federal ozone classification is "extreme."[7] An extreme non-attainment area has an 8-hour ozone design value of 0.187 ppm,[8] and has the attainment deadline of June 15, 2024. On June 26, 2013, the USEPA approved, as a revision to the California State Implementation Plan (SIP), the State's request to re-designate the South Coast Air Basin to attainment for the 24-hour PM_{10} NAAQS. The USEPA is also approving the PM_{10} maintenance plan and the associated PM_{10} motor vehicle emissions budgets for use in transportation conformity determinations necessary for the South Coast PM_{10} area. Finally, the USEPA approved the attainment year emissions inventory. The USEPA took these actions because the SIP revision meets the requirements of the Clean Air Act (CAA) and USEPA guidance for such plans and motor vehicle emissions budgets.[9]

Table 4.3-1
FEDERAL AND STATE ATTAINMENT STATUS

Pollutants	Federal Classification	State Classification
Ozone (O_3)	Non-Attainment (Extreme)	Non-Attainment
Particulate Matter (PM_{10})	Attainment	Non-Attainment
Fine Particulate Matter ($PM_{2.5}$)	Non-Attainment (Moderate)	Non-Attainment

5 http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5085. Accessed November 18, 2015.
6 According to the SCAQMD, the "Basin has met the PM10 standards at all stations and a request for re-designation to attainment is pending with U.S.EPA." (SCAQMD Board Meeting, December 7, 2012, Agenda Item 30, p. 6.).
7 U.S. Environmental Protection Agency. 2011. "8-Hour Ozone Nonattainment State/Area/County Report." Green Book. http://www.epa.gov/air/oaqps/greenbook/gncs.html#CALIFORNIA. Updated December 14, 2012.
8 U.S. Environmental Protection Agency. 2011. "Designations." Green Book. www.epa.gov/air/oaqps/greenbook/define.html. Updated August 30, 2011.
9 "Approval and Promulgation of Implementation Plans; Designation of Areas for Air Quality Planning Purposes; California; South Coast Air Basin; Approval of PM10 Maintenance Plan and Redesignation to Attainment for the PM10 Standard." Federal Register 78 (123): 38223-38226. http://www.gpo.gov/fdsys/pkg/FR-2013-06-26/html/2013-15145.htm.

Pollutants	Federal Classification	State Classification
Carbon Monoxide (CO)	Maintenance	Attainment
Nitrogen Dioxide (NO_2)	Maintenance	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment

Sources:
U.S. Environmental Protection Agency, "California 8-Hour Ozone Nonattainment Areas in Blue Borders." Green Book. [www.epa.gov/air/oaqps/greenbook/ca8.html]. Updated December 14, 2012;
Protection Agency, "Counties Designated Nonattainment for PM-10." Green Book. [http://www.epa.gov/air/oaqps/greenbook/map/mappm10.pdf]. Accessed January 15, 2013;
U.S. Environmental Protection Agency, "PM-2.5 (2012) State/Area/County Report, as of October 01, 2015." Green Book. [http://www3.epa.gov/airquality/greenbk/kncs.html#CALIFORNIA]. Accessed October 9, 2015;
California Air Resources Board, "Area Designations Maps/State and National." [www.arb.ca.gov/desig/adm/adm.htm]. Accessed January 15, 2013.
California Air Resources Board, "Chronology Of State Nitrogen Dioxide Designations (Updated January 8, 2015)." [http://www.arb.ca.gov/desig/changes/no2.pdf]. Accessed October 9, 2015.

4.3.4 Local Air Quality

The South Coast Air Quality Management District (SCAQMD) has divided the SCAB into source receptor areas (SRAs), based on similar meteorological and topographical features. The proposed project site is located in SRA 4 (South Los Angeles County Coastal), whose air quality is monitored at three stations. The one nearest the site is the North Long Beach Monitoring Station, located at 3648 North Long Beach Boulevard, 1.65 miles south-southwest of the proposed project site. All the criteria pollutants of interest are monitored at the North Long Beach Monitoring Station. However, ozone and nitrogen dioxide data were unavailable for 2014 at that station. The only Long Beach monitoring station having 2014 data for those pollutants is located approximately 3.89 miles southwest of the proposed project site at 2425 Webster Street. The ambient air quality data in the proposed project vicinity as recorded at the North Long Beach and 2425 Webster Street monitoring stations from 2012 to 2014 and the applicable federal and state standards are shown in **Table 4.3-2**. Note that, given the complex way in which violation criteria are defined, an exceedance does not necessarily imply a violation of the federal or state ambient air quality standards.

Table 4.3-2
AMBIENT AIR QUALITY MONITORING DATA

Air Pollutant	Standard/Exceedance	2012	2013	2014
Carbon Monoxide (CO)	Year Coverage	40%	ND	ND
	Max. 8-hour Concentration (ppm)	2.17	ND	ND
	# Days > Federal 1-hour Std. of 35 ppm	0	ND	ND
	# Days > Federal 8-hour Std. of 9 ppm	0	ND	ND
	# Days > California 8-hour Std. of 9.0 ppm	0	ND	ND
Ozone (O_3)[a]	Year Coverage	94%	79%	82%
	Max. 1-hour Concentration (ppm)	0.084	0.092	0.087
	Max. 8-hour Concentration (ppm)	0.067	0.071	0.072
	# Days > Federal 8-hour Std. of 0.075 ppm	0	0	0
	# Days > California 1-hour Std. of 0.09 ppm	0	0	0
	# Days > California 8-hour Std. of 0.07 ppm	0	1	0

Air Pollutant	Standard/Exceedance	2012	2013	2014
Nitrogen Dioxide (NO_2)[a]	Year Coverage	70%	32%	91%
	Max. 1-hour Concentration (ppm)	0.077	0.067	0.136
	Annual Average (ppm)	ND	ND	ND
	# Days > California 1-hour Std. of 0.18 ppm	0	0	0
Sulfur Dioxide (SO_2)[a]	Year Coverage	1	ND	ND
	Max. 24-hour Concentration (ppm)	0.003	0.001	ND
	Annual Average (ppm)	ND	ND	ND
	# Days > California 24-hour Std. of 0.04 ppm	ND	ND	ND
Respirable Particulate Matter (PM_{10})	Year Coverage	99%	65%	ND
	Max. 24-hour Concentration (µg/m³)	45.0	37.0	ND
	#Days > Fed. 24-hour Std. of 150 µg/m³	0	0	0
	#Days > California 24-hour Std. of 50 µg/m³	0	0	0
	Annual Average (µg/m³)	23.2	ND	ND
Fine Particulate Matter ($PM_{2.5}$)	Year Coverage	95%	88%	92%
	Max. 24-hour Concentration (µg/m³)	49.8	47.2	51.5
	State Annual Average (µg/m³)	10.4	11.3	ND
	#Days > Fed. 24-hour Std. of 35 µg/m³	4	2	2
	Federal Annual Average (µg/m³)	10.3	11.3	11.5

Source:
California Air Resources Board, "iADAM Air Quality Data Statistics." Internet URL: http://www.arb.ca.gov/adam/ (November 19, 2015)
ND: There were insufficient (or no) data available to determine the value.
a: The North Long Beach Monitoring Station does not have 2014 data for O_3 or NO_2. The nearest station that has 2014 data for these pollutants is at 2425 Webster Street in Long Beach.

4.3.5 Sensitive Receptors

Some people, such as individuals with respiratory illnesses or impaired lung function because of other illnesses, the elderly over 65 years of age, and children under 14, are particularly sensitive to certain pollutants. Facilities and structures where these sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses identified to be sensitive receptors by SCAQMD in the CEQA Handbook include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive receptors may be at risk of being affected by air emissions released from the construction and operation of the proposed project.

The proposed project is located at Barton Elementary School in Long Beach, California. Exposure to potential emissions would vary substantially from day to day depending on the amount of work being conducted, the weather conditions, the location of receptors, and the length of time that receptors would be exposed to air emissions. The construction phase emissions estimated in this analysis are based on conservative estimates and worst-case conditions, with maximum levels of construction activity occurring simultaneously within a short period of time. The nearest sensitive receptors to the proposed project site, with the highest potential to be impacted by the proposed project, are the residential properties adjacent to the Barton Elementary school and the proposed project site itself.

4.3.6 Air Quality Plans

The SCAQMD is required to produce plans to show how air quality will be improved in the region. The California Clean Air Act (CCAA) requires that these plans be updated triennially to incorporate the most recent available technical information.[10] A multi-level partnership of governmental agencies at the federal, state, regional, and local levels implements the programs contained in these plans. Agencies involved include the USEPA, CARB, local governments, Southern California Association of Governments (SCAG), and SCAQMD. The SCAQMD and the SCAG are responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the SCAB. The SCAQMD updates its AQMP every three years. The 2012 AQMP was adopted by the SCAQMD Board on December 6, 2012 and submitted to the ARB and the USEPA for concurrent review on December 20, 2012. The plan identifies control measures needed to demonstrate attainment with the federal 24-hour standard for $PM_{2.5}$ by 2014 in the South Coast Air Basin. In addition, the 2012 AQMP provides updates on progress towards meeting the 8-hour O_3 standard for 2023, an attainment demonstration for the revoked 1-hour O_3 standard, a vehicle miles traveled (VMT) offset demonstration for O_3 standards, and a report on the health effects of $PM_{2.5}$.

On January 25, 2013 the ARB approved the South Coast 2012 AQMP as an amendment to the State Implementation Plan (Goldstene, 2013). On February 13, 2013, the ARB submitted the approved plan to the USEPA.[11] The 2016 AQMP is in development.[12]

4.3.7 Air Quality Thresholds

The significance thresholds for air quality, presented in **Table 4.3-3**, have been established by the SCAQMD for construction and operations daily emissions. During construction or operation, if any of the identified daily air pollutant thresholds is exceeded by the proposed project, then the air quality impacts may be considered significant. The SCAQMD indicates in Chapter 6 of its CEQA Handbook that it considers a project to be mitigated to a level of insignificance if its primary effects are mitigated below the thresholds provided below.

Table 4.3-3
REGIONAL THRESHOLDS OF SIGNIFICANCE

Pollutant	Emissions in lbs/day	
	Construction	Operations
ROG	75	55
NO_X	100	55
CO	550	550
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_X	150	150
Source: Air Quality Significance Thresholds. South Coast Air Quality Management District. Revised March 2015.		

10 CCAA of 1988.
11 http://www.arb.ca.gov/planning/sip/planarea/2012%20AQMP%20Submittal%20Letter%20to%20U.S.%20EPA.pdf.
12 http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/factsheet-2016-aqmp.pdf?sfvrsn=2. Accessed October 9, 2015.

The SCAQMD Governing Board adopted a methodology for calculating localized air quality impacts through localized significance thresholds (LSTs), which is consistent with SCAQMD's Environmental Justice Enhancement Initiative I-4. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable state or national ambient air quality standard (Chico and Koizumi, 2003). The LSTs are developed based on the ambient concentrations of that pollutant for each source receptor area, and are applicable to NO_X, CO, PM_{10}, and $PM_{2.5}$.

As noted above, the project site is located in SRA 4. It is assumed that construction will disturb no more than one acre per day and that sensitive receptors are within 25 meters. **Table 4.3-4** shows the appropriate LSTs for construction activity. LSTs for construction emissions only apply to onsite sources.

Table 4.3-4
SCAQMD LOCALIZED THRESHOLDS FOR CONSTRUCTION

Pollutant	Localized Significance Threshold (lbs/day)
Nitrogen Dioxide (NO_2)	82
Carbon Monoxide (CO)	842
Respirable Particulate Matter (PM_{10})	8
Fine Particulate Matter ($PM_{2.5}$)	5
Source: Air Quality Significance Thresholds. South Coast Air Quality Management District. Revised October 21, 2009.	

4.3.8 Significance Evaluation

(a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact

Typically, assessments for air quality plan consistency use four criteria for determining project consistency with the current Air Quality Management Plan (AQMP). The first and second criteria are from the SCAQMD. According to the SCAQMD, there are two key indicators of AQMP consistency: (1) whether the project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP; and (2) whether the project will exceed the assumptions in the AQMP based on the year of project build out and phase (SCAQMD 2006). The third criterion is compliance with the control measures in the AQMP. The fourth criterion is compliance with the SCAQMD regional thresholds.

- *Project's Contribution to Air Quality Violations*

  As shown in Impact 4.3-b the project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Therefore, the project meets the first indicator.

- *AQMP Assumptions*

One way to assess project compliance with the AQMP assumptions is to ensure that the population density and land use are consistent with the growth assumptions used in the air plans for the air basin. According to ARB transportation performance standards, the rate of growth in vehicle miles traveled (VMT) and trips should be held to the rate of population growth (SCAQMD, 2006). Compliance with this performance standard is one way suggested by the ARB of showing compliance with the growth assumptions used in the AQMP. If the total VMT generated by the proposed project at build-out is at or below that predicted by the AQMP, then the proposed project's mobile emissions is consistent with the AQMP. It is assumed that the existing and future pollutant emissions computed in the AQMP were based on land uses from area general plans.

As discussed in **Section 4.10**, the proposed project is located within an area designated as Institutional District on the City's General Plan Land Use Map. The proposed project includes the construction of an early education facility on a site located within the campus of an existing elementary school. The proposed project is consistent with the policies of the General Plan and located within a consistent land use designation. Therefore, the proposed project is consistent with the growth assumptions upon which the current AQMP is based and would not conflict with the AQMP. Impacts would be less than significant.

Another measurement tool in evaluating consistency with the AQMP is to determine whether a project would generate population and employment growth and, if so, whether that growth would exceed the growth rates forecasted in the AQMP and how the project would accommodate the expected increase in population or employment. The proposed project will not induce new residential growth. The 48 new jobs created by the project would not result in a marked variance from the predicted regional employment growth rate. Therefore the project would not conflict with or obstruct the implementation of the applicable air quality management plan and would be less than significant.

- *Compliance with Control Measures in the AQMP*

The emissions analysis presented in the next section presumes that the project complies with all applicable SCAQMD rules, such watering requirements to suppress PM emissions during construction, and use of low-VOC architectural coatings. These rules, in turn, implement the latest AQMP's control measures. Therefore the project will be in compliance with the control measures in the AQMP.

- *Compliance With SCAQMD Regional Thresholds*

As discussed in the next section, all construction emissions associated with the Project would be below regional significance thresholds.

(b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less than Significant Impact

Construction activities, including soil disturbance dust emissions and combustion pollutants from on-site construction equipment and from off-site trucks hauling materials would create a temporary addition of pollutants to the local and regional air sheds. Construction emissions were

estimated using CalEEMod Version 2013.2.2. As shown in **Table 4.3-5**, all construction emissions associated with the project would be below the regional significance thresholds and LSTs.

Table 4.3-5
ESTIMATED CONSTRUCTION EMISSIONS

Construction Phase	Maximum Daily Emissions (lbs)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Demolition of Parking Lot	3.20	33.20	26.93	0.04	4.64	2.10
Fine Grading	3.11	31.99	22.25	0.03	4.76	3.22
Utility Trenching	2.13	20.55	16.67	0.02	1.26	1.11
Building Construction	3.42	25.34	17.60	0.03	1.65	1.45
Playground Paving	1.41	12.55	10.27	0.02	0.94	0.74
Architectural Coating	4.77	2.20	2.04	0.003	0.17	0.18
Portable Classroom Demolition	2.81	27.24	22.07	0.03	1.83	1.54
New Parking Lot Paving	1.85	16.55	12.93	0.02	1.19	0.99
Project Maximum Daily	**4.77**	**33.20**	**26.93**	**0.04**	**4.76**	**3.22**
SCAQMD Daily Threshold	75	100	550	150	150	55
Exceed Thresholds?	No	No	No	No	No	No
Onsite Emissions for LST Test	N/A	31.97	21.9	N/A	4.71	3.20
LST Threshold		82	842		8	5
Exceed Thresholds?	N/A	No	No	N/A	No	No
Source: CalEEMod Version 2013.2.2.						

The project's projected operational emissions are shown in **Table 4.3-6**. The SCAQMD does not require a localized significance analysis for operations, so one was not done. Maximum daily emissions of all criteria pollutants would be below their respective SCAQMD significance thresholds. Therefore regional emissions of criteria pollutants during the operational phase would be less than significant.

Table 4.3-6
ESTIMATED OPERATIONAL EMISSIONS

Operational Emissions Source	Maximum Daily Emissions (lbs)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area	2.51	0.0001	0.01	0.00	0.00004	0.00004
Energy	0.01	0.0936	0.08	0.0006	0.007	0.007

Operational Emissions Source	Maximum Daily Emissions (lbs)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Mobile	7.73	14.35	63.73	0.12	8.02	2.26
Total Daily	**10.25**	**14.45**	**63.82**	**0.12**	**8.02**	**2.27**
SCAQMD Daily Threshold	55	55	550	150	150	55
Exceed Thresholds?	No	No	No	No	No	No
Source: CalEEMod Version 2013.2.2.						

(c) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Less than Significant Impact

According to the CEQA Guidelines, a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved air quality attainment or maintenance plan.[13] As described above in **Section 4.3(b)**, the project would not exceed any of the SCAQMD daily criteria pollutant thresholds. In general, cumulative *regional* impacts of construction and operation of all projects in the SCAB at any given time are accounted for in the AQMP. The proposed project is compliant with the AQMP so the incremental contribution of the project would not be cumulatively considerable. The only cumulative impacts with the potential for significance would be localized impacts during construction. The analysis in **Sections 4.3(b) and 4.3(d)** shows that localized impacts from the project would be less than significant and therefore would not contribute to a cumulative impact.

(d) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact

Exposure of sensitive receptors to criteria pollutants was discussed in **Section 4.3(b)**; exposures would be less than significant.

During construction, diesel equipment would be operating. Diesel particulate matter (DPM) is known to the State of California as a toxic air contaminant (TAC). The risks associated with exposure to substances with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure, which is defined in the California Air Pollution Control Officers' Association Air Toxics "Hot Spots" Program Risk Assessment Guidelines as 24 hours per day, 7 days per week, 365 days per year, for 70 years. DPM would be emitted during the short term of construction assumed for the proposed project from heavy equipment used in the construction process. Because diesel exhaust particulate matter is considered carcinogenic, long-term exposure to diesel exhaust emissions have the potential to result in adverse health impacts. Due to the short-term nature of

13 CEQA Guidelines, § 15064(h)(3).

project construction, impacts from exposure to diesel exhaust emissions during construction would be less than significant.

(e) Would the project create objectionable odors affecting a substantial number of people?

Less than Significant Impact

The CEQA guidelines indicate that a significant impact would occur if the proposed project would create objectionable odors affecting a substantial number of people. Diesel exhaust and VOCs will be emitted during construction of the proposed project, which are objectionable to some; however, emissions will disperse rapidly from the project site and the activity would be temporary. Impacts due to objectionable odors would be less than significant.

(f) Is the boundary of the proposed school site within 500 feet of the edge of the closest traffic lane of a freeway or busy traffic corridor? If yes, would the project create an air quality health risk due to the placement of the school?

No Impact

The nearest freeway, Interstate I-710, is approximately 1.5 miles west of the project site. Although the General Plan classifies East Del Amo Boulevard as a "major avenue," it may be considered an arterial for the purpose of this analysis.[14] Barton Elementary School, including the facilities being replaced by the project, has been located on that thoroughfare since its original construction. There would be no change in the distance to freeways or busy traffic corridors. Therefore the project would create no additional health risk from proximity to mobile sources.

(g) Create an air quality hazard due to the placement of a school within one-quarter mile of: (i) permitted and non-permitted facilities identified by the jurisdictional air quality control board or air pollution control district; (ii) freeways and other busy traffic corridors; (iii) large agricultural operations; and/or (iv) a rail yard, which might reasonably be anticipated to emit hazardous air emissions?

No Impact

i. A search of the SCAQMD's Facility Information Detail (FIND) online database[15] found no air toxics emission sources within 0.25 mile of the school. Therefore, the proposed project would not be exposed to significant emissions of hazardous air pollutants from a facility regulated by the SCAQMD.

ii. The nearest freeway, Interstate I-710, is approximately 1.5 miles west of the project site. Although the General Plan classifies East Del Amo Boulevard as a "major avenue," it may be considered an arterial for the purpose of this analysis.[16] Barton Elementary School, including the facilities being replaced by the project, has been located on that thoroughfare since its original construction. There would be no change in the distance to freeways or

14 Email from Keith Rutherfurd, Stantec, Irvine, CA to Michael Rogozen, UltraSystems Environmental, Inc., Irvine California. January 22, 2016.
15 South Coast Air Quality Management District. Facility Information Detail (FIND). http://www3.aqmd.gov/webappl/fim/prog/search.aspx. Last accessed January 25, 2016.
16 Email from Keith Rutherfurd, Stantec, Irvine, CA to Michael Rogozen, UltraSystems Environmental, Inc., Irvine California. January 22, 2016.

busy traffic corridors. Therefore the project would create no additional health risk from proximity to hazardous emissions from mobile sources.

iii. The project site is in an urban area, and is not near any agricultural operations. Therefore, the proposed project would not be exposed to hazardous air emissions from a large agricultural operation.

iv. The project site is not near a rail yard. Therefore the proposed project would not be exposed to hazardous air emissions from operations at a large rail yard.

4.4 Biological Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife[1] or U.S. Fish and Wildlife Service?		**X**		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				**X**
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				**X**
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native nursery sites?				**X**
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				**X**
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				**X**

1 Beginning January 1, 2013, the California Department of Fish and Game (CDFG) officially changed its name to California Department of Fish and Wildlife (CDFW). However, CEQA Guidelines Appendix G: Environmental Checklist Form has not been updated to reflect this name change

Methodology

Relevant literature, maps, databases, agency web sites, Geographic Information System (GIS) data, and aerial imagery were obtained from public domain sources to: (1) assess habitats, special-status plant and wildlife species, jurisdictional waters, critical habitats, and wildlife corridors that potentially may occur in and near the project site, and (2) identify local or regional plans, policies, and regulations that may apply to the project. Plant and wildlife species protected by federal agencies, state agencies, and nonprofit resource organizations, such as the California Native Plant Society (CNPS), are collectively referred to as "special-status species" in this report.[2] Some of these plant and wildlife species are afforded special legal or management protection because they are limited in population size, and typically have a limited geographic range and/or habitat. The following data sources were accessed.

- United States Geological Survey (USGS) 7.5-Minute Topographic Map Long Beach Quadrangle[3] and current aerial imagery.[4]
- Web Soil Survey provided by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS).[5]
- California Natural Diversity Database (CNDDB) provided by the California Department of Fish and Wildlife (CDFW).[6]
- Information, Planning and Conservation (IPaC) provided by the United States Fish and Wildlife Service (USFWS).[7]
- Inventory of Rare and Endangered Plants of California, 8th Edition, provided by the CNPS.[8]
- National Wetlands Inventory (NWI) provided by the USFWS.[9]
- National Hydrography Dataset (NHD) provided by the USGS. [10]
- Critical Habitat Portal provided by the USFWS.[11]

Following the literature and data review, UltraSystems biologist, Ms. Sloane Seferyn, conducted a reconnaissance-level field survey on November 3, 2015 in and near the project site to: (1) assess the potential for sensitive habitats and presence of special-status plant and wildlife species; (2) identify plant communities, jurisdictional waters, and potential wildlife corridors; and (3) identify potential impacts to these biological resources.

2 Avian species protected by the Migratory Bird Treaty Act (MBTA) are not considered "special-status species."
3 Cal-Atlas: http://atlas.ca.gov/imagerySearch.html. Accessed on October 30, 2015.
4 Google Earth©. Accessed on October 30, 2015.
5 USDA NRCS Web Soil Survey: http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed on October 28, 2015.
6 CDFW CNDDB: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed on October 27, 2015.
7 USFWS IPaC: http://ecos.fws.gov/ipac/. Accessed on October 27, 2015.
8 CNPS Topo Quad Search: http://cnps.site.aplus.net/cgi-bin/inv/inventory.cgi/BrowseAZ?name=quad. Accessed October 30, 2015.
9 USFWS NWI: http://www.fws.gov/wetlands/Data/mapper.html. Accessed on October 1, 2015.
10 USGS NHD: http://nhd.usgs.gov/. Accessed on October 1, 2015.
11 USFWS Critical Habitat Portal: http://ecos.fws.gov/crithab/. Accessed on October 26, 2015.

Discussion of Impacts

(a) Could the project have a substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less than Significant Impact with Mitigation Incorporated

The project site is located within an urban area, which provides low habitat value for special-status plant and wildlife species. The project site contains structures, sidewalks, and a paved surface parking lot that would not support sensitive habitats or special-status species. No special-status plants or wildlife[12] were observed within the project site. The project site lacks suitable soils, biological resources, and physical features that could support special-status plant or wildlife species. For this reason, no direct or indirect impacts on special-status plant or wildlife species are anticipated as a result of project activities.

The project site supports ornamental vegetation and structures that could potentially provide cover and nesting habitat for bird species that have adapted to urban areas, such as rock pigeons (*Columba livia*) and mourning doves (*Zenaida macroura*). Mourning doves are protected by the Migratory Bird Treaty Act (MBTA) and the Fish and Game Code, which render it unlawful to take native breeding birds, and their nests, eggs, and young. Temporary direct impacts on breeding birds could occur from increased noise, vibration, and dust during construction, which could adversely affect the breeding behavior of some birds, and lead to the loss (take) of eggs and chicks, or nest abandonment. To avoid potential disturbance to potential nest sites and other wildlife, the following mitigation measures will be adopted.

Mitigation Measures

BR-1: Construction During Breeding Season

- The breeding bird nesting season is typically from February 15 through September 15, but can vary slightly from year to year, usually depending on weather conditions. If construction cannot be avoided during the breeding season, a qualified biologist will conduct a pre-construction survey for breeding birds, and active and potential nesting sites within the limits of project disturbance up to seven days prior to mobilization, staging and other disturbances.

- If no breeding birds or active nests are observed during the pre-construction survey, or if they are observed and will not be impacted, then project activities may begin and no further breeding bird monitoring will be required.

- If an active bird nest is located during the pre-construction survey and potentially will be impacted, a no-activity buffer zone will be delineated on maps and marked by flagging or other means up to 500 feet for special-status avian species and raptors, or 100 feet for non-special-status avian species. The biologist will determine the appropriate size of the buffer zone based on the type of activities planned near the nest and bird species because some bird species are more tolerant than others to noise and other disturbances. Buffer zones

12 Special-status species include candidate and sensitive species.

will not be disturbed until a qualified biologist determines that the nest is inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, or the young will no longer be impacted by project activities. Periodic monitoring by a biologist will be performed to determine when nesting is complete. After the nesting cycle, project activities may begin within the buffer zone.

- Birds or their active nests will not be disturbed, captured, handled or moved except as noted above. Inactive nests may be moved by a qualified biologist, if necessary, to avoid disturbance by project activities.

BR-2: General Plant and Wildlife Avoidance Measures

- To minimize construction-related mortalities of nocturnally active species such as mammals and snakes, work be conducted during daylight hours to the extent practicable. Night-time work (and use of artificial lighting) will not be permitted unless specifically authorized. If required, night lighting will be shielded to protect species from direct night lighting. All unnecessary lights will be turned off at night to avoid attracting wildlife such as insects, migratory birds, and bats.

- Wildlife encountered during the course of project activities will be allowed to freely leave the area unharmed. Wildlife will not be disturbed, captured, harassed, or handled.

- Active nests cannot be removed or disturbed. Nests can be removed or disturbed if determined inactive by a qualified biologist.

- To avoid impacts on wildlife, the applicant will comply with litter and pollution laws and institute a litter control program throughout project construction. All contractors, subcontractors, and employees will adhere to this program. Trash and food items will be disposed of promptly in predator-proof containers with resealing lids. These covered trash receptacles will be placed at each designated work site and the contents will be properly disposed at least once a week. Trash removal will reduce the attractiveness of the area to opportunistic predators such as common ravens (*Corvus corax*), coyotes (*Canis latrans*), northern raccoons (*Procyon lotor*), and Virginia opossums (*Didelphis virginiana*).

BR-3: Construction Best Management Practices (BMPs)

- Project work crews will be directed to use best management practices (BMPs) to protect wildlife where applicable. These measures will be identified prior to construction and incorporated into the construction operations.

(b) Could the project have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact

The dominant land use in the vicinity of the project is urban development, which includes structures, paving, and other impervious surfaces and/or areas where landscaping has been installed and maintained. No riparian habitat or other sensitive natural communities were

observed in or adjacent to the project site. For this reason, no direct or indirect impacts to riparian habitat or other sensitive natural communities are anticipated as a result of project activities.

(c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact

According to the literature review and reconnaissance-level field survey, no wetlands occur in or adjacent to the project site. For this reason, no direct or indirect impacts to federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means are anticipated as a result of project activities.

(d) Could the project interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?

No Impact

According to the literature review and reconnaissance-level field survey, the project site does not function as a wildlife movement corridor. The project site does not contain wildlife travel routes, such as a riparian strip, ridgeline, drainage, or wildlife crossings, such as a tunnel, culvert, or underpass. In addition, the project contains a chain-linked fence around the boundary. This fence inhibits wildlife travel through the site. Common wildlife species such as coyotes, northern raccoons, striped skunks (*Mephitis mephitis*), and Virginia opossums could be expected to travel within areas surrounding the site.

The project site and adjacent areas do not support resident or migratory fish species or wildlife nursery sites. No established resident or migratory wildlife corridors occur within the project site. For these reasons, the project would not interfere substantially with or impede (1) the movement of any resident or migratory fish or wildlife species, (2) established resident or migratory wildlife corridors, or (3) the use of wildlife nursery sites.

(e) Could the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact

The project is located within a developed urban area and no native trees or shrubs protected by local policies or ordinances were observed within the project site during the reconnaissance-level field survey. For these reasons, the project would not conflict with local policies or ordinances protecting biological resources.

(f) Could the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact

The project site is not located in an area covered by a Habitat Conservation Plan (HCP), Natural Communities Conservation Plan (NCCP) or other approved HCP. For this reason, the project would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP.

4.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?				**X**
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?			**X**	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			**X**	
d) Disturb any human remains, including those interred outside of formal cemeteries?			**X**	

(a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

No Impact

No historical or archaeological resources were identified within the project site, which has been previously developed. For this reason, no impacts to these resources are anticipated.

(b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Less than Significant Impact

The proposed project site is adjacent to the Barton Elementary School, and surrounded by a completely built and urban setting containing a mix of roadways and residential and institutional uses. Development of the area was essentially complete by the late 1940s. No historical or archaeological resources were identified within the proposed project site during previous investigations[1]; however; unknown or unrecorded resources may potentially be revealed during precise grading activities. This may occur if ground disturbance activities penetrate deeper than previous work performed.

Additional study was conducted to determine possible traditional cultural properties with the Native American Heritage Commission and local tribal representative, which proved negative for the site.[2]

1 See Phase 1 Environmental Assessment Report, Barton Elementary School, Educare Facility, Portion of APN 7135-007-900 for Archaeological Project Impacts in PA 5B.

2 See Native American Heritage Commission and Native American Communities Consultation in Support of LBUSD, Educare Facility at Barton Elementary School.

The City of Long Beach's Historic Preservation Element of the General Plan calls for the protection of cultural, structural, and archaeological resources, but does not require archaeological monitoring of ground disturbance.[3] California Public Resources Code[3] (PRC) protects archeological, paleontological, and historical sites with a wide variety of state policies and regulations in conjunction with the California Environmental Quality Act (CEQA). Furthermore, all construction activities must comply with PRC §§ 21083.2-21084.1 and CEQA Guidelines §§ 15064.5 and 15126.4(b) which address the protection of archeological and historical resources. California Senate Bill 18 (SB 18) requires local government agencies to consult with Native American tribes in the land development process in order to preserve traditional tribal cultural places.

With adherence to applicable California PRC sections, and SB 18 consultation, no impacts to historical resources and less than significant impacts to archaeological resources would be anticipated.

(c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant Impact

As previously mentioned in **Section 4.5(a)** of this initial study, the proposed project will be located on a site that has been graded and in use since the late 1940s. Although this project proposes precise grading activities, it is not anticipated to directly or indirectly destroy any paleontological resources or site or unique geologic feature since previous grading activities have yielded negative results.

There are no regulations regarding paleontological resources monitoring or preservation in the City of Long Beach's municipal codes or General Plan.[3] In the unlikely event that a unique paleontological resource or unique geologic feature is discovered during precise grading activities, then the California Public Resources Code requirements would become effective immediately.[4] Therefore, with adherence to all applicable requirements, less than significant impacts would be anticipated.

(d) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant Impact

As previously mentioned in **Section 4.5(a)** of this initial study, the proposed project will be located on a site that has been graded and in use since the late 1940s. During previous ground disturbance activities, no human remains were identified or recorded onsite. In the unlikely event that human remains are discovered, during precise grading or construction activities, the project would be subject to California Health and Safety Code § 7050.5[5], CEQA § 15064.5, and California Public Resources Code § 5097.98.[4]

California Health and Safety Code § 7050.5 have procedures for the unlikely discovery of human remains. CEQA § 15064.5 indicates the process for determining the significance of impacts to archeological and historical resources. California Public Resources Code § 5097.98 stipulates the notification process during the discovery of Native American human remains, descendants,

3 See California Public Resources Code 5020–5029.5, 5079–5079.65, and 5097.9.–5097.98.

disposition of human remains, and associated artifacts. Therefore, adherence to all applicable codes and regulations would result in a less than significant impact.

4.6 Geology and Soils

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) (1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault, or (2) placement of a school within an area designated as geologically hazardous in the safety element of the local general plan, or (3) construction, reconstruction, or relocation of any school building on the trace of a geological fault along which surface rupture can reasonably be expected to occur within the life of the school building?? Refer to Division of Mines and Geology Special Publication 42.			**X**	
ii) Strong seismic ground shaking?			**X**	
iii) The construction, reconstruction, or relocation of any school building on a site subject to moderate-to-high liquefaction??			**X**	
iv) The construction, reconstruction, or relocation of any school building on a site subject to landslides?				**X**
b) Result in substantial soil erosion or the loss of topsoil?			**X**	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off site landslide, lateral spreading, subsidence, liquefaction or collapse?			**X**	
d) Be located on expansive soil, as defined in Table 18-1 B of the Uniform Building Code (1994), creating substantial risks to life or property?			**X**	

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				**X**

(a) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less than Significant Impact

In California, an "Alquist-Priolo Earthquake Fault Zone" (formerly Special Study Zone) is a seismic hazard area that varies in width, but averages approximately 0.25 mile around active faults. A fault is a fracture in the crust of the earth, where the rock mass on one side moves relative to the rock mass on the other side. Most faults are the result of repeated displacements over a long period of time. A fault trace is the line on the land surface defining the fault that can be delineated on a map. Surface rupture occurs when movement on a fault occurs at the surface. These faults may pose a risk of rupture to existing or future structures.

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. This law was a direct result of the 1971 San Fernando Earthquake, which was associated with extensive surface fault ruptures that damaged numerous homes, commercial buildings, and other structures. Surface rupture is the most easily avoided seismic hazard. For the purposes of the Act, an active fault is one that has ruptured in the last 11 thousand years (Holocene time), and a potentially active fault is one that has ruptured in the last 1.6 million years (Pleistocene time). The law requires the State Geologist to establish regulatory zones (Earthquake Fault Zones), and prepare maps showing surface traces of active faults.

The proposed project site is not within a designated State of California Alquist-Priolo Earthquake Fault Zone, or within an area designated as geologically hazardous in the safety element of the local general plan. No known active or potentially active faults trend toward or through the project site (see **Figure 4.6-1**). For these reasons, impacts from rupture of a known earthquake fault during the project life would be less than significant.

(ii) Strong seismic ground shaking?

Less than Significant Impact

A total of 42 active or potentially active faults have been identified within 62 miles of the project site. For this reason, the project site is likely to be subject to strong seismic ground shaking during the life of the project, which could potentially cause collapse of structures, buckling of walls, and damage to foundations. Based on the analysis performed for this project site, the Newport-Inglewood fault, approximately 1.6 miles southwest of the project site, would probably generate the most severe ground shaking. The maximum probable earthquake (MPE) that is likely to occur during a 100-year time interval is 7.1 Mw[1], which would result in acceleration on the order of 0.494g[2] at the project site. Other nearby active faults includes the Palos Verdes Fault and the Puente Hills Blind Thrust Fault approximately 8.3 and 8.4 miles from the project site, respectively (ASE, 2015).

Proposed structures would be constructed in accordance with applicable California Building Code (CBC) (Title 24, Part 2, California Code of Regulations) adopted by the legislature and used throughout the state, and requirements from State of California's Department of General Services, Division of the State Architect (DSA).

The CBC provides minimum standards to protect property and the public welfare by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. The CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock onsite, and the strength of ground motion with specified probability of occurring at the site. It requires the preparation of project-specific geotechnical reports prepared by a Certified Engineering Geologist or Geotechnical Engineer prior to construction of proposed structures. A project-specific geotechnical investigation report has been prepared for the proposed project. Site specific recommendations provided in the geotechnical report would be incorporated into project plans that are reviewed by building officials prior to issuance of permits. If applicable, structures would also be inspected in the field prior to permit sign off to ensure that these requirements are implemented. For these reasons, impacts from strong seismic ground shaking would be less than significant.

(iii) Seismic-related ground failure, including liquefaction?

Less than Significant Impact

Liquefaction is the loss of soil strength from a rapid increase in pore-water pressure during severe ground shaking and occurs primarily in loose (low density), cohesion-less, and fine- to medium-grained soils in areas where groundwater is approximately 20 feet below the ground surface (bgs) or less. The project site is not within a known liquefaction hazard zone according to the California Seismic Hazard Zone Report (ASE, 2015) (see **Figure 4.6-2**). Because groundwater is deeper than

1 The moment magnitude scale (Mw) reports the size of earthquakes in terms of energy released. The magnitude is based on the seismic moment of the earthquake, which is equal to the rigidity of the earth multiplied by the average amount of slip on the fault and the size of the area that slipped. The Mw scale was developed in the 1970s to succeed the 1930s-era Richter scale. Although the formulae are different, the Mw scale retains the familiar magnitude values used in the Richter scale. The Mw scale is now used by the United States Geological Survey to estimate magnitudes for modern large earthquakes.

2 g = gravitational acceleration of 9.8 meters per second per second.

20 feet bgs, and accelerations expected from seismicity are relatively small (0.494g), potential for liquefaction within the proposed project site would be less than significant.

(iv) Landslides?

No Impact

Landslides occur when the stability of the slope changes from a stable to an unstable condition. A change in the stability of a slope can be caused by a number of factors, acting together or alone. Natural causes of landslides include groundwater (pore water) pressure acting to destabilize the slope, loss of vegetative structure, erosion of the toe of a slope by rivers or ocean waves, weakening of a slope through saturation by snow melt or heavy rains, earthquakes adding loads to barely stable slope, earthquake-caused liquefaction destabilizing slopes, and volcanic eruptions.

The project site is not within a landslide hazard zone according to the California Seismic Hazard Zone Report (ASE, 2015), and the topography within and surrounding the property is relatively flat (see **Figure 4.6-2**). There are engineered slopes along the eastern and western boundaries of the project site. Proposed structures are located within the center of the project site. For these reasons, no impacts to people or structures due to landslides are anticipated.

(b) Would the project result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact

Section 402 of the federal Clean Water Act requires construction projects that may potentially result in soil erosion to implement best management practices (BMPs) to eliminate or reduce sediment and other pollutants in stormwater runoff. If one or more acres of soil would be disturbed, a National Pollutant Discharge Elimination System (NPDES) permit would be obtained. NPDES permits establish enforceable limits on discharges, require effluent monitoring, designate reporting requirements, and require construction and post-construction BMPs to eliminate or reduce point and non-point source discharges of pollutants, including soil.[3]

A General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (NPDES permit) would be required for this construction project. This NPDES Permit would require the Legally Responsible Person (LRP), such as the project owner, to prepare a Storm Water Pollution Prevention Plan (SWPPP) prior to construction to identify construction BMPs to eliminate or reduce soils and pollutants in storm water and non-storm water discharged to storm water sewer systems and other drainages. Prior to NPDES permit issuance, the LRP would upload Permit Registration Documents (PRDs) to the State Water Resources Control Board (SWRCB) on-line Stormwater Multi-Application and Report Tracking System (SMARTS). PRDs include a Notice of Intent (NOI), site map, risk assessment, SWPPP, post-construction water balance, annual fee, and signed certification statement by the LRP attesting to the validity of the information. These preventive measures during construction are intended to eliminate or reduce soil and topsoil erosion.

The project site has a low potential for soil erosion because it is relatively flat, and would be hardscaped, except for selected landscaped areas. Additionally, the proposed project must be designed to minimize, to the maximum extent practicable, the introduction of pollutants that may

3 California State Water Resources Control Board, http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml. Accessed October 2013.

result in significant impacts, generated from site runoff to the storm water conveyance system as approved by the building official. For these reasons, the potential for substantial soil erosion or the loss of topsoil would be less than significant.

(c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less than Significant Impact

The potential impact of landslides, lateral spreading, subsidence, liquefaction or collapse on proposed buildings and other structures is discussed below.

Landslides

Landslides occur when the stability of the slope changes from a stable to an unstable condition. A change in the stability of a slope can be caused by a number of factors, acting together or alone. Natural causes of landslides include groundwater (pore water) pressure acting to destabilize the slope, loss of vegetative structure, erosion of the toe of a slope by rivers or ocean waves, weakening of a slope through saturation by snow melt, or heavy rains, earthquakes adding loads to barely stable slope, earthquake-caused liquefaction destabilizing slopes, and volcanic eruptions. The project site is flat, and not within a landslide hazard zone. For these reasons, no impacts to people or structures due to landslides are anticipated.

Lateral Spreading

Lateral spreading occurs on mild slopes of 0.3 to 5% underlain by loose sands and a shallow water table. Lateral spreading can range from a few centimeters to a few meters, and can cause significant damage to buildings, bridges, pipelines, and other infrastructure. Lateral spreading often occurs along riverbanks and shorelines where loose, saturated sandy soils are commonly encountered at shallow depths. During lateral spreading, unsaturated overburden soil slides as intact blocks over a lower liquefied deposit. Surface displacements proceed down-slope or toward a steep free face, such as a stream bank, and may form fissures, scarps, and grabens. The topography within and surrounding the property is relatively flat, and groundwater occurs more than 61 feet bgs. The conditions for lateral spreading are not present at the proposed site. For this reason, the potential for lateral spreading would be less than significant.

Subsidence

Seismically induced differential settlement may occur in loose to moderately dense, unsaturated granular soils and result in subsidence. Subsidence may also occur in areas of excessive overdraft during oil and groundwater production. No subsidence from oil or groundwater overdraft occurs in this area. According to the 2015 geotechnical investigation at the project site, shallow earth materials on site consist of stiff to hard fine-grained soils, and are considered non-liquefiable. However, any deeper granular soils, if present, may still undergo seismically-induced volumetric densification above groundwater level during the MPE. Settlement of deeper on-site granular soils from seismically-induced densification (i.e., "dry" seismic settlement) is estimated to be less than 1/2 inch, and would affect a relatively large area. Consequently, differential settlement over short distances is unlikely. For these reasons, potential for damage to buildings within the proposed property from subsidence would be less than significant.

Liquefaction

Liquefaction is the loss of soil strength from a rapid increase in pore-water pressure during severe ground shaking and occurs primarily in loose (low density), cohesion-less, and fine- to medium-grained soils in areas where groundwater is approximately 20 feet bgs or less. Shallow earth materials on site consist of stiff to hard fine-grained soils, groundwater is deeper than 20 feet bgs, and accelerations expected from seismicity are relatively small (0.494), potential for liquefaction within the proposed project site would be less than significant.

Collapse

Collapsible soils consist of loose, dry, low-density materials that collapse and compact with the addition of water or excessive loading. These soils are distributed throughout the southwestern United States, specifically in areas of young alluvial fans, debris flow sediments, and loess (wind-blown sediment) deposits. Soil collapse occurs when the land surface is saturated at depths greater than those reached by typical rain events. This saturation eliminates the clay bonds holding the soil grains together. Similar to expansive soils, collapsible soils result in structural damage such as cracking of the foundation, floors, and walls in response to settlement. Because subsurface soils consist of stiff to hard fine-grained soils, and groundwater is deeper than 20 feet bgs, potential for soil collapse within the proposed project site would be less than significant.

(d) Would the project be located on expansive soil, as defined in Table 18-1 B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less than Significant Impact

Expansive soils shrink and swell with changes in soil moisture. Soil moisture may change from landscape irrigation, rainfall, and utility leakage. Repeated changes in soil volume due to water content fluctuations may compromise structure foundations. Expansive soils are commonly very fine-grained with high to very high percentages of clay. Soils with an Expansion Index (EI) greater than 20 are considered expansive according to § 1803.5.3 of the 2013 Uniform Building Code (UBC).[4] The laboratory test result of one soil sample had an EI of 83 (ASE 2015). Based on this result, shallow soils within the project site have been classified as "medium" to "high" expansive soils. These soils may heave or shrink unevenly upon saturation and drying, respectively, resulting in potentially excessive and uneven displacement of overlying foundations, structural improvements, flatworks, and pavements.[5]

For this project, the County Building and Planning Department would require the project to comply with the applicable soil and foundation codes of the CBC and UBC that specify special foundation design for construction on soils that exceed certain expansion thresholds. . A project-specific geotechnical investigation report has been prepared for the proposed project. Site specific recommendations provided in the geotechnical report would be incorporated into project plans that are reviewed by building officials prior to issuance of permits. If applicable, structures would also be inspected in the field prior to permit sign off to ensure that these requirements are implemented. For these reasons, impacts due to location on expansive soils would be less than significant.

4 http://www.ecodes.biz/ecodes_support/free_resources/2013California/13Building/PDFs/Chapter%2018%20-%20Soils%20and%20Foundations.pdf. Accessed January 19, 2015.

5 EI = 100 x h x F. Where h = percent swell and F = fraction passing No. 4 sieve. EI= 0 to 20 Very Low, 21 to 50 Low , 51 to 90 Medium, 91 to 130 High, >130 Very High.

(e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact

The proposed project would not include septic tanks or alternative waste water disposal systems. For this reason, no impact from septic tanks or alternative waste water disposal systems within the proposed project site would occur.

Figure 4.6-1
Regionally Active Faults

Figure 4.6-2
LIQUEFACTION AND LANDSLIDE HAZARD ZONES

4.7 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			**X**	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			**X**	

4.7.1 GHG Constituents

Constituent gases that trap heat in the Earth's atmosphere are called greenhouse gases (GHGs), analogous to the way a greenhouse retains heat. GHGs play a critical role in the Earth's radiation budget by trapping infrared radiation emitted from the Earth's surface, which would otherwise escape into space. Prominent GHGs contributing to this process include carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). Without the natural heat-trapping effect of GHG, the earth's surface would be about 34°F cooler. This natural phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. However, anthropogenic emissions of these GHGs in excess of natural ambient concentrations are responsible for the enhancement of the greenhouse effect. It has led to a trend of unnatural warming of the Earth's natural climate known as "global warming" or "climate change," or, more accurately, "global climate disruption." Emissions of these gases that induce global climate disruption are attributable to human activities in the industrial/manufacturing, energy, transportation, residential, and agricultural sectors.

The global warming potential (GWP) is the potential of a gas or aerosol to trap heat in the atmosphere. Individual GHG compounds have varying GWP and atmospheric lifetimes. The reference gas for the GWP is CO_2; CO_2 has a GWP of one. The calculation of the CO_2 equivalent (CO_2e) is a consistent methodology for comparing GHG emissions since it normalizes various GHG emissions to a consistent metric. Methane's warming potential of 21 indicates that methane has a 21 times greater warming effect than CO_2 on a molecule per molecule basis. A CO_2e is the mass emissions of an individual GHG multiplied by its GWP. GHGs are often presented in units of metric tons (tonnes) of CO_2e.

Types of Greenhouse Gases

Carbon Dioxide (CO_2): The natural production and absorption of CO_2 is achieved through the terrestrial biosphere and the ocean. However, humankind has altered the natural carbon cycle by burning fossil coal, oil, and natural gas. Since the industrial revolution began in the mid-1700s, each of these activities has increased in scale and distribution.

Methane (CH_4): CH_4 has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at

the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropogenic sources include fossil-fuel combustion and biomass burning.

Nitrous Oxide (N_2O): N_2O is produced naturally by microbial processes in soil and water, including those reactions that occur in nitrogen-containing fertilizer. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. N_2O is used as an aerosol spray propellant, e.g., in whipped cream bottles. It is also used in potato chip bags to keep chips fresh, in rocket engines and in racecars.

GHG Emissions Levels

In 2010, total worldwide GHG emissions were estimated to be 46 billion tonnes of CO_2e, excluding emissions and removals from land use, land use change, and forestry.[1] In 2012, total GHG emissions in the U.S. were 6.525.6 billion tonnes CO_2e.[2] In 2012, total California greenhouse gas emissions were 459 million tonnes CO_2e. The transportation sector accounted for approximately 37% of the total emissions, while the industrial sector accounted for approximately 22%. Emissions from electricity generation were about 21%.[3]

GHG Thresholds

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, the South Coast Air Quality Management District (SCAQMD) Board adopted an Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans.[4] The Interim Guidance uses a tiered approach to determining significance. Although this Interim Guidance was developed primarily to apply to stationary source industrial projects where the SCAQMD is the lead agency under CEQA, in absence of more directly applicable policy, the SCAQMD's Interim Guidance is often used as general guidance by local agencies to address the long-term adverse impacts associated with global climate change.

The SCAQMD proposes that if a project generates GHG emissions below 3,000 tonnes CO_2e annually, it could be concluded that the proposed project's GHG contribution is not cumulatively considerable, and is therefore less than significant under CEQA. If the proposed project generates GHG emissions above the threshold, the analysis must identify mitigation measures to reduce GHG emissions.

4.7.2 Regulatory Setting

Federal Climate Change Regulations

The federal government has been involved in climate change issues at least since 1978, when Congress passed the National Climate Program Act (92 Stat. 601), under authority of which the National Research Council prepared a report predicting that additional increases in atmospheric

1 U.S. Environmental Protection Agency. Climate Change Indicators in the United States, 2014. Third Edition. 2014.
2 U.S. Environmental Protection Agency. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2012. April 15, 2014.
3 California Environmental Protection Agency Air Resources Board. California Greenhouse Gas Emission Inventory: 2000-2012. May, 2014.
4 Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans. South Coast Air Quality Management Board. Adopted December 5, 2008.

CO_2 would lead to non-negligible changes in climate. At the "Earth Summit" in 1992 in Rio de Janeiro, President George H. W. Bush signed the United Nations Framework Convention on Climate Change (UNFCCC), a nonbinding agreement among 154 nations to reduce atmospheric concentrations of carbon dioxide and other greenhouse gases. The treaty was ratified by the U.S. Senate. However, when the UNFCCC signatories met in 1997 in Kyoto, Japan, and adopted a protocol that assigned mandatory targets for industrialized nations to reduce greenhouse gas emissions, the U.S. Senate expressed its opposition to the treaty. The Kyoto Protocol was not submitted to the Senate for ratification.

In 2007, Massachusetts et al. v. Environmental Protection Agency et al. (549 U.S. 497), the U.S. Supreme Court ruled that CO_2 was an air pollutant under the Clean Air Act, and that consequently, the U.S. Environmental Protection Agency (USEPA) had the authority to regulate its emissions. The Court also held that the Administrator must determine whether emissions of greenhouse gases from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On April 24, 2009, the USEPA published its intention to find that: (1) the current and projected concentrations of the mix of six key greenhouse gases—CO_2, CH_4, N_2O, HFCs, PFCs and SF_6—in the atmosphere threaten the public health and welfare of current and future generations, and (2) the combined emissions of GHG from new motor vehicles and motor vehicle engines contribute to the atmospheric concentrations of these key greenhouse gases and hence to the threat of climate change (74 Fed. Reg. 18886). These findings are required for subsequent regulations that would control GHG emissions from motor vehicles.

California Climate Change Regulations

Executive Order S-3-05 (GHG Emissions Reductions). Executive Order #S-3-05, signed by Governor Arnold Schwarzenegger on June 1, 2005, calls for a reduction in GHG emissions to 1990 levels by 2020 and for an 80% reduction in GHG emissions to below 1990 levels by 2050.

The California Global Warming Solutions Act of 2006 (AB 32). In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Global Warming Solutions Act of 2006 (Health and Safety Code § 38500 et seq.), into law. AB 32 was intended to effectively end the scientific debate in California over the existence and consequences of global warming. In general, AB 32 directs the California Air Resources Board (CARB) to do the following:

- On or before June 30, 2007, publicly make available a list of discrete early action GHG emission reduction measures that can be implemented prior to the adoption of the statewide GHG limit and the measures required to achieve compliance with the statewide limit;

- By January 1, 2008, determine the statewide levels of GHG emissions in 1990, and adopt a statewide GHG emissions limit that is equivalent to the 1990 level (an approximately 25% reduction in existing statewide GHG emissions);

- On or before January 1, 2010, adopt regulations to implement the early action GHG emission reduction measures;

- On or before January 1, 2011, adopt quantifiable, verifiable, and enforceable emission reduction measures by regulation that will achieve the statewide GHG emissions limit by 2020, to become operative on January 1, 2012, at the latest. The emission reduction

measures may include direct emission reduction measures, alternative compliance mechanisms, and potential monetary and non-monetary incentives that reduce GHG emissions from any sources or categories of sources as CARB finds necessary to achieve the statewide GHG emissions limit; and

- Monitor compliance with and enforce any emission reduction measure adopted pursuant to AB 32.

On December 11, 2008, the CARB approved the *Climate Change Scoping Plan* (CARB, 2008a) pursuant to AB 32. The Scoping Plan recommends a wide range of measures for reducing GHG emissions, including (but not limited to):

- Expanding and strengthening of existing energy efficiency programs;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a GHG emissions cap-and-trade program;
- Establishing targets for transportation-related GHG emissions for regions throughout the state, and pursuing policies and incentives to meet those targets;
- Implementing existing state laws and policies, including California's clean car standards, goods movement measures and the Low Carbon Fuel Standard; and
- Targeted fees to fund the state's long-term commitment to administering AB 32.

Executive Order S-01-07 (Low Carbon Fuel Standard). Executive Order #S-01-07 (January 18, 2007) establishes a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020 through establishment of a Low Carbon Fuel Standard. Carbon intensity is the amount of CO_2e per unit of fuel energy emitted from each stage of producing, transporting and using the fuel in a motor vehicle. On April 23, 2009 the Air Resources Board adopted a regulation to implement the standard.

Senate Bill 97. Senate Bill 97 was signed by the governor on August 24, 2007. The bill required the Office of Planning and Research (OPR), by July 1, 2009, to prepare, develop and transmit to the resources agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, including, but not limited to, effects associated with transportation or energy consumption. On April 13, 2009 OPR submitted to the Secretary for Natural Resources its proposed amendments to the State CEQA Guidelines for greenhouse gas emissions. The Resources Agency adopted those guidelines on December 30, 2009, and they became effective on March 18, 2010. The amendments treat GHG emissions as a separate category of impacts; i.e. they are not to be addressed as part of an analysis of air quality impacts.

Section 15064.4, which was added to the CEQA Guidelines, specifies how the significance of impacts from GHGs is to be determined. First, the lead agency should "make a good faith effort" to describe, calculate or estimate the amount of GHG emissions resulting from a project. After that, the lead agency should consider the following factors when assessing the impacts of the GHG emissions on the environment:

- The extent to which the project may increase or reduce GHG emissions, relative to the existing environmental setting;

- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and

- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional or local plan for the reduction or mitigation of GHG emissions.

The Governor's Office of Planning and Research (OPR) asked the CARB to make recommendations for GHG-related thresholds of significance. On October 24, 2008, the CARB issued a preliminary draft staff proposal for *Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act* (CARB, 2008b). After holding two public workshops and receiving comments on the proposal, CARB staff decided not to proceed with threshold development (Ito, 2010). Quantitative significance thresholds, if any, are to be set by local agencies.

Senate Bill 375. Senate Bill 375 requires coordination of land use and transportation planning to reduce GHG emissions from transportation sources. Regional transportation plans, which are developed by metropolitan transportation organizations such as the Southern California Association of Governments (SCAG), are to include "sustainable community strategies" to reduce GHG emissions.

Title 24. The Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24, Part 6, of the *California Code of Regulations*) were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Compliance with Title 24 will result in decreases in GHG emissions. The California Energy Commission adopted the 2008 changes to the Building Energy Efficiency Standards on April 23, 2008 with an aim to promote the objectives listed below (CEC, 2008).[5]

- Provide California with an adequate, reasonably-priced and environmentally-sound supply of energy.

- Respond to Assembly Bill 32, the Global Warming Solutions Act of 2006, which mandates that California must reduce its greenhouse gas emissions to 1990 levels by 2020.

- Pursue California energy policy that energy efficiency is the resource of first choice for meeting California's energy needs.

- Act on the findings of California's Integrated Energy Policy Report (IEPR) that Standards are the most cost effective means to achieve energy efficiency, expects the Building Energy Efficiency Standards to continue to be upgraded over time to reduce electricity and peak demand, and recognizes the role of the Standards in reducing energy related to meeting California's water needs and in reducing greenhouse gas emissions.

5 The 2008 changes to Building Energy Efficiency Standards became effective January 1, 2010.

- Meet the West Coast Governors' Global Warming Initiative commitment to include aggressive energy efficiency measures into updates of state building codes.

- Meet the Executive Order in the Green Building Initiative to improve the energy efficiency of nonresidential buildings through aggressive standards.

The provisions of Title 24, Part 6 apply to all buildings for which an application for a building permit or renewal of an existing permit is required by law. They regulate design and construction of the building envelope, space-conditioning and water-heating systems, indoor and outdoor lighting systems of buildings, and signs located either indoors or outdoors. Title 24, Part 6 specifies mandatory, prescriptive and performance measures, all designed to optimize energy use in buildings and decrease overall consumption of energy to construct and operate residential and nonresidential buildings. Mandatory measures establish requirements for manufacturing, construction and installation of certain systems; equipment and building components that are installed in buildings.

Recent Developments: On May 22, 2014 the CARB approved the First Update to the Climate Change Scoping Plan Pursuant to AB 32 (CARB, 2014). The updated scoping plan evaluates the effectiveness of policies from the original scoping plan and adds recommendations for expanding and improving upon those programs including, but not limited to:

- Leveraging public money to fund technologies including medium and heavy duty Zero Emission Vehicles (ZEVs).

- Expanding local, regional, and state transportation plan goals to improve transit efficiency.

- Supporting the High-Speed Rail Authority and Sustainable Freight Strategy.

- Extending Low Carbon Fuel Standards beyond 2020 with more aggressive goals.

- Developing accurate methods for estimating agricultural emissions so that greenhouse gas reduction techniques can be assessed.

- Eliminating disposal of organic matter and promote methane recovery at landfills.

- Instituting the Forest Carbon Plan to model and understand the carbon cycle of forestry.

- Implementing economic incentives for the destruction of short-lived climate pollutants.

- Allowing limited future allowances for Cap-and-Trade to reduce cost spikes.

- Setting interim goals to reach greenhouse gas emissions of 80% of 1990 levels by 2050.

4.7.3 Discussion of Impacts

(a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant Impact

Short-term construction GHG emissions and long-term operational emissions were assessed using CalEEMod Version 2013.2.2. Modeled emissions were compared with SCAQMD Interim Thresholds to determine potential significance.[6] In addition to emissions from on- and off-road equipment usage during construction, CalEEMod estimates GHG emissions related to operational sources, such as mobile, energy, area, waste, and water.

Even though construction equipment would emit minor amounts of CH_4 and N_2O, the predominant GHG emissions during construction would be CO_2 from construction equipment. **Table 4.7-1** shows the estimated total CO_2 emissions from construction activity from the proposed project.

Table 4.7-1
CONSTRUCTION GHG EMISSIONS

Emission Source	GHG Emissions 2017 (tonnes)			
	CO_2	CH_4	N_2O	CO_2e
Onsite	119.0	0.03	0.000	119.7
Offsite	27.7	0.0006	0.000	27.7
Total	**147**	**0.03**	**0.00**	**147**
Source: UltraSystems Environmental, Inc. with CalEEMod 2013.2.2.				

The largest source of operational emissions would be from mobile sources, i.e. the combustion of fossil fuels (primarily gasoline and diesel) in vehicle engines. The CalEEMod model estimates vehicle emissions by first calculating trip rate, trip length, trip purpose, and trip type percentages (e.g., home to work, home to shop, home to other) for each land use type, based on the land use types and quantities entered by the user in the land use module.

GHGs are also emitted as a result of activities in buildings for which electricity and natural gas are used as energy sources. GHGs are produced during the generation of electricity from fossil fuels off-site in power plants. The emissions are considered indirect emissions, since they are not emitted directly at the source but are indirectly attributed to the source. CalEEMod estimated project GHG emissions from energy use by multiplying average rates of energy consumption by the square footage entered in the land use module to obtain total projected energy use. This value is then multiplied by electricity and natural gas GHG emission factors applicable to the project location and utility provider.

The amount of water used and wastewater generated by a project has indirect GHG emissions associated with it. These emissions are a result of the energy used to supply, distribute, and treat the water and wastewater. In addition to the indirect GHG emissions associated with energy use, wastewater treatment can directly emit both methane and nitrous oxide.

The disposal of solid waste produces GHG emissions from anaerobic decomposition in landfills, incineration, and transportation of waste. CalEEMod determines the GHG emissions associated with disposal of solid waste into landfills. To estimate GHG emissions that would be generated by

6 Ibid.

disposing of the solid waste associated with the project, the total volume of solid waste associated with the project was first estimated in the model using waste disposal rates identified by CalRecycle. CalEEMod methods for quantifying GHG emissions from solid waste are based on the Intergovernmental Panel on Climate Change (IPCC) method using the degradable organic content of waste.

Table 4.7-2 shows a summary of operational GHG emissions from the Project. Because of the persistence of GHG in the atmosphere, all the impacts addressed in this section are defined as long-term. Greenhouse gas emissions from construction are amortized over the next 30 years and added to operational emissions for the purpose of estimating annual emissions. Since the SCAQMD proposes that if a project generates GHG emissions below 3,000 tonnes CO_2e, it could be concluded that the proposed project's GHG contribution is not "cumulatively considerable" and is therefore less than significant under CEQA. Based on the SCAQMD threshold, impacts due to greenhouse gas emissions would be less than significant. No mitigation measures are required.

Table 4.7-2
UNMITIGATED ANNUAL PROJECT GHG EMISSIONS, 2017 AND BEYOND
(Emissions in tonnes)

Emission Source		CO_2	CH_4	N_2O	CO_2e
Construction[a]		4.89	0.001	N/A	5
Operations	Area	0.0029	0.00001	0.0000	0.003
	Energy	90.30	0.0037	0.0010	91
	Mobile	1,238.40	0.054	0.0000	1,240
	Waste	8.44	0.50	0.0000	19
	Water	16.77	0.046	0.0012	18
Totals		**1358.80**	**0.60**	**0.00**	**1,373**

Note: Proposed project is expected to be operational in 2017.
[a] Amortized over 30 years per SCAQMD Interim CEQA GHG Significance Threshold.

Source: UltraSystems Environmental, Inc. with CalEEMod (Version 2013.2.2)

(b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant Impact

The City of Long Beach does not have a plan that focuses principally on the emissions of greenhouse gases. However, the City's Sustainable City Action Plan,[7] which was prepared by the City of Long Beach Sustainable City Commission and adopted by the City Council on February 2, 2010, sets many goals whose attainment would result in reductions in GHG emissions. The project was reviewed against the Sustainable City Action Plan, and no conflicts were found. Furthermore, the following Plan measure will be followed by the proposed project:

7 Sustainable Long Beach. Sustainable City Action Plan. Long Beach: Long Beach Office of Sustainability. February 2, 2010. http://www.longbeach.gov/sustainability/nature-initiatives/action-plan/. Accessed January 25, 2016.

> "Utilize and/or replace non pervious surfaces with permeable materials (e.g., sidewalks, driveways, outdoor patios, and parking lots)."[8]

As discussed in **Section 2.2.5**, after construction, the impervious area within the proposed project site will be reduced by approximately four percent. Because the project will further the goals of the plan and will not conflict with it, impacts from GHG emissions will be less than significant.

8 Ibid. p. 38.

4.8 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			**X**	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			**X**	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one quarter mile of an existing or proposed school?			**X**	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 or a list of hazardous substance release sites identified by the state Department of Health Services pursuant to § 25356 of the Health & Safety Code and, as a result, would it create a significant hazard to the public or the environment? [PRC § 21151.8 (a)(1)(B)]				**X**
e) Does the project site contain a current or former hazardous waste disposal site or solid waste disposal site and, if so, have the wastes been removed? [PRC § 21151.8 (a)(1)(A)]			**X**	
f) Is the proposed school site located on a site containing or underlain by naturally occurring hazardous materials?				**X**
g) Is the proposed school site situated within 2,000 feet of significant disposal of hazardous waste? [CCR, Title 5 § 14010(t)]				**X**

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
h) Does the proposed school site contain one or more pipelines, situated underground or aboveground, which carry hazardous substances, acutely hazardous materials or hazardous wastes, unless the pipeline is a natural gas line that is used only to supply natural gas to that school or neighborhood? [PRC § 21151.8 (a)(1)(C)]				**X**
i) Is the proposed school site located near an aboveground water or fuel storage tank or within 1,500 feet of an easement of an aboveground or underground pipeline that can pose a safety hazard to the site? [CCR, Title 5 § 14010 (h)]			**X**	
j) Is the property line of the proposed school site less than the following distances from the edge of respective power line easements: (1) 100 feet for 50-133 kV line; (2) 150 feet for 220-230 kV line; or (3) 350 feet for 500-550 kV line? [CCR, Title 5 §14010(c)]				**X**
k) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?			**X**	
l) Is the proposed school site within two miles, measured by air line, of that point on an airport runway or potential runway included in an airport master plan that is nearest to the site? [Ed. Code § 17215 (a)&(b)] (Two nautical miles = 12,152 feet) (Does not apply to school sites acquired prior to January 1, 1996.)			**X**	
m) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?			**X**	
n) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			**X**	

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
o) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				**X**
p) Is the school site in an area designated in a city, county, or city and county general plan for agricultural use and zoned for agricultural production, and if so, do neighboring agricultural uses have the potential to result in any public health and safety issues that may affect the pupils and employees at the school site? [Ed. Code § 17215.5 (a)] (Does not apply to school sites approved by CDE prior to January 1, 1997).				**X**

(a) **Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

(b) **Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

(c) **Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

Less than Significant Impact

The proposed project would include the transport, storage, and use of chemical agents, solvents, paints, and other hazardous materials commonly associated with construction activities. Chemical transport, storage, and use would comply with Resource Conservation and Recovery Act (RCRA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); California Hazardous Waste Control Law[1]; Occupational Safety and Health Administration (OSHA), and Long Beach Fire Department (LBFD) requirements.

The operation of the proposed project is anticipated to include the minimal use of hazardous materials, including janitorial and landscaping supplies, such as commercial cleansers, paints, lubricants and herbicides. The use of these materials would be subject to District guidelines and would be stored, handled, and disposed in accordance with applicable regulations. School operation

1 Codified in California Health and Safety Code, Division 20, Chapter 6.5, Hazardous Waste Control.

would not involve the routine transport, use, or disposal of quantities of hazardous materials that may create a significant hazard to the public or environment.

A Hazardous Materials Business Plan (HMBP) would be prepared and submitted by the District to the LBFD if the quantity of hazardous materials onsite would equal or exceed 55 gallons of a liquid, 500 pounds of a solid, 200 cubic feet of gas at standard temperature and pressure (STP), or extremely hazardous substances above threshold planning quantities as required by the Emergency Planning Community Right to Know Act (EPCRA) §§ 311 and 312.[2, 3] The HMBP would include provisions for proper training for employees that would use, store and dispose of hazardous materials or waste, and safety procedures to be implemented in the unlikely event of unauthorized releases of hazardous materials. Based on the above analysis, potential impacts from the transport, storage, and use of chemical agents, solvents, paints, and other hazardous materials to the public or the environment would be less than significant.

Portable classrooms 39 to 42, 47 to 50, and 55 will be demolished to construct the Educare facility. Based on a 2014 survey completed pursuant to the Asbestos Hazard Emergency Response Act (AHERA), asbestos-containing materials (ACMs) were observed in portable classrooms 39 through 42 (Leighton, 2015). Based on the age, these portable classrooms may also contain lead-based paint (LBP) and polychlorinated biphenyl (PCB)-containing caulking.

Prior to ACM removal from the portable classrooms, an asbestos compliance plan must be prepared in accordance with Occupational Health and Safety (OSHA) standards (29 CFR 1926.1101) to include provisions for potential inhalation exposures, permissible exposure limits (PEL) and other health-based criteria, ACM monitoring, and worker health and safety protection and training. To protect workers and the public from exposure to airborne asbestos, ACM removal will be conducted using established protocols under the supervision of specifically trained personnel (40 CFR part 763, subpart E, Appendix C) with appropriate personal protective equipment within marked restricted areas (29 CFR §§ 1926.1101(e)(2), (3), (4) and (5)). Warning signs will be posted as required (29 CFR § 1926.1101(k)(7)). ACM waste, debris and accompanying dust will be contained and properly disposed.

Prior to LBP and PCB-chalking removal from the portable classrooms, a lead compliance plan must be prepared (8 CCR § 1532.1 - Occupational Lead Exposure) to implement industry best practices for management, storage and disposal of lead. Employers who conduct lead-related construction activities (8 CCR § 1532.1(d)(2)) must provide written notification to the California Department of Industrial Relations (Cal-OSHA) at least 24 hours before starting work. PCB waste cleanup and disposal will comply with relevant requirements (40 CFR § 761.61), and waste-specific guidance (EPA, 2015). Lead and PCB waste and debris will be contained and properly disposed.

Following these required protocols, significant hazards to the public or the environment during removal of ACMs, LBP and PCBs through (1) routine transport, use, or disposal of hazardous materials, (2) accident conditions involving the release of hazardous materials into the environment, or (3) hazardous emissions, handling hazardous or acutely hazardous materials, substances, or waste in the vicinity of the Barton Elementary School would be less than significant.

2 U.S. Environmental Protection Agency. "Emergency Planning and Community Right-To-Know Act (EPCRA)". Internet URL: http://www.epa.gov/oecaagct/lcra.html. Updated June, 27, 2012.

3 A California Accidental Release Program (CalARP) Risk Management Plan (RMP) would not be needed because the quantity of hazardous material onsite would not exceed State Regulated Substance List threshold quantities specified in Title 19 California Code of Regulations (CCR), Division 2, Chapter 4.5 and Title 40 of the Code of Federal Regulations (CFR), Part 68.

(d) **Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 or a list of hazardous substance release sites identified by the state Department of Health Services pursuant to Section 25356 of the Health & Safety Code and, as a result, would it create a significant hazard to the public or the environment?**

No Impact

Government Code § 65962.5 requires the Department of Toxic Substances Control (DTSC) to compile and update, at least annually, lists of the following:

- Hazardous waste and substances sites from the DTSC EnviroStor database.
- Leaking underground storage tank (LUST) sites by county, and fiscal year from the State Water Resources Control Board (SWRCB) GeoTracker database.
- Solid waste disposal sites identified by the SWRCB with waste constituents above hazardous waste levels outside the waste management unit.
- SWRCB Cease and Desist Orders (CDOs) and Cleanup and Abatement Orders (CAOs).[4]
- Hazardous waste facilities subject to corrective action by DTSC pursuant to Health and Safety Code (HSC) § 25187.5.[5]

These lists are collectively referred to as the "Cortese List." The project site was not included on the Cortese List. However, the Barton Elementary School was included in the following federal, state, regional or local database listings (Leighton, 2015).

CHMIRS: The California Hazardous Material Incident Report System (CHMIRS) contains information on reported hazardous material incidents such as accidental releases or spills. The source is the California Office of Emergency Services. The Barton Elementary School was included on this list by the LBFD as a result of a roof-fire during repairs on February 2, 2000 (Leighton, 2015).

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting RCRA of 1976 and the Hazardous Solid Waste Act (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by RCRA. Small Quantity Generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. The Barton Elementary School is listed as a SQG with no violations reported (Leighton, 2015).

FINDS: The Facility Index System (FINDS) contains both facility information and "pointers" to other sources of information that contain more detail. These include: Resource Conservation and Recovery Information Systems (RCRIS); Permit Compliance System (PCS); Aerometric Information

4 CDOs and CAOs may be issued for discharges of domestic sewage, food processing wastes, or sediment that do not contain hazardous materials,

5 If corrective action is not taken on or before the date specified in a CDO or CAO, or if immediate corrective action is necessary to remedy or prevent an imminent substantial danger to the public health, domestic livestock, wildlife, or the environment, the DTSC may take, or contract for, corrective action and recover the cost from a responsible party.

Retrieval Systems (AIRS); FIFRA Federal Insecticide Fungicide Rodenticide Act (FATES) and Toxic Substances Control Act (TSCA) Enforcement System, FIFRA/TSCA Tracking System (FTTS); Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS); DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases of all environmental statuses); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); RCRA-J (medical waste transporters/disposers); Toxic Release Inventory Systems (TRIS); and TSCA. The source of this database is the U.S. EPA/NTIS. The Barton Elementary School is included on this list because it is a SQG (Leighton, 2015).

HAZNET Database: These data are extracted from the copies of hazardous waste manifests received each year by the DTSC. Data from non-California manifests and continuation sheets are not included. Data are from manifests submitted without correction, and therefore, may contain some invalid values for data elements. The source is the DTSC. The Barton Elementary School is included on this list because it historically and properly disposed of small quantities of "Off-specification, aged or surplus organics"; oil containing wastes; asbestos; and "other inorganic solid waste" (Leighton, 2015).

During a 2015 Phase I Environmental Site Assessment (ESA) hazardous materials were not observed or reported within the Barton Elementary School Campus with the exception of approximately 20-gallons of self-contained diesel fuel stored in an emergency generator trailer at the southwest corner of the campus (Leighton, 2015).

Because the one accidental spill that caused a fire in 2000 has been mitigated to the satisfaction of the LBFD, and no other release of hazardous materials have been reported or identified, the proposed project would not be located on a site that would create a significant hazard to the public or the environment.

(e) **Does the project site contain a current or former hazardous waste disposal site or solid waste disposal site and, if so, have the wastes been removed?**

Less than Significant Impact

According to a Phase I ESA (Leighton, 2015), the Barton Elementary School was constructed in 1943. Portable classrooms 37 to 42 were constructed between 1966 and 1969, and the remaining portable classrooms were constructed after 1996. Four other structures were present in the early 1950s, but were removed during or prior to 1972. Former portable classrooms 37 and 38 were removed in 2015. The remainder of the facility is asphalt-paved with exception of a small landscaped area to the east of portable classrooms 41 and 42. Portable classrooms are shown in **Appendix B**.

Organochlorine pesticides (OCPs) were commonly used as insecticides for termite control around structures constructed between 1948 and January 1, 1989, and school structures were commonly coated with lead-based paint (LBP) on or after January 1, 1993. Weathering, scraping, chipping, and abrasion may have caused lead to be released to soil around these structures. To satisfy California Education Code (CEC) §§ 17210, 17210.1, 17213.1, and 17213.2 and applicable guidance (DTSC, 2006), Leighton and Associates, Inc. (Leighton), on behalf of the District, collected soil samples at 22 locations to a maximum depth of three feet in an open landscaped area and adjacent to portable classrooms to be demolished. Soil samples were selectively analyzed for lead and OCPs in keeping with DTSC guidance (DTSC, 2006).

Based on the laboratory results, OCP concentrations in soil samples were below DTSC criteria for unrestricted residential use, but lead was detected at a concentration of 130 mg/kg in one soil sample collected between the surface and a depth of 0.5 feet adjacent to the southwest corner of portable classroom 50. This concentration exceeds the DTSC 80 mg/kg criterion for unrestricted residential use. The Phase I ESA addendum containing soil sampling data and the statistical analysis is provided in **Appendix B**.

Based on a statistical analysis following DTSC protocols (Leighton, 2016), the 95% upper confidence limit (UCL) for lead concentrations in soil within the proposed project site is 35.39 mg/kg and below the DTSC 80 mg/kg criterion (Leighton, 2016). This result suggests that the threat to human health and the environmental from potential lead exposure is less than significant.

No other recognized environmental conditions (RECs) were identified within the site for the proposed project including (1) presence or likely presence of hazardous substances or petroleum products on the subject property, (2) conditions that indicate an existing release, a past release, or a material threat of a release of hazardous substances or petroleum products into structures, the ground, groundwater, or surface water of the subject property, and (3) issues that may have an environmental impact on the subject property (Leighton, 2015 and 2016).

(f) **Is the proposed school site located on a site containing or underlain by naturally occurring hazardous materials?**

(g) **Is the proposed school site situated within 2,000 feet of significant disposal of hazardous waste?**

(h) **Does the proposed school site contain one or more pipelines, situated underground or aboveground, which carry hazardous substances, acutely hazardous materials or hazardous wastes, unless the pipeline is a natural gas line that is used only to supply natural gas to that school or neighborhood?**

No Impact

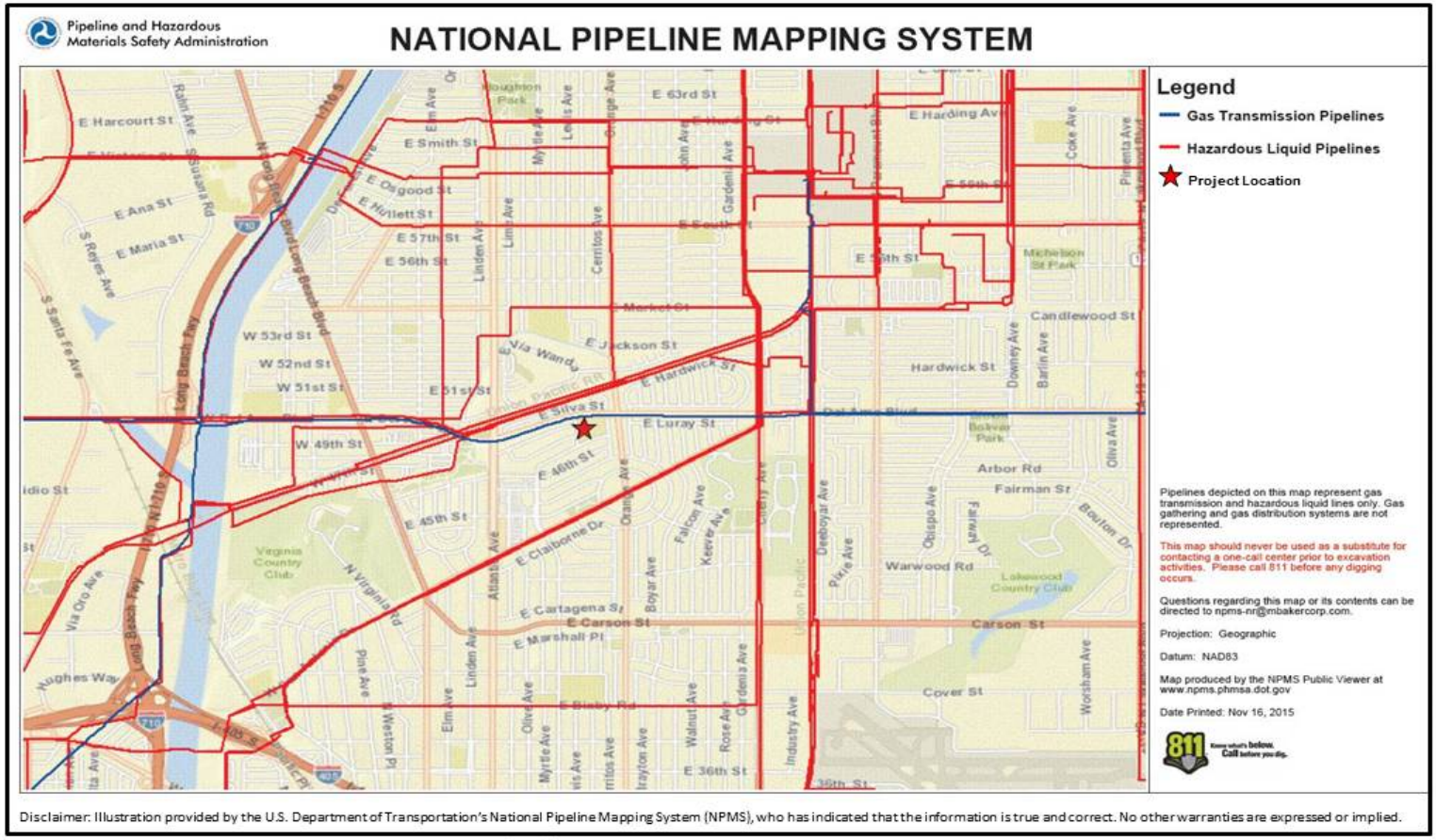
No evidence for mines, debris, naturally occurring hazardous materials or pipelines containing hazardous substances, acutely hazardous materials or hazardous wastes within the project site was observed or reported. A review of regulatory databases indicated there was no significant disposal of hazardous waste reported within 2,000 feet of the project site (Leighton, 2015). Based on these findings, no impact from naturally occurring hazardous materials or hazardous materials disposal would be anticipated.

(i) **Is the proposed school site located near an aboveground water or fuel storage tank or within 1,500 feet of an easement of an aboveground or underground pipeline that can pose a safety hazard to the site?**

Less than Significant Impact

According to the 2015 Phase I ESA (Leighton, 2015), a gas transmission pipeline is adjacent to the north boundary of the project site and parallel to East Del Amo Boulevard. The nearest hazardous liquid pipeline is approximately 520 feet north of the project site parallel to the Union Pacific Railroad (**Figure 4-8.1**).

Figure 4-8.1
NEARBY PIPELINES



Sources: U.S. Department of Transportation, National Pipeline Mapping System (NPMS), 2015

N

Not to Scale

Barton Elementary School
High Pressure Pipelines

UltraSystems
environmental • management • planning

In 1981, the California Legislature established the Hazardous Liquid Pipeline Safety Act so that the Office of the State Fire Marshal may exercise exclusive safety regulatory and enforcement authority over intrastate hazardous liquid pipelines. The Office of the State Fire Marshal currently regulates the safety of approximately 4,500 miles of intrastate hazardous liquid transportation pipelines. The Pipeline Safety Division consists of engineers, analytical staff, and clerical support located in northern, central and southern California. Pipeline Safety staff inspect pipeline operators to ensure compliance with federal and state pipeline safety laws and regulations. The Division is also responsible for the investigation of all spills, ruptures, fires, or pipeline incidents for cause and determination of probable violation.[6] In addition, the federal Transportation Security Administration Pipeline Security Division has (1) assessed risk and prioritized efforts to help strengthen pipeline security, (2) implemented agency guidance and requirements of the Implementing Recommendations of the 9/11 Commission Act of 2007 (9/11 Commission Act) regarding pipeline security, and (3) measured its performance in strengthening pipeline security (TSA, 2008).

Based on these programs, underground pipelines are sufficiently regulated so that the safety hazard posed to the public by nearby underground pipelines is less than significant.

(j) **Is the property line of the proposed school site less than the following distances from the edge of respective power line easements: (1) 100 feet for 50-133 kV line; (2) 150 feet for 220-230 kV line; or (3) 350 feet for 500-550 kV line?**

No Impact

Based on a the site visit on November 3, 2015 by Sloane Seferyn (UltraSystems biologist) and review of the 2015 Phase I ESA, the project site is not located within 100 feet for 50-133 kilo-volt (kV) line, 150 feet for 220-230 kV line, or 350 feet for 500-550 kV line.

(k) **For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?**

(l) **Is the proposed school site within two miles, measured by air line, of that point on an airport runway or potential runway included in an airport master plan that is nearest to the site?**

(m) **For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

Less than Significant Impact

The project site is not in the vicinity of a private airstrip. The Long Beach Airport is approximately one mile southeast of the project site. The project site is outside the Airport Influence Area established by the Los Angeles County Airport Land Use Commission, but is within two miles of an airport runway (see **Figure 4.8-2**). However, the proposed project would not affect the operation of any airport because the proposed building height would not exceed Federal Aviation Administration height limits for air safety established in Federal Air Regulations Part 77

6 http://osfm.fire.ca.gov/pipeline/pipeline. Accessed January 14, 2016.

Guidelines.[7] For this reason, the potential safety hazard for people residing or working in the project area due to the proximity of an airport is less than significant.

(n) **Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

Less than Significant Impact

The proposed project would not impair or physically interfere with the various City of Long Beach emergency preparedness plans, which provide for an effective response to multi-agency and multi-jurisdiction emergencies.[8] Educare students and faculty would comply with applicable emergency plans, and would not obstruct the City's evacuation routes or impede emergency ingresses or egresses. For these reasons, the potential for the project to impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan would be less than significant.

(o) **Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?**

No Impact

The California Department of Forestry and Fire Protection (CALFIRE) developed Fire Hazard Severity Zones (FHSZ) for State Responsibility Areas (SRA) and Local Responsibility Areas (LRA). The project site is not located in SRA or LRA areas. The proposed project would include required fire suppression design features identified in the latest edition of the California Building Code (CBC), and would comply with California's Division of the State Architect (DSA) and LBFD requirements. With adherence to applicable regulations and the proximity to the nearest fire station, no impacts due to wildland fire exposure would be anticipated.

(p) **Is the school site in an area designated in a city, county, or city and county general plan for agricultural use and zoned for agricultural production, and if so, do neighboring agricultural uses have the potential to result in any public health and safety issues that may affect the pupils and employees at the school site?**

No Impact

The project site is in an area designated for Institutional District (I) and Single Family Residential (R-1-N). Local agricultural operations were replaced with single family residences in the 1940s (Leighton, 2915). Based on these findings, impacts from agricultural use or production are not anticipated.

7 Los Angeles County Airport Land Use Commission Comprehensive Land Use Plan. http://planning.lacounty.gov/assets/upl/data/pd_alup.pdf. Accessed February 26, 2016.

8 http://www.longbeach.gov/DisasterPreparedness/Help-Preparing/Emergency-Preparedness-Plans. Accessed November 16, 2015

Figure 4.8-2
NEAREST AIRPORT

4.9 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?			**X**	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			**X**	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				**X**
d) Substantially alter the existing drainage pattern of the site or area, including through the alternation of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			**X**	
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			**X**	
f) Otherwise substantially degrade water quality?			**X**	
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				**X**
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				**X**
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or dam inundation?			**X**	

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
j) Cause inundation by seiche, tsunami, or mudflow?				**X**

(a) Would the project violate any water quality standards or waste discharge requirements?

Less than Significant Impact

Development of the proposed project may result in two types of water quality impacts: (1) short-term impacts due to construction related discharges; and (2) long-term impacts from operation or changes in site runoff characteristics. Runoff may carry on-site surface pollutants to water bodies such as lakes, streams, and rivers that ultimately drain to the ocean. Projects that increase urban runoff may indirectly increase local and regional flooding intensity and erosion.

Construction Pollutants Control

Construction of the proposed project would include the transport, storage, and use of chemical agents, solvents, paints, and other hazardous materials commonly associated with construction activities. Chemical transport, storage, and use would comply with the Resource Conservation and Recovery Act (RCRA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); California's Hazardous Waste Control laws[1]; Occupational Health and Safety Administration (OSHA), Long Beach Fire Department, and Regional Water Quality Control Board (RWQCB) requirements.

Construction projects typically expose soil to erosion and may temporarily alter drainage patterns. Storm water runoff during construction may contain soil amendments such as fertilizers and pesticides, entrained soil, trash, waste oil, paints, solvents and other substances used during construction. Section 402 of the Federal Water Pollution Control Act (FWPCA) requires projects that would disturb one acre or more of soil to obtain a National Pollutant Discharge Elimination System (NPDES) General Construction Permit. As part of the permit conditions, the District is required to submit a Notice of Intent (NOI) and a Storm Water Pollution Prevention Plan (SWPPP) to the State Water Resources Control Board (SWRCB), which identifies site-specific best management practices (BMPs) to eliminate or reduce pollutants and soil in storm water and non-storm water discharges from the construction site. The NPDES permit requires enforceable limits on discharges, effluent monitoring, annual reporting, and construction and post-construction BMPs to eliminate or reduce point and non-point source discharges of pollutants.

For these reasons, potential violations of water quality standards or waste discharge requirements would be less than significant during project construction.

1 See California's Health and Safety Code, Division 20. Miscellaneous Health and Safety Provisions, §§ 24000-26204, Chapter 6.5. Hazardous Waste Control.

Operational Pollutant Controls

NPDES Municipal Stormwater Permits mandated by the FWPCA require new development and significant redevelopment projects to incorporate post-construction BMPs to comply with the local Standard Urban Stormwater Mitigation Plan (SUSMP), Drainage Area Management Plan (DAMP) and/or Water Quality Management Plan (WQMP) to reduce the quantity of rainfall runoff and improve the quality of water that leaves a site. The local SUSMP requires new developments to implement appropriate routine structural and nonstructural BMPs. Examples of routine structural BMPs include filtration, common area runoff minimizing landscape, energy dissipaters, inlet trash racks, and catch basins. Routine nonstructural BMPs include litter control, inspection and maintenance of catch basins, and spill contingency plans.

For these reasons, potential violations of water quality standards or waste discharge requirements would be less than significant during project operation.

(b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Less than Significant Impact

Development of the proposed project would not result in substantial changes in the quantity of existing groundwater supplies because no groundwater extraction activities would occur. After construction, the impervious area within the proposed project site will be reduced by approximately four percent from the current 286,959 to 274,579 square feet (see Section 2.2.5), and therefore would not substantially change or reduce the potential for local groundwater recharge.

Based on the geotechnical field investigation (ASE, 2015), depth to groundwater beneath the site is more than 61 feet below the ground surface, and would not be a constraint for the proposed design, construction, or development of the proposed project site. The City of Long Beach Water Department would supply the facilities with water and no water supply wells would be constructed or used.

For these reasons, impacts to groundwater supplies or recharge would be less than significant.

(c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

No Impact

Runoff from the project site currently flows north, and discharges to storm drains along Del Amo Boulevard and the corners shared with Lemon and Bentree Avenues. No substantial changes in the existing drainage pattern of the area are proposed, and no streams, rivers, or drainage channels that contribute runoff to the local drainage network would be impacted by the project.

(d) Would the project substantially alter the existing drainage pattern of the site or area, including through the alternation of the course of a stream or river, or substantially

increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

(e) Would the project create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

(f) Would the project otherwise substantially degrade water quality?

Less than Significant Impact

No streams or rivers are adjacent to or within the project site. Runoff from the project site currently flows north, and discharges to storm drains along Del Amo Boulevard and the corners shared with Lemon and Bentree Avenues, which are designed to accommodate project runoff volumes. Post-construction BMPs would be adopted to minimize runoff and potential pollutants from the project site, and enhance subsurface infiltration. For these reasons, the potential for the project to: (1) substantially alter the existing drainage pattern, (2) result in on- or off-site flooding, (3) create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems, (4) provide substantial additional sources of polluted runoff, or (5) substantially degrade water quality would be less than significant.

(g) Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

(h) Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact

The project site is in Federal Emergency Management Area (FEMA) Flood Insurance Rate Map (FIRM), Zone X, which is outside the 100-year flood zone (see **Figure 4.9-1**). Zone X is characterized as moderate to low risk areas for FEMA flood hazard zones. Flood Zone X identifies "areas outside the one percent annual chance floodplain, areas of one percent annual chance sheet flow flooding where average depths are less than one foot, areas of one percent annual chance stream flooding where the contributing drainage area is less than one square mile, or areas protected from the one percent annual chance flood by levees."[2] The proposed project site is a public facility and would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary, FEMA FIRM, or other flood hazard delineation map. No impacts to housing or flood-flow as a result of the proposed project are anticipated.

(i) Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or dam inundation?

2 http://www.vbgov.com/government/departments/communications-info-tech/maps/Documents/FEMA_FIRM_Maps/Definitions%20of%20FEMA%20Flood%20Zone%20Designations.pdf. Accessed November 14, 2015.

Less than Significant Impact

The project site is not within a 100-year flood hazard area. According to the California Emergency Management Agency, the proposed project site is in or near an area of low hazard for flooding. No people or structures would be exposed to a significant risk of loss or death involving flooding, including flooding as a result of the failure of a levee or dam. For these reasons, exposure of people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or dam inundation would be less than significant.

(j) Would the project cause inundation by seiche, tsunami, or mudflow?

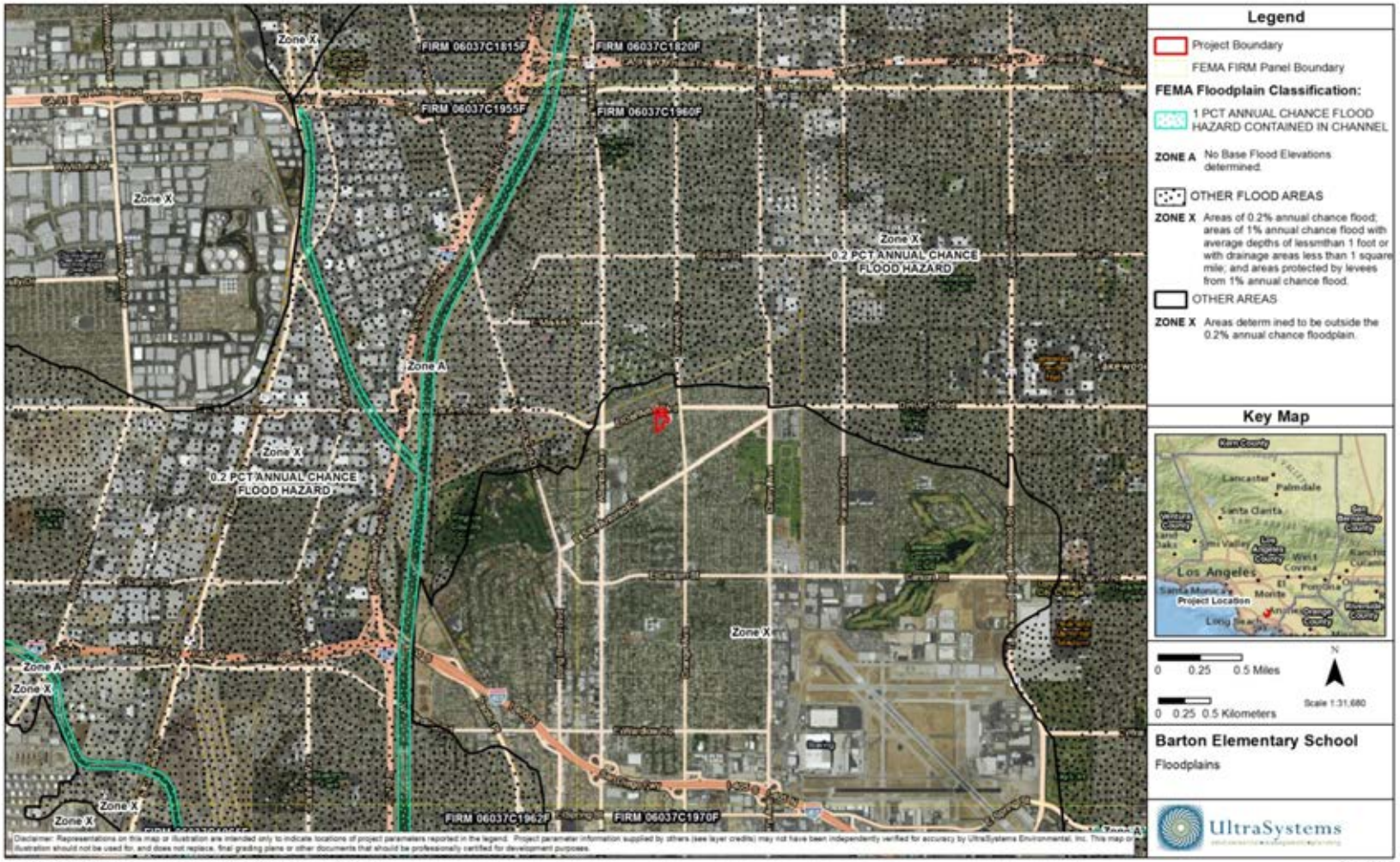
No Impact

A Seiche is an oscillating wave caused by wind, tidal forces, earthquakes, landslides and other phenomena in a closed or partially closed water body such as a river, lake, reservoir, pond, and other large inland water body. Tsunamis are long wave-length, earthquake-generated ocean waves. Mudflows are fast-moving landslides composed of mud and debris, typically caused by heavy rainfall or melting snow on steep hillsides.

According to the California Emergency Management Agency, the project site is not within a Tsunami Inundation Area for Emergency Planning.[3] Because there are no existing large water storage reservoirs or other inland water bodies in the vicinity of the proposed project site, hazards from a seiche are considered negligible. The project site is not within a landslide hazard zone (see **Figure 4.6-2**). The potential for seismically-induced landslides or mud debris flows within or near the proposed project site is considered negligible. For these reasons, no impacts from inundation by a seiche, tsunami, or mudflow are anticipated.

3 http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/Orange/Pages/Orange.aspx Accessed on November, 4, 2015.

Figure 4.9-1
ZONE X FLOOD HAZARD AREA



4.10 Land Use and Planning

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?				**X**
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				**X**
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				**X**
d) Would the proposed school conflict with any existing or proposed land uses, such that a potential health or safety risk to students would be created?				**X**

(a) Would the project physically divide an established community?

No Impact

A significant impact would occur if the proposed project were sufficiently large or configured in such a way as to create a physical barrier within an established community.

The proposed project is located in the Institutional Zoning District and designated as Institutional land use on the City of Long Beach General Plan Land Use Map. The proposed project would construct a one to two story early education facility for at risk children in the community, adjacent to an existing elementary school campus. The project site is located in a highly urbanized area and, surrounded by single and multi family residential land uses. The proposed project would not alter the existing street grid surrounding the project site or surrounding area. The scale of the proposed buildings would be similar in character to the surrounding developments. Furthermore, no residential uses would be displaced by project-related activities and the physical arrangement of the surrounding community would not be modified or divided.

Therefore, the proposed project would not physically divide an established community and no impacts would occur.

(b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact

As mentioned in the previous response, the proposed project is located within an area designated as Institutional District on the City's General Plan Land Use Map. The proposed project includes the construction of an early education facility on a site located adjacent to the campus of an existing elementary school. The proposed project is consistent with the policies of the General Plan and located within a consistent land use designation. Additionally, as discussed in **Sections 4.1 through 4.17**, of this Initial Study, the project would be consistent with all applicable plans, policies or regulations that have been adopted by local, county, regional, state or federal agencies with jurisdiction over this project for the purpose of avoiding or mitigating environmental effects. Therefore, no impacts would occur.

(c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact

The project site is located in a highly urbanized area and does not contain any significant natural habitat. The project site is not located within an area subject to a habitat conservation plan or natural community conservation plan. Thus, the proposed project would not generate a conflict with any such plans and no impact would occur.

(d) Would the proposed school conflict with any existing or proposed land uses, such that a potential health or safety risk to students would be created?

No Impact

As discussed in **Sections 4.10(a) and (b)**, the proposed project is a permitted and compatible use in the Institutional Zoning District designated for the project site by the City of Long Beach. Areas immediately to the north, south, and west of the site are zoned as R-1-N, Single Family Residential District and area immediately east of the site is designated as Institutional District.

Existing uses at the project site include temporary classroom structures, surface parking and cemented playground areas, currently used by students of the Barton Elementary school located adjacent to the site. The project proposes uses similar to the existing uses on site and would not conflict with school and residential uses in the surrounding area. Area surrounding the project site is already developed and currently no new developments are proposed in the vicinity of the project. Therefore, the proposed school would not conflict with any existing or proposed land uses, such that a potential health or safety risk to students would be created and no impacts would occur.

4.11 Mineral Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				**X**
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				**X**

(a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?

(b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact

Assessment of mineral resources is based on the State of California's Mineral Land Classification/Designation Program established after the adoption of the Surface Mining and Reclamation Act (SMARA) in 1975. The primary objectives of SMARA are the assurance of adequate supplies of mineral resources important to California's economy and the reclamation of mined lands. These objectives are implemented through land use planning and regulatory programs administered by local government with the assistance of the Department of Conservation, California Geological Survey (CGS). Information on the location of important mineral deposits is developed by the CGS through a land use planning process termed mineral land classification. According to the SMARA Generalized Mineral Land Classification Map for Los Angeles County, the project site is not classified within any of four SMARA designated mineral resource zones[1] (**Figure 4.11-1**). Based on review of the conservation element of the Long Beach General Plan (Long Beach, 1973) and the DOC, Division of Oil, Gas and Thermal Resources mapping,[2] the project site is not located within a known oil and gas field or in the vicinity of oil and gas wells (**Figure 4.11-2**).

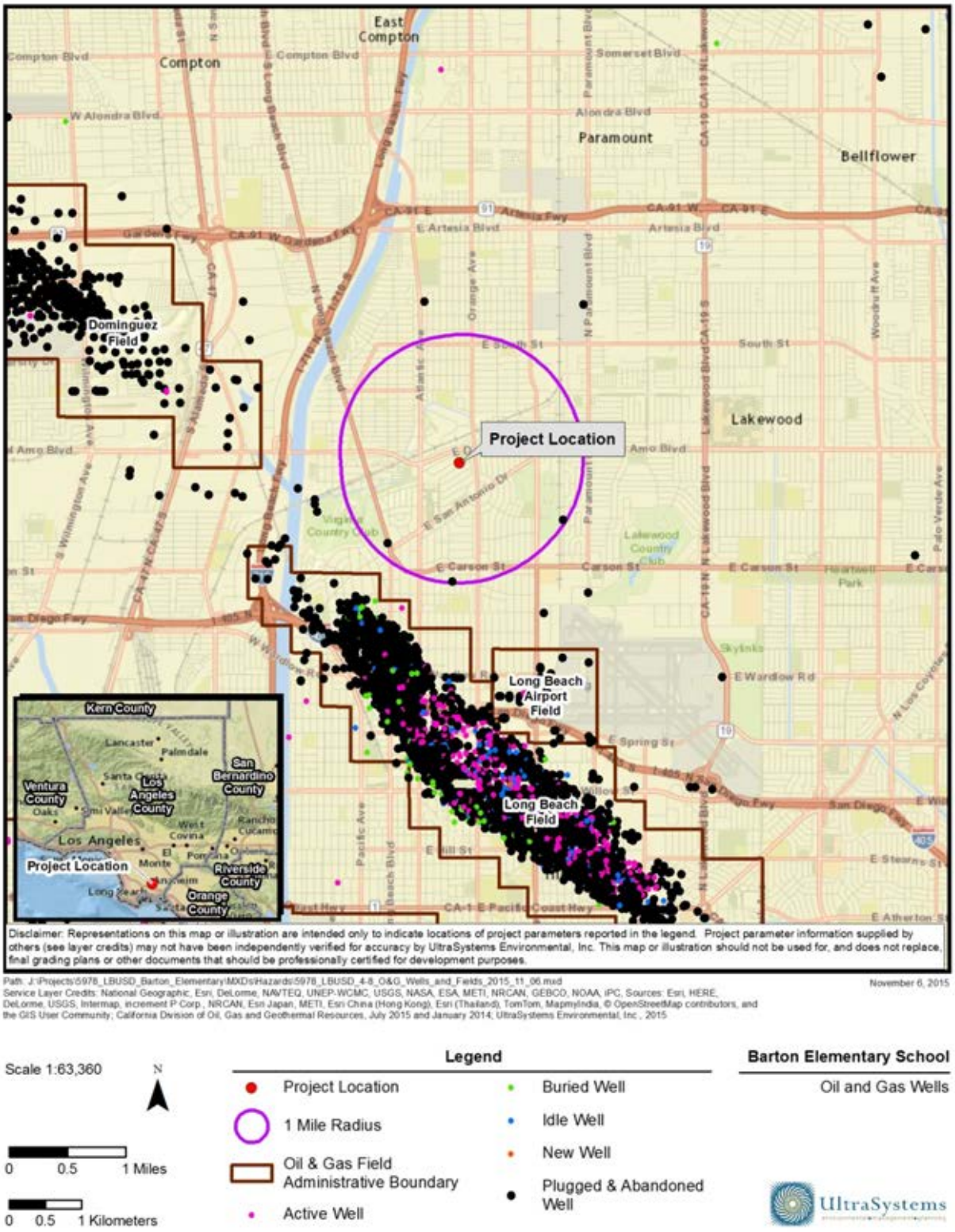
For these reasons, no impacts are anticipated to: (1) the availability of known mineral resources of value to the region or state residents, or (2) a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

1 http://www.consrv.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf Accessed on October 14, 2014. Note: MRZ-1 are areas of no significant mineral resource deposits, MRZ-2 are areas that contain identified mineral resources, MRZ-3 are areas of undetermined mineral resource significance, and MRZ-4 are areas of unknown resource potential.

2 http://www.conservation.ca.gov/dog/geothermal/maps/Pages/Index.aspx#g1. Accessed November 14, 2015.

Figure 4.11-1
MINERAL RESOURCES

Figure 4.11-2
OIL AND GAS FIELDS



4.12 Noise

Would the project result in:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Exposure of persons to or generation of noise level in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		**X**		
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			**X**	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			**X**	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			**X**	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				**X**
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				**X**
g) Is the proposed school site located adjacent to or near a major arterial roadway or freeway whose noise generation may adversely affect the education program?			**X**	

The following is summarized in part from the Noise Analysis (see **Appendix D**) prepared by UltraSystems.

BACKGROUND AND EXISTING SETTING

4.12.1 Characteristics of Sound

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), frequency or pitch (measured in hertz [Hz] or cycles per second), and duration (measured in seconds or minutes). The decibel (dB) scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the

sound is related to the frequency of the pressure vibration. Because the human ear is not equally sensitive to all frequencies, a special frequency-dependent rating scale is used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against upper and lower frequencies in a manner approximating the sensitivity of the human ear. The scale is based on a reference pressure level of 20 micropascals (zero dBA). The scale ranges from zero (for the average least perceptible sound) to about 130 (for the average human pain level).

4.12.2 Noise Measurement Scales

Several rating scales have been developed to analyze adverse effects of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise on people depends largely upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs. Those that are applicable to this analysis are as follows:

- L_{eq}, the equivalent noise level, is an average of sound level over a defined time period (such as 1 minute, 15 minutes, 1 hour or 24 hours). Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure.

- L_{90} is a noise level that is exceeded 90 percent of the time at a given location; it is often used as a measure of "background" noise.

- CNEL, the Community Noise Equivalent Level, is a 24-hour average L_{eq} with a 4.77-A-weighted decibel (dBA) "penalty" added to noise during the hours of 7:00 p.m. to 10:00 p.m., and a 10-dBA penalty added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime (Caltrans, 2009). The logarithmic effect of these additions is that a 60-dBA 24-hour L_{eq} would result in a calculation of 66.7 dBA CNEL.

- L_{dn}, the day-night average noise, is a 24-hour average L_{eq} with an additional 10-dBA "penalty" added to noise that occurs between 10 p.m. and 7 a.m. The L_{dn} metric yields values within 1 dBA of the CNEL metric. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent and are treated as such in this assessment.

4.12.3 Existing Noise

The project site is located in a highly urbanized area and is surrounded by single and multifamily residential land uses. The predominant noise source is automobile and truck traffic on East Del Amo Boulevard, which bounds the school on the north, and on neighborhood streets.

On November 3, 2015, UltraSystems conducted ambient noise sampling at eight locations in the general project area; these are shown in **Figure 4.12-1** (Ambient Noise Sampling Locations). **Table 4.12-1** (Characteristics of Ambient Noise Measurement Locations) lists the measurement points, sampling date and times, and why the sites were chosen. Details of the ambient sampling methods and results are in the noise technical report in **Appendix D**.

The samples were taken between 8:55 a.m. and 12:26 p.m. on a Tuesday. On the Barton Elementary School campus, 15-minute L_{eq} values ranged from 53.2 to 63.2 dBA. The measuring location for the lowest of these values was shielded from East Del Amo Boulevard by a school building. The

maximum ambient noise level near a residence was 68.3 dBA L_{eq}, across East Del Amo Boulevard from the school. The other residential exterior values ranged from 58.0 to 59.5 dBA L_{eq}.

4.12.4 Sensitive Land Uses

The City of Long Beach General Plan, Noise Element explicitly defines only four land uses that are especially sensitive to noise: residential, hospitals, libraries, and schools.[1] The existing sensitive receptors that are nearest to the proposed Educare site are listed in **Table 4.12-2**, Nearest Existing Sensitive Receivers. These receivers would be exposed to noise during project construction and operations.

4.12.5 Regulatory Setting

The proposed project would be located in Long Beach, California. The primary regulatory documents that establish noise standards in the City of Long Beach are the General Plan Noise Element[2] and the Municipal Code. The Noise Element was adopted in 1975 and has not been updated since. The element's information on the existing noise environment is obsolete and was not considered in this analysis. However the goals and objectives of the noise element have served as guidance for noise controls established through the Long Beach Municipal Code (LBMC). Finally, the Noise Element lists noise control techniques for all the major types of noise sources affecting the city.

Most of the noise-related provisions of the LBMC are in Chapter 8.80, Noise. Only those provisions relevant to the present noise analysis will be discussed here. Sections 8.80.50 and 8.80.60 set limits on exterior noise exposure in five "districts," each with a predominant type of noise receiver.[3] The project site is in District One, which is "predominantly residential with other land use types also present."[4] **Table 4.12-3** summarizes the limits, which apply to noise generated on one property (or in a public area) and received on another property. The Municipal Code allows an upward adjustment in the permissible noise exposures when normal ambient levels exceed the limits shown.[5] Both original and adjusted limits for daytime residential exposure are shown in **Table 4.12-3**.

1 Long Beach General Plan, Noise Element, p. 136.
2 Long Beach General Plan, Noise Element. City of Long Beach, Planning Department. March 25, 1975.
3 A map of the districts is in § 8.80.150 of the Municipal Code.
4 City of Long Beach Municipal Code § 8.80.150 - Exterior Noise limits—Sound Levels by Receiving Land Use District. Table A, Exterior Noise Limits.
5 City of Long Beach Municipal Code, § 8.80.150(C).

Figure 4.12-1
AMBIENT NOISE SAMPLING LOCATIONS

Table 4.12-1
CHARACTERISTICS OF AMBIENT NOISE MEASUREMENT LOCATIONS

Point	Sampling Location	Date	Time Interval	Purpose of Selection
1	On the north side of the campus, near eastern edge of future parking lot	11-3-2015 Tuesday	08:55–09:10	Measure ambient noise levels on campus during school hours.
2	On the southern part of the campus, near East Ridgewood Avenue, between a 14-foot-high building and a parking lot.	11-3-2015 Tuesday	09:25–09:40	Measure ambient noise levels on campus during school hours.
3	On the northeast part of the campus, near southwestern leg of future parking lot. 45 feet from existing preschool	11-3-2015 Tuesday	09:47–10:02	Measure ambient noise levels on campus during school hours.
4	1124 East Ridgewood Avenue, across street from campus	11-3-2015 Tuesday	10:25–10:40	Measure ambient noise levels near existing residence near future construction area.
5	1092 Terrace Drive, at southwest corner of Terrace Drive and Lemon Avenue, across street from campus	11-3-2015 Tuesday	11:02–11:17	Measure ambient noise levels at existing residence near future construction area.
6	1090 East Luray Street, at southwest corner of East Luray Street and Lemon Avenue, across street from campus.	11-3-2015 Tuesday	15:51–15:56	Measure ambient noise levels at existing residence near future construction area.
7	1085 East Luray Street, at northwest corner of East Luray Street and Lemon Avenue, across street from campus	11-3-2015 Tuesday	11:44–11:59	Measure ambient noise levels at existing residence near future construction area.
8	On sidewalk on north side of East Del Amo Boulevard, across street from campus	11-3-2015 Tuesday	12:11–12:26	Measure ambient noise levels at existing residence near future construction area.

Table 4.12-2
NEAREST EXISTING SENSITIVE RECEIVERS

Sensitive Land Use	Location With Respect to Project Features	Smallest Distance from Proposed Project (Feet)
Residential Neighborhoods	On the north, west and south	50
Barton Elementary School	Adjacent on the east and southeast	0
The Church in Long Beach	The Church in Long Beach 4911 Orange Ave, Long Beach, CA 90807 (East of Barton Elementary School)	400
Source: UltraSystems with Google Earth. 2015.		

Table 4.12-3
MAXIMUM ALLOWED EXTERIOR NOISE LEVELS FOR VARIOUS EXPOSURE PERIODS

			dBA, for Periods Exceeding:				
Receiving Land Use District		**Time Period**	**30 min.**	**15 min.**	**5 min.**	**1 min.**	**Anytime[a]**
District One: Predominantly residential with other land use types also present	Exterior	7:00 a.m. to 10:00 p.m. (Unadjusted to Ambient Values)	50	55	60	65	70
		7:00 a.m. to 10:00 p.m.(Adjusted to Ambient Values)	60	60	60	65	70
		10:00 p.m. to 7:00 a.m.	45	50	55	60	65
District Two: Predominantly commercial with other land use types also present	Exterior	7:00 a.m. to 10:00 p.m.	60	65	70	75	80
		10:00 p.m. to 7:00 a.m.	55	60	65	70	75
District Three: Predominantly industrial with other land use types also present	Exterior	Anytime	65	70	75	80	85
District Four: Predominantly industrial with other land use types also present	Exterior	Anytime	70	75	80	85	90
District Five: Airport, freeways and waterways regulated by other agencies	Not subject to Long Beach Municipal Code Noise Limits						
Source: City of Long Beach Municipal Code §§ 8.80.150 and 8.80.160. [a] Or the maximum measured ambient level, for any period of time.							

The General Plan, Noise Element *suggests* that, during daytime construction activities, "average maximum noise levels outside the nearest building, at the window of the occupied room closest to

the site boundary, should not exceed 70 dBA in areas away from main roads and sources of industrial noise."[6] This is not, however, a provision of the Municipal Code. Section 8.80.202 of the LBMC addresses construction noise. Noise-producing construction activity is limited to 7 a.m. to 7 p.m. on weekdays and 9 a.m. to 6 p.m. on Saturday. No construction equipment of any type may be used on Sundays. Federal holidays are considered weekdays. The LBMC provides for Sunday work permits, which allow construction activities from 9 a.m. to 6 p.m. There are no noise limit relaxations or exemptions for construction.

Neither the City of Long Beach General Plan Noise Element nor the Municipal Code contains a chart of acceptable long-term exposure levels. Instead, the Noise Element recommends the limits shown in **Table 4.12-4**. Note that specifying separate L_{dn} values for daytime and nighttime contradicts the definition of L_{dn}, which is a 24-hour weighted average.

Table 4.12-4
RECOMMENDED CRITERIA FOR MAXIMUM ACCEPTABLE NOISE LEVELS

Major Land Use Type	Outdoor			Indoor
	L_{max}	L_{10}	L_{50}	L_{dn}
Residential (7 a.m. – 10 p.m.)	70	55	45	45
Residential (10 p.m. – 7 a.m.)	60	45	35	35
Commercial (Anytime)	75	65	55	None
Industrial (Anytime)	85	70	60	None

Source: City of Long Beach General Plan, Noise Element, p.137. 1975.

For ambient measurement sites in the residential areas surrounding Barton Elementary School, L_{max} exceeds the criterion of 70 dBA, without the project.

4.12.6 Thresholds of Significance for this Analysis

There are two criteria for judging noise impacts. First, noise levels generated by the proposed project must comply with all relevant federal, state and local standards and regulations. Noise impacts on the surrounding community are limited by local noise ordinances, which are implemented through investigations in response to nuisance complaints. It is assumed that all existing regulations for the construction and operation of the proposed project would be enforced. In addition, the proposed project should not produce noise levels that are incompatible with adjacent noise sensitive land uses as defined in the City of Long Beach *General Plan Noise Element*.

The second measure of impact used in this analysis is the significant increase in noise levels above existing ambient noise levels as a result of the introduction of a new noise source. An increase in noise level due to a new noise source has a potential to adversely impact people.

Based on the applicable noise regulations stated above, the proposed project would have a significant noise impact if it would:

- Conflict with applicable noise restrictions or standards imposed by regulatory agencies.
- Cause the **permanent** ambient noise level at the property line of an affected land use to increase by 3 dBA CNEL.

6 Long Beach General Plan, Noise Element, p. 95.

- Contribute to a significant cumulative noise impact.

DISCUSSION OF IMPACTS

(a) Would the project expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant Impact With Mitigation Incorporated

Construction

Noise impacts from construction activities are a function of the noise generated by the operation of construction equipment and on-road delivery and worker commuter vehicles, the location of equipment, and the timing and duration of the noise-generating activities. For the purpose of this analysis, it was estimated that the construction of the proposed project would begin in January 2017 and finish within a year.[7]

Methods used for estimating construction noise impacts are presented in the Noise Analysis in **Appendix D**. UltraSystems estimated noise exposures for each construction phase: existing parking lot demolition, fine grading, utility trenching, prefabricated building construction, paving of playgrounds, application of architectural coatings, portable classroom demolition, and paving of the new parking lot. Each phase includes a different mix of construction equipment.

Table 4.12-5 summarizes the maximum construction-related short-term noise exposures at the existing residential receivers at which ambient exposures were measured. Attenuation due to the existing walls between some of the residences and the school site was not taken into account

Table 4.12-5
ESTIMATED ONE-HOUR CONSTRUCTION NOISE EXPOSURES AT NEAREST SENSITIVE RECEIVERS

Construction Phase	Nearest Receiver[a]	Adjusted Standard (dBA L_{eq})	One-Hour Exposure (dBA L_{eq})	Exposure Increase Above Ambient (dBA)
Parking Lot Demolition	7	60	79.5	21.5
Fine Grading	7	60	79.2	21.2
Utility Trenching	5	60	75.1	15.7
Building Construction	5	60	79.9	20.4
Architectural Coating	5	60	64.5	5.0
Playground Paving	5	60	75.2	15.8
Portable Classrooms Demolition	7	60	77.5	18.1
Parking Lot and Non-Asphalt Paving	7	60	72.5	13.1

[a]See Figure 4.12-1 for residential receiver locations.

7 Approximate starting and completion dates for major construction phases were obtained from Section 2.3 of the Initial Study/Mitigated Negative Declaration for the project. These milestones were adjusted to be consistent with the phase durations estimated by the CalEEMod emissions model.

As noted above, the Long Beach Municipal Code limits construction activities to the hours of 7:00 a.m. and to 7:00 p.m. Monday through Friday, and 9:00 a.m. to 6:00 p.m. on Saturdays. This would preclude construction noise exposures during the evening and nighttime hours, when people are most sensitive to noise. Except for building construction, construction phases will be less than or equal to 15 working days. Nevertheless, short-term absolute exposures and exposure increases are potentially significant and need to be mitigated. Implementation of the following measures will result in a less than significant impact from construction activities:

N-1 If residents complain of excessive noise during construction, then the District will conduct noise monitoring in the residential area of concern during the suspected noise-producing construction activities. If the monitored noise levels exceed regulatory noise restrictions or standards, then the District will mitigate noise levels using temporary noise shields, noise barriers or other mitigation measures to comply with those restrictions or standards.

N-2 The construction contractor will ensure that all construction equipment, fixed or mobile, is properly operating (tuned-up) and that mufflers are working adequately.

N-3 Construction activities will not occur between the hours of 7:00 p.m. and 7:00 a.m. Mondays through Thursdays; between the hours of 7:00 p.m. on Fridays and 9:00 a.m. Saturdays; after 6 p.m. on Saturdays, and anytime on. No permit for construction activity during these prohibited hours will be sought.

N-4 Construction equipment will not be allowed to idle for more than five minutes when not in use.

N-5 The District will notify residents surrounding the school site of the construction schedule and updates thereof, at least two weeks in advance of a change in construction phase.

Operation

The proposed project may generate noise onsite as a result of student activities. The student outdoor activities may impact existing residences that will be located near the school boundary. The number of students, the specific activity, and the amount of supervision can all greatly affect the amount of noise a group of playing children makes. Typical outdoor activities could create short-term noise levels between 60 to 70 dBA at land uses adjacent to the noise sources.[8] For example, noise measurements taken at designated play areas at Hammel Street Elementary School, a school in the Los Angeles Unified School District, during recess activities and immediately following recess showed a noise increase of approximately 2.6 dBA when students were at recess.[9] This noise level increase is not a significant impact.

The principal noise source in the project area is traffic on local roadways. The project may contribute to a permanent increase in ambient noise levels in the project vicinity due to project-generated vehicle traffic on neighborhood streets and at intersections. A noise impact would occur if the project contributes to a permanent increase in ambient noise levels affecting sensitive

8 LAUSD, OEHS. 2004. *New School Construction Program, Final Program Environmental Impact Report (PEIR)*, Draft PEIR (incorporated in the Final PEIR). June 8. p. 3.3-10.

9 LAUSD. 2005. *East Los Angeles High School No. 2/Central Region Elementary School No. 19 Final EIR*, September. Measurements cited were not a part of the study covered by this report.

receivers along streets that would carry project-generated traffic. In addition, students and faculty at the proposed project would be exposed to noise from traffic on local streets and from major roadways surrounding Burton Elementary School. Both of these types of impacts were evaluated.

Table 4.12-6 shows the average daily traffic (ADT) without the project in 2017 and for the 2017 conditions plus the project, as determined by the traffic study prepared for the project.[10] The project is estimated to generate a net 653 daily trips.[11] In general, traffic would have to at least double for an increase in roadway noise to have a significant impact on sensitive receivers. Because traffic in areas surrounding Burton Elementary School would not double as a result of the project, those impacts would be less than significant.

Table 4.12-6
2017 AVERAGE DAILY TRAFFIC VOLUMES ON THREE ROADWAY SEGMENTS WITH AND WITHOUT THE PROPOSED PROJECT

Street	2017 ADT (without Project)	2017 ADT (with Project)	Traffic Doubles?
Del Amo Boulevard East of Lemon Street	28,086	28,412	No
Ridgewood Street East of Lemon Street	849	947	No
Lemon Avenue North of Luray Street	1,770	2,194	No
Sources: Rutherfurd, K.R. et al. *Barton Elementary School Educare Facility Traffic Impact Analysis.* Prepared by Stantec, Irvine, California for Long Beach Unified School District, Long Beach, California, November 2015, Figures 10 and 14; Email from Keith Rutherfurd, Stantec, Irvine, California to Michael Rogozen, UltraSystems, Irvine, California. December 3, 2015.			

Methods for estimating peak hour and average daily impacts of future traffic noise on occupants of residential areas surrounding the school are presented in the noise analysis in **Appendix D.** **Table 4.12-7** shows the results of the peak hourly noise impact analysis. The maximum increase in peak-hour noise exposure would be 1.9 dBA L_{eq}, which would not be detectable by the average person.

Table 4.12-7
2017 PEAK-HOUR RESIDENTIAL NOISE EXPOSURE WITH AND WITHOUT THE PROJECT

Neighborhood	Hourly L_{eq} (dBA)					
	A.M. Peak Hour			P.M. Peak Hour		
	Without Project	With Project	Change	Without Project	With Project	Change
Del Amo Boulevard East of Lemon Street	66.3	66.5	+0.2	66.4	66.5	+0.1
Ridgewood Street East of	50.6	50.9	+0.3	44.8	45.9	+1.1

10 Rutherfurd, K.R. et al. *Barton Elementary School Educare Facility Traffic Impact Analysis*. Prepared by Stantec, Irvine, California for Long Beach Unified School District, Long Beach, California, November 2015, Figures 10 and 14.

11 The project will generate 837 weekday trips but will eliminate 184 weekday trips for a net increase of 653 ADT.

Lemon Street						
Lemon Avenue North of Luray Street	51.2	52.3	+1.1	48.4	50.3	+1.9

CNEL values were also calculated for the same residential areas. The results of the analysis are shown in **Table 4.12-8**. The highest change would be 0.06 dBA, which would not be detectable.

Table 4.12-8
2017 RESIDENTIAL CNEL VALUES WITH AND WITHOUT THE PROJECT

Residential Neighborhood	CNEL (dBA)		
	Without Project	With Project	Change
Del Amo Boulevard East of Lemon Street	67.10	67.15	+0.05
Ridgewood Street East of Lemon Street	60.00	60.05	+0.05
Lemon Avenue North of Luray Street	59.92	59.98	+0.06

In conclusion, the project's long-term impacts would be less than significant.

(b) Would the project expose persons to or generate excessive groundborne vibration or groundborne noise levels?

Less than Significant Impact

Vibration is sound radiated through the ground. Groundborne noise is the rumbling sound caused by the vibration of building interior surfaces. The ground motion caused by vibration is measured as peak particle velocity (PPV) in inches per second and is referenced as vibration decibels (VdB). Typical outdoor sources of perceptible groundborne vibration are construction equipment and traffic on rough roads.

The American National Standards Institute (ANSI) indicates that vibration levels in critical care areas, such as hospital surgical rooms and laboratories, should not exceed 0.2 inch per second of PPV.[12] The Federal Transit Administration (FTA) also uses a PPV of 0.2 inch per second as a vibration damage threshold for fragile buildings and a PPV of 0.12 inch per second for extremely fragile historic buildings. The FTA criteria for infrequent groundborne vibration events (less than 30 events per day) that may cause annoyance are 80 VdB for residences and buildings where people normally sleep, and 83 VdB for institutional land uses with primarily daytime use.[13]

Construction

The project would not include any blasting, drilling, or pile driving. Construction equipment such as loaded trucks, jack hammers, and small bulldozers may temporarily increase groundborne vibration or noise at the project site.

12 American National Standards Institute (ANSI). 1983. *"Guide to the Evaluation of Human Exposure to Vibration in Buildings"*, ANSI S.329-1983.

13 *Transit Noise and Vibration Impact Assessment*, FTA-VA-90-1003-06. U.S. Department of Transportation, Federal Transit Administration (May 2006).

The FTA has published standard vibration levels for construction equipment operations, at a distance of 25 feet.[14] The smallest geometric mean distance from construction activity to a residential receptor would be about 118 feet. The calculated vibration levels expressed in VdB and PPV for selected types of construction equipment at distances of 50, 100, and 118 feet are listed in **Table 4.12-9**.

Table 4.12-9
VIBRATION LEVELS OF CONSTRUCTION EQUIPMENT

Equipment	PPV at 25 feet (in/sec)	Vibration Decibels at 25 feet (VdB)	PPV at 50 feet (in/sec)	Vibration Decibels at 50 feet (VdB)	PPV at 118 feet (in/sec)[a]	Vibration Decibels at 118 feet (VdB)[a]
Large Bulldozer	0.089	87	0.0315	81	0.0087	74
Loaded Truck	0.076	83	0.0269	77	0.0074	70
Jackhammer	0.035	79	0.0124	73	0.0034	66
Small Bulldozer	0.003	58	0.0011	52	0.0003	45

Source: Calculated by UltraSystems from FTA data.
[a]118 feet is representative of the nearest sensitive receiver to the proposed construction.

As shown in **Table 4.12-9**, the vibration level of construction equipment at the nearest sensitive receiver (118 feet) is at most 0.0087 inch per second, which is less than the FTA damage threshold of 0.12 inch per second PPV for fragile historic buildings, and 74 VdB, which is less than the FTA threshold for human annoyance of 80 VdB. Vibration impacts would therefore be less than significant.

Operations

Operation of the proposed project would not involve significant sources of groundborne vibration or groundborne noise. Thus, operation of the proposed project would result in a less than significant impact.

(c) Would the project cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

(d) Would the project cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less than Significant Impact

As seen in **Tables 4.12-7 and 4.12-8**, operation of the project would result in an increase in peak-hour and 24-hour average residential noise exposures above levels without the project. However, those increases would not be detectable by the average person. Therefore, impacts would be less than significant.

(e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the

14 Ibid., p. 12-12.

project expose people residing or working in the project area to excessive noise levels?

No Impact

The nearest airport is Long Beach Airport, whose nearest runway is approximately 1.6 miles southeast of the project site. However, the project site is outside the boundaries of the Long Beach Airport portion of the Los Angeles County Airport Land Use Plan (County of Los Angeles, 2004). Therefore, the project would not expose people residing or working in the project area to excessive noise levels and no impact would occur.

(f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact

The project site is not in the vicinity of a private airstrip. Therefore, the proposed project would not expose students or staff to excessive noise levels. No impact would occur.

(g) Is the proposed school site located adjacent to or near a major arterial roadway or freeway whose noise generation may adversely affect the education program?

Less than Significant Impact

The nearest freeway, Interstate I-710, is approximately 1.5 miles west of the project site. Noise generated by freeway traffic would be attenuated so much by distance and by intervening structures that it would not adversely affect operations at the school. Although the General Plan classifies East Del Amo Boulevard as a "major avenue," it may be considered an arterial for the purpose of this analysis.[15] Barton Elementary School has been located on East Del Amo Boulevard since original construction. Noise generated by traffic on East Del Amo Boulevard has not adversely affected educational activities at the school to date.

As documented in **Section 4.12.2**, measured short-term noise levels at on-campus sampling points 1 and 3, which are closest to East Del Amo Boulevard, were 53.2 dBA L_{eq} and 63.2 dBA L_{eq}. The noise level at sampling point 2, which is closest to the proposed Educare facility site, was 60.8 dBA L_{eq}. These levels are typical of an urban area and can be readily attenuated to 45 dBA L_{dn} inside the classrooms.[16] Therefore, the impact of traffic noise from freeways and major arterial roadways would be less than significant.

15 Email from Keith Rutherfurd, Stantec, Irvine, CA to Michael Rogozen, UltraSystems Environmental, Inc., Irvine California. January 22, 2016.

16 The City of Long Beach General Plan, Noise Element recommends 45 dBA Ldn as the maximum acceptable indoor noise level for schools; see page 133 of the Noise Element.

4.13 Population and Housing

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			**X**	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				**X**
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				**X**

(a) Would the project induce substantial growth in an area either directly (for example, by proposing new homes and business) or indirectly (for example, through extension of roads or other infrastructure)?

Less than Significant Impact

The proposed project is an early education facility adjacent to an existing elementary school campus. The project would add 191 at-risk children (from birth to five years old) within the community, and 48 new administration and teacher personnel. However, the proposed project is relatively small in size and within an urban residential neighborhood. The proposed project would most likely support the existing residential uses in the vicinity, and not induce substantial growth in the region.

The project does not include a housing component or otherwise support an increase in the resident population of the City. The project would utilize existing infrastructure for its operation and no additional extension of roads or other infrastructure is proposed. Therefore, indirect population growth as a result of new jobs created by the project is expected to be less than significant.

(b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact

The proposed project is located within an existing elementary school campus and no housing facilities or residences are located on site. Therefore, project components would not involve the removal or displacement of existing housing. Because no housing would be displaced by the project, there would be no need for the construction of replacement housing. Therefore, no impacts would occur.

(c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact

The project would not result in the loss of residential units or displace any people with housing. Therefore, the construction of replacement housing would not be necessary and no impact would occur.

4.14 Public Services

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?			**X**	
b) Police protection?			**X**	
c) Schools?				**X**
d) Parks?				**X**
e) Other public facilities?				**X**
f) Does the site promote the joint use of parks, libraries, museums, and other public services?				**X**

(a) Fire protection?

Less than Significant Impact

The City of Long Beach (City) Fire Department (LBFD) provides fire protection and emergency medical services citywide. The LBFD operates 24 fire stations throughout the City. Fire stations nearest to the project site include Station No. 11 approximately 1.4 miles northwest and Station No. 9 approximately 1.6 miles southwest of the project site.

The LBFD is divided into four bureaus including Operations, Fire Prevention, Support Services and Administration. Each bureau reports to the fire chief and is further broken down into divisions. Each bureau has specific responsibilities that are managed independently.[1] The Operations Bureau is responsible for all field operations including Fire Suppression, the Lifeguard Division, personnel, policies and fire/non-fire response activities. The Support Services Bureau is responsible for Fire Communications, Training Division, Emergency Medical Services, and Fleet Management.

The Fire Prevention Bureau's objectives, organization, functions and responsibilities work towards the primary goal of preventing fires before they happen. This Bureau is also responsible for providing safety education in case of fire, investigating and identifying suspicious fires and environmental crimes through proactive enforcement of Fire, Life Safety, and Environmental Code requirements in the City. The Bureau is responsible for Fire Code Enforcement, Plan Check, Fire Investigation, Arson Prosecution, Environmental Investigations and Records Management. The Bureau assures that newly constructed buildings are designed with correct fire protection and life safety systems built into them. Existing structures must satisfy fire code requirements and standards.[2]

1 http://www.longbeach.gov/fire/organization-chart/, Accessed October 27, 2015.
2 http://www.longbeach.gov/fire/fire-prevention/, Accessed October 27, 2015.

The proposed project would comply with applicable sections of the City of Long Beach Fire, Life Safety and Environmental Code. Construction plans would be subject to approval by the Division of the State Architect[3] and the Long Beach Fire Prevention Bureau. The project will provide fire lane and hydrants, and would be built with required fire protection and life safety systems in compliance with the requirements of the Fire Prevention Bureau. With the implementation of required measures for fire safety and prevention, impacts related to fire protection services would be less than significant.

(b) Police protection?

Less than Significant Impact

The City of Long Beach Police Department (LBPD) is the second largest municipal police agency in Los Angeles County, and responsible for providing law enforcement services in the City. LBPD includes over 800 sworn officers and total staff of over 1,200 personnel and, is divided into five bureaus including: Administration, Financial, Investigation, Patrol and Support.[4]

The City of Long Beach is organized into quadrants. The Patrol Bureau includes one specialized Field Support Division and three geographical divisions: North, East and West. The Patrol Bureau focuses on community policing accomplished by community policing teams consisting of sworn employees and civilian support staff. These proactive teams promote personal safety and crime prevention.[5]

Long Beach Police North Patrol Division Station is approximately 0.4 mile west of the project site. The proposed project would be designed to avoid or minimize crime-related incidents. The Educare security policies will require parents, guardians or pre-approved persons to sign-in students. For security and circulation, a receptionist in the lobby will direct persons to the facility, stairs or elevator to the second floor, where the training and Parent Resource Rooms are located. Other site security features include fencing between buildings, security cameras, emergency communication systems, evacuation plan, and ability to lock-down the campus in case of an emergency. Therefore, impacts related to police protection services would be less than significant.

(c) Schools?

No Impact

The proposed project is an early education facility that would provide a specialized learning environment for at-risk children from birth to five years old within the community. As discussed in **Section 4.13**, the proposed project would not directly induce any population growth in the project area and indirect population growth as a result of new jobs generated by the project would be negligible. Therefore, the proposed project would have a positive effect related to the provision of schools for at-risk children and no adverse impacts would occur.

(d) Parks?

3 This division is an affiliate of State of California's Department of General Services.
4 http://www.longbeach.gov/police/about-the-lbpd/, Accessed October 27, 2015.
5 http://www.longbeach.gov/police/about-the-lbpd/bureaus/patrol-bureau/patrol-bureau/, Accessed October 27, 2015.

No Impact

The City of Long Beach Parks Systems includes about 162 parks with 26 community centers, two historic sites, two major tennis centers, and, one of the busiest municipal golf systems in the country with five courses.[6] More than 3,100 acres within the City's 50 square miles are developed for parks and recreation.[7] The project site is located in close proximity to three community parks including Scherer Park, Bixby Knolls Park and Atlantic Plaza Park. Several other mini parks, greenways and neighborhood parks are also located near the project site.

Demand for parks typically increases with housing or population growth in an area. The proposed project would not directly or indirectly induce any population growth in the project area and indirect population growth as a result of new jobs generated by the project would be negligible. Therefore, no impacts to parks are anticipated.

(e) Other public facilities?

No Impact

The proposed project would not directly induce any population growth in the project area and indirect population growth as a result of new jobs generated by the project would be negligible. Therefore, no impacts to other public facilities are anticipated.

(f) Does the site promote the joint use of parks, libraries, museums, and other public services?

No Impact

The proposed project is an early education program based on an innovative partnership between the public and private sectors to provide a specially designed learning place to at-risk children.[8] The facility would be used for classroom instruction, parent and teacher training, and recreation, and would be beneficial to the community. Therefore, the project would not impact the joint use of parks, libraries, museums, and other public services.

6 http://www.longbeach.gov/park/, Accessed October 27, 2015.
7 http://www.longbeach.gov/park/business-operations/about/, Accessed October 27, 2015.
8 http://www.educareschools.org/about/index.php, Accessed October 27, 2015.

4.15 Recreation

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			**X**	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			**X**	

(a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less than Significant Impact

The increase in use of recreational facilities is generally spurred by population growth in the project area. As discussed in **Section 4.13**, the proposed project would not directly induce any population growth in the project area and indirect population growth as a result of new jobs generated by the project would be negligible. Therefore, impacts related to increased use of existing recreation facilities would be less than significant.

(b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less than Significant Impact

The proposed project would include an outdoor play area for Educare students and a landscaped garden.[1] Construction and operation of these recreational facilities would comply with federal, state, and local requirements. As discussed in **Sections 4.1 through 4.17** of this Initial Study, no significant adverse physical effects on the environment are expected from construction and operation of the project. With adherence to all applicable regulations, adverse physical effects on the environment would be less than significant.

1 See Section 2.0, Project Description, of this Initial Study.

4.16 Transportation and Traffic

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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?		**X**		
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?		**X**		
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, which results in substantial safety risks?				**X**
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			**X**	
e) Result in inadequate emergency access?				**X**
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			**X**	
g) Is the proposed school site within 1,500 feet of a railroad track easement?			**X**	
h) Is the site easily accessible from arterials and is the minimum peripheral visibility maintained for driveways per Caltrans' Highway Design Manual?			**X**	

4.16.1 Methodology

A focused Traffic Impact Analysis (TIA) was completed to assess existing traffic conditions surrounding Barton Elementary School, and the effect of development of the proposed project on existing on- and off-site traffic circulation, site access and parking. The following is a summary of the TIA, which is provided in **Appendix C**.

The TIA included analysis of the following intersections in the project study area.

1. Orange Avenue and Del Amo Boulevard (signalized);
2. Bentree Avenue and Del Amo Boulevard (two-way stop);
3. Lemon Avenue and Del Amo Boulevard (one-way stop);
4. Lemon Avenue and Luray Street/Project Access (stop-controlled);
5. Lemon Avenue and Ridgewood Street (all-way stop-controlled); and
6. Bentree Avenue and Ridgewood Street (all-way stop-controlled).

The existing roadway network and intersections surrounding the project site including intersection geometrics and controls are shown in **Figure 4.16-1**.

Level of Service

The level of service (LOS) is a qualitative indicator of an intersection's congestion and delay.

The Intersection Capacity Utilization (ICU) method was used to determine signalized intersection LOS. Under ICU methodology, the volume of traffic using the intersection is compared to the capacity of the intersection. ICU's are calculated for peak hours of traffic, and include unique features of the intersection such as turning movement volumes, intersection lane configurations, and traffic signal phasing. ICU's are generally expressed as a percent, and used to determine the LOS based on the capacity of the intersection.

The Highway Capacity Manual (HCM) unsignalized operations method was used to determine LOS for unsignalized intersections. This methodology estimates the average control delay for each of the subject approaches/movements, and determines the LOS for each movement. For all-way stop controlled intersections, the overall average control delay is measured in seconds per vehicle, and LOS is then determined from this value for the entire intersection. Worst-case delay is not applicable to all-way stop intersections and is not reported. For one-way and two-way stop-controlled (minor street) intersections, the HCM methodology estimates the worst-case delay of the stop-controlled side streets, measured in seconds per vehicle, and determines the LOS for that approach/movement. At one-way and two-way stop-controlled intersections, the uncontrolled major street through vehicles are assumed to have no control delay, so average delay for the entire intersection is much lower, and not used to determine LOS. Nevertheless, the software that was used to perform HCM analysis for this study reports both average delay and worst-case (minor side street) delay as part of the model output for one-way/ two-way stop-controlled intersections. Reporting both parameters gives a more complete picture of operation at the project study area intersections. For the one-way/two-way stop-controlled intersections included in this study, reported average delay values for the entire intersection have been provided for informational purposes only to present a more accurate indication of overall operation. Using the HCM Unsignalized Method, vehicle worst-case or average approach delay at an unsignalized intersection is used to determine LOS.

LOS for signalized and unsignalized intersections range from "A" (excellent conditions) to "F "(extreme congestion), and is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. LOS for signalized and unsignalized intersections are summarized in **Tables 4.16-1 and 4.16-2**.

Target LOS criteria for study area intersections were determined based on individual "Street Typology Design Criteria" as identified in Table 5 of the City of Long Beach General Plan Mobility Element. The City's Mobility Element designates Del Amo Boulevard as a Major Avenue, Orange Avenue as a minor avenue, and Ridgewood Street, Lemon Avenue, and Bentree Avenue as local streets. The Mobility Element designates "D" to be the maximum allowable peak hour LOS for regional corridors, boulevards and major avenues, and "C" to be the maximum allowable peak hour LOS for minor avenues and neighborhood connectors.

Table 4.16-1
INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS LEVEL OF SERVICE DESCRIPTIONS FOR SIGNALIZED INTERSECTIONS

Level of Service	Traffic Flow Description	Nominal Range of ICU
A	Low volumes; high speeds; speed not restricted by other vehicles; all signal cycles clear with no vehicles waiting through more than one signal cycle.	0.00 – 0.60
B	Operating speeds beginning to be affected by other traffic; between one and ten percent of the signal cycles have one or more vehicles which wait through more than one cycle during peak traffic periods.	0.61 - 0.70
C	Operating speeds and maneuverability closely controlled by other traffic; between 11 and 30 percent of the signal cycles have one or more vehicles which wait through more than one cycle during peak traffic periods; recommended ideal design standard.	0.71 - 0.80
D	Tolerable operating speeds; 31 to 70 percent of the signal cycles have one or more vehicles which wait through more than one cycle during peak traffic periods; often used as design standard in urban areas.	0.81 - 0.90
E	Capacity; the maximum traffic volume an intersection can accommodate; restricted speeds; 71 to 100 percent of the signal cycles have one or more vehicles which wait through more than one cycle during peak traffic periods.	0.91 - 1.00
F	Long queues of traffic; unstable flow; stoppages of long duration; traffic volumes and traffic speed can drop to zero; traffic volumes will be less than the volume which occurs at Level of Service E.	Over 1.00

Table 4.16-2
LEVEL OF SERVICE DESCRIPTIONS FOR UNSIGNALIZED INTERSECTIONS

Level of Service	Traffic Flow Description	Worse Case Approach Delay Per Vehicle (SEC)
A	Operations with delay less than or equal to 10.0 second per vehicle; most vehicles have a very short stop.	<10.0
B	Operations with delay in the range of 10.1 to 15.0 second per vehicle; higher levels of delay, longer stops than LOS A.	10.1 to 15.0
C	Operations with delay in the range of 15.1 to 25.0 second per vehicle; significant levels of delay.	15.1 to 25.0
D	Operations with delay in the range of 25.1 to 35.0 second per	25.1 to 35.0

Level of Service	Traffic Flow Description	Worse Case Approach Delay Per Vehicle (SEC)
	vehicle; noticeable congestion; increased queue lengths; long delays.	
E	Operations with delay in the range of 35.1 to 50.0 second per vehicle; limit of acceptable delay; very long delay; long queue lengths.	35.1 to 50.0
F	Operations with delay in excess of 50.0 second per vehicle; considered unacceptable driver delay; congestion; oversaturation; > 50.0 unacceptable queuing.	> 50.0

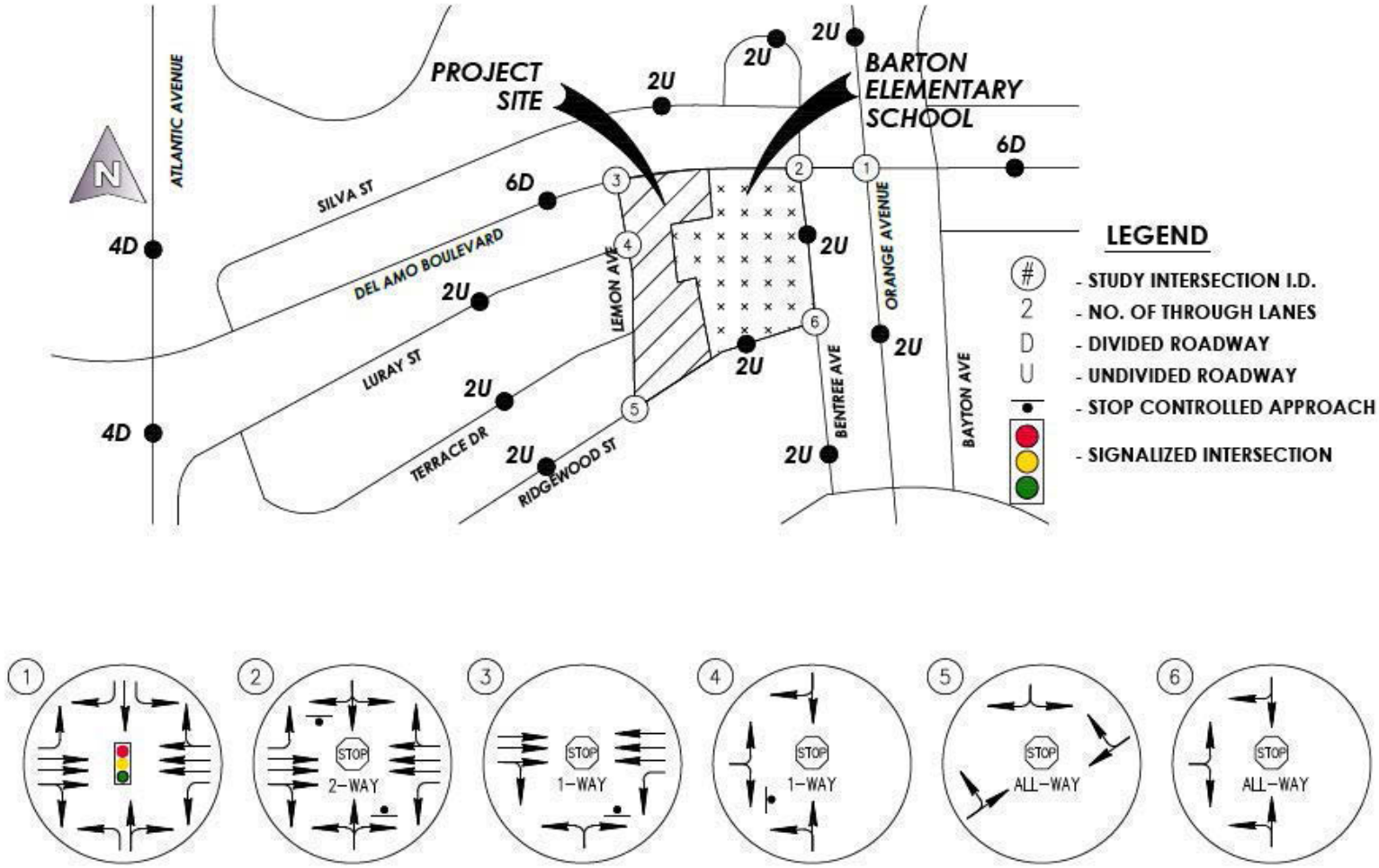
Existing Traffic Volumes

Existing (year 2015) traffic volumes in the study area were collected on a school day and include weekday AM and PM peak hour intersection turning movement volumes for each of the six study intersections noted above. Traffic volumes also include 24 hour volumes on roadway segments between study intersections. Pedestrian and bicycle volumes were also collected at each study intersection. Baseline traffic volumes for project implementation year (2017) were developed by factoring existing 2015 volumes by an ambient growth rate of one percent per year for two years.

Projected Future Traffic

Trip generation rates used to forecast traffic volumes produced by the project were based on trip generation rates identified by the Institute of Transportation Engineers, in Trip Generation, 9th Edition. Existing 2015 and project only traffic volumes were combined to produce forecasts of existing traffic conditions with project implementation. Baseline 2017 and project-only traffic volumes were combined to produce forecasts of future traffic conditions with project implementation.

Figure 4.16-1
STUDY AREA INTERSECTION LOCATION, GEOMETRIC AND TRAFFIC CONTROLS



Source: Appendix C

DISCUSSION OF IMPACTS

(a) Would the project 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?

(b) Would the project 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?

Less than Significant Impact with Mitigation Incorporated

Operation

Operation of the proposed project is forecast to generate 653 trips per weekday. **Table 4.16-3** shows AM peak hour trip generation, which represents the highest volume of vehicles entering and exiting the site. The projected AM peak hour volume is 119 trips with 57 inbound and 64 outbound. The projected PM peak hour volume is 121 trips with 57 inbound and 64 outbound. It is anticipated that 45% of the project traffic would be generated along Del Amo Boulevard, 20% along Orange Avenue, 20% along Bentree Avenue, and 15% along Ridgewood Street.

Table 4.16-3
PROJECT TRIP GENERATION

Land Use	Quantity	AM Peak Hour			PM Peak hour			Net Vehicular Trips per weekday
		Rate	In	Out	Rate	In	Out	
Daycare Center	191 students	119	63	56	121	57	64	**653**

The AM peak hour of the school site (between the hours of 7 AM to 9 AM) coincides with the morning commuter AM peak hour of the surrounding street network. The PM peak hour of the school is between 1 and 3 PM, and peaks earlier than the 4 PM to 6 PM peak of the surrounding street system. LOS analysis for Baseline 2017, and Baseline 2017 with project traffic volume conditions during the AM peak hour and PM peak hour are provided in **Tables 4.16-4 and 4.16-5**.

Table 4.16-4
AM PEAK HOUR LEVEL OF SERVICE AT STUDY AREA INTERSECTIONS

Signalized Intersection		AM Peak Hour			
		Baseline (2017)		Baseline 2017 with Project	
		ICU	Level of Service	ICU	Level of Service
1. Orange and Del Amo		0.75	C	0.75	C
Unsignalized Intersection		**Delay (sec./vehicle)**	**Level of Service**	**Delay (sec./vehicle)**	**Level of Service**
2. Bentree and Del Amo	Worst Case	137.5	F	155.8	F
	Average Delay	2.5	A	2.7	A
3. Lemon and Del Amo	Worst Case	18.5	C	24.0	C
	Average Delay	1.2	A	1.9	A
4. Lemon and Luray (Project Access)	Worst Case	9.5	A	10.5	B
	Average Delay	1.3	A	3.7	A
5. Lemon and Ridgewood		7.6	A	7.6	A
6. Bentree and Ridgewood		7.9	A	8.0	A

Table 4.16-5
PM PEAK HOUR LEVEL OF SERVICE AT STUDY AREA INTERSECTIONS

Signalized Intersection		PM Peak Hour			
		Baseline (2017)		Baseline 2017 with Project	
		ICU	Level of Service	ICU	Level of Service
1. Orange and Del Amo		0.77	C	0.77	C
Unsignalized Intersection		**Delay (sec./vehicle)**	**Level of Service**	**Delay (sec./vehicle)**	**Level of Service**
2. Bentree and Del Amo	Worst Case	54.3	F	59.2	F
	Average Delay	0.7	A	0.7	A
3. Lemon and Del Amo	Worst Case	30.2	D	57.0	F
	Average Delay	1.1	A	3.0	A
4. Lemon and Luray (Project Access)	Worst Case	9.1	A	9.9	A
	Average Delay	1.0	A	3.9	A
5. Lemon and Ridgewood		7.2	A	7.3	A
6. Bentree and Ridgewood		7.1	A	7.1	A

As shown in **Tables 4.16-4 and 4.16-5**, all study area intersections with the exception of Bentree Avenue at Del Amo Boulevard intersection are predicted to have an existing LOS of "C" or better. Existing (2015) traffic and LOS conditions at all study area intersections remain the same as Baseline 2017 conditions. Therefore, under the Baseline 2015 and 2017 without projects conditions, all study area intersections, with the exception of Bentree/Del Amo intersection, are currently operating at desirable LOS considering their individual "Street Typology Design Criteria" as identified in **Table 4.16-5** of the City's General Plan Mobility Element.

Under both Baseline 2017 and Baseline 2017 with project conditions, the poor existing LOS "F" at the Bentree/Del Amo intersection is only associated with the low-volume stop-controlled southbound Bentree Avenue approach, and does not include traffic movements directly impacted by the proposed project. The average delay at the intersection is essentially unperceivable to Del Amo Boulevard traffic and indicates LOS "A".

For Baseline 2017 with project conditions, the study area intersections are predicted to continue to operate at the same LOS as for existing (2015) and Baseline 2017 conditions with two exceptions:

1. At the Lemon Avenue and Luray Street (project access) intersection, the AM peak hour LOS is reduced from "A" to "B". Even under peak hour reduced LOS conditions, the Lemon Avenue/Luray Street intersection would operate at LOS B which is higher than maximum allowable peak hour LOS C for minor avenues and neighborhood connectors designated by the City's Mobility Element. Therefore, project related traffic impact on Lemon Avenue/Luray Street intersection would be less than significant.

2. At the Lemon Avenue and Del Amo Boulevard intersection, the PM peak hour LOS is reduce from "D" to "F". Similar to Bentree/Del Amo intersection, the poor LOS "F" at Lemon/Del Amo intersection is associated with the stop-controlled Lemon Avenue approach only and the LOS on Del Amo Boulevard is LOS "A". However, at Lemon Avenue, this approach is directly impacted by project traffic. With the incorporation of mitigation measure **TT-1 (see below),** the project generated LOS "F" on Lemon Avenue would be restored back to existing LOS "D", and project-related traffic impact on existing circulation system would be less than significant.

Construction

As described in the project description, project related construction activities are scheduled to commence in the summer of 2016 and end in December 2017. During the construction period, the proposed project would generate temporary construction-related truck and automobile traffic over a period of approximately 12 months including June to August 2016 and January to September 2017. Existing street network and on-site re-configuration would provide access to the site. Traffic during the construction phase includes construction workers traveling to and from the project site, trucks hauling construction materials to the site, and transporting material away from the site. During construction, the project site would also be surrounded by on-going construction activities. Because the truck trips would be spread throughout the day and would generally occur during non-peak hours, the level of construction-related traffic would not result in significant impact on the study area street network.

Non-motorized Traffic and Mass Transit

Under the proposed project, parents or guardians would be required to escort Educare students from the proposed visitor and student drop-off parking lot to classroom facilities. However, there is a possibility that some of the Educare staff may walk or bike to school or use existing bus transit service in the project area. Therefore, the project is anticipated to generate a negligible increase in non-motorized traffic. Existing streets in the vicinity of the project site have sidewalks along both sides of the street. Therefore, project impacts associated with non-motorized traffic circulation would be less than significant.

Long Beach Transit bus lines provide bus transit service in the project area. The nearest bus lines[1] operate on Orange Avenue and Del Amo Boulevard, and the nearest bus stops are located within an approximately 10-minute walk from the project site. Operation of the proposed project would not affect the transit route or bus facilities, and not conflict with any plans or policies relative to these travel modes. The proposed project would not conflict with existing policies, plans, or programs supporting alternative transportation, and the traffic impact would be less than significant.

The Los Angeles County Congestion Management Program (CMP) requires all freeway segments and arterial intersections to operate at a minimum LOS "E", or at the current level, if worse than "E". As discussed above. during project operation, study area intersections analyzed in the TIA would continue to operate at the same LOS as existing (2015) and Baseline 2017 conditions with the exception of two intersections along Lemon Avenue. With the incorporation of mitigation measure **TT-1**, project generated reduced LOS "F" on Lemon Avenue would be restored to existing LOS "D", and the project would not conflict with LOS standards or travel demand measures established by CMP. For these reasons, the traffic impact would be less than significant.

Mitigation Measure

TT-1: Restricted Parking on Lemon Avenue

- The district shall coordinate with the City of Long Beach to (1) post signs on the east side of Lemon Avenue between the proposed project access driveway and Del Amo Boulevard to restrict on-street parking during school day peak traffic periods, and (2) eliminate approximately 100 feet (4 parking spaces) of on-street parking along the east side of Lemon Avenue during peak periods on school days. The resulting clear 18-foot half-section width of the existing roadway will then be wide enough to provide a "defacto" or unofficial right-turn lane. The loss of on-street parking during peak school periods would be mitigated by the proposed 18-space drop-off/pick-up parking lot accessed from the Lemon Avenue driveway. The restriction of on-street parking along the school side of Lemon Avenue north of the access driveway will also improve sight-distance and enhance pedestrian and vehicular safety. No change to existing on-street parking along the west side of Lemon Avenue will be required.

(c) Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, which results in substantial safety risks?

No Impact

The nearest commercial airport, Long Beach Airport, is located approximately one mile southeast of the project site, and outside the Airport Influence Area for Long Beach Airport established by the Los Angeles County Airport Land Use Commission (see **Figure 4.16-2**).[2] Furthermore, the proposed project would not affect the operation of any airport because the proposed building height would not exceed Federal Aviation Administration height limits for air safety established in

1 The nearest bus lines include: 1) Long Beach Transit Route 191 along Del Amo Boulevard, 2) Long Beach Transit Route 71 along Orange Avenue, and 3) Long Beach Transit Route 72 along Orange Avenue.

2 Long Beach Airport Influence Area Map. http://planning.lacounty.gov/assets/upl/project/aluc_airport-long-beach.pdf . Accessed January 14, 2016.

Federal Air Regulations Part 77 Guidelines.[3] For these reasons, the project would not result in a change in air traffic patterns that would result in safety risks and no impact would occur.

(d) Would the project 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 Impact

Operation of the proposed Educare facility would increase vehicular traffic, number of vehicular turning movements at nearby intersections and proposed access point, and generate an increase in the number of pedestrians. This increase in motorized and non-motorized traffic could result in a higher risk for traffic conflicts between the different travel modes at intersections and curb-cuts. However, this risk would be substantially reduced, because the project site is located within an existing elementary school campus with existing safety features such as yellow painted school crosswalks at intersections adjacent to the school site.

If required, new signage and crosswalks will be installed or improvements to existing safety infrastructure will be implemented. New safety features will be designed and installed in accordance to the specification set in the Caltrans Manual for School Area Pedestrian Safety. Furthermore, the proposed access driveways and aisle-ways are appropriately spaced, sized, and configured for the project volume and site use. All onsite access and sight-distance requirements would be in accordance with the District and Caltrans design requirements. The project would not substantially alter or impact roads, sight lines or land uses. Therefore, the project would not increase hazards due to a design feature, and the traffic impact would be less than significant.

[3] Los Angeles County Airport Land Use Commission Comprehensive Land Use Plan. http://planning.lacounty.gov/assets/upl/data/pd_alup.pdf. Accessed February 26, 2016.

Figure 4.16-2
AIRPORT INFLUENCE AREA FOR LONG BEACH AIRPORT

(e) Would the project result in inadequate emergency access?

No Impact

The proposed project would comply with applicable Long Beach Fire Department (LBFD) regulations and the California Building Standards Code. Prior to the issuance of building permits, the LBFD would review project site plans, including location of all buildings, fences, drive gates, or other features that may affect emergency access. Fire lanes would be provided for adequate emergency access. The site design for the Educare facility would include access and fire lanes that would accommodate emergency ingress and egress by fire trucks, police units, and ambulance/paramedic vehicles. All onsite access and sight-distance requirements would be in accordance with the District and Caltrans design requirements. LBFD's review process and compliance with applicable regulations and standards would ensure that adequate emergency access would be provided at the project site at all times. Therefore, the proposed project would not result in inadequate emergency access and no impacts are anticipated.

(f) Would the project 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 Impact

The project site is served by three bus transit routes to include Long Beach Transit Route 191 along Del Amo Boulevard and Long Beach Transit Routes 71 and 72 along Orange Avenue. Project site design does not include removal or relocation or expansion of alternative transportation facilities. As discussed in **Section 4.16(a,b)** above, parents or guardians would be required to escort Educare students from the proposed visitor and student drop-off parking lot to classroom facilities. Therefore, the project is anticipated to generate a negligible increase in transit riders due to probable use of transit by some of Educare staff.

Pedestrians accessing the school from the north along the east side of Lemon Avenue will be required to cross the new access driveway. Based on the existing pedestrian counts conducted for the TIA, Barton Elementary School pedestrian volume after project implementation is anticipated to be approximately 30 students during the AM peak hour. Currently, students at Barton Elementary School are required to cross the driveway on Ridgewood Street that provides access to the existing parking lot that would be demolished. The school pedestrian volumes are not anticipated to change significantly; however, in the case of the proposed project access on Lemon Avenue, the driveway vehicle volumes will be greater. Under such circumstances, a two lane exit may create unsafe situations for pedestrians if cars compete for line of sight, as drivers will creep forward into the pedestrian right-of-way while looking left to spot oncoming traffic.

In order to enhance pedestrian safety at the access driveway, a single lane egress would be provided in each direction. A single exit lane would have a shorter pedestrian crossing distance (i.e., across the driveway), which is a safer condition than a two-lane exit with a longer crossing distance. A single lane approach under stop sign control would also result in the clear assignment of driver right-of-way. As mentioned in response to section (d) above, if required, new signage and crosswalks would be installed or improvements to existing safety infrastructure would be implemented. New safety features would be designed and installed in accordance to the specification set in the Caltrans Manual for School Area Pedestrian Safety.

For these reasons, the project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, and impacts on alternative modes of transportation would be less than significant.

(g) Is the proposed school site within 1,500 feet of a railroad track easement?

Less Than Significant Impact

The nearest railroad track easement, Union Pacific Railroad, is located approximately 520 feet north of the project site. Pursuant to Railroad Safety Improvement Act of 2008, the Federal Railroad Administration (FRA) enforces safety regulations that govern different areas related to railroad safety, such as positive train control implementation, standards for track inspections, and safety at highway-rail grade crossings.[4] The California Public Utilities Commission (CPUC) works closely with the FRA to ensure Railroad, Rail Transit and Rail Crossing Safety in California. CPUC's Railroad Operations and Safety Branch (ROSB) is responsible for ensuring that California communities and railroad employees are protected from unsafe practices on freight and passenger railroads by enforcing state and federal rail safety rules, regulations, and inspection efforts, and by carrying out proactive assessments of potential risks before they create dangerous conditions. ROSB rail safety inspectors investigate rail accidents and safety related complaints, and recommend safety improvements to the Commission, railroads, and the federal government as appropriate.[5] CPUC employs federally certified inspectors to ensure at the time of inspection that railroad locomotives and equipment and facilities located in railroad yards in California are inspected no less frequently than every 180 days, and all main and branch line tracks are inspected no less frequently than every 12 months.

Based on these programs, railroads are sufficiently regulated so that the safety hazard posed to the public by nearby railroad tracks is less than significant.

(h) Is the site easily accessible from arterials and is the minimum peripheral visibility maintained for driveways per Caltrans' Highway Design Manual?

Less than Significant Impact

The proposed site is located near the intersection of Del Amo Boulevard and Orange Avenue. Access to these arterials from the project site is provided by local streets via Lemon Avenue, Ridgewood Street and Bentree Avenue. Direct access to the project site would be provided by driveways connected to Lemon Avenue located along the western boundary of the site. According to the TIA, the project access driveway and parking aisles would be appropriately sized and configured for the project volumes and would be designed in accordance with requirements of the Caltrans' Highway Design Manual and other applicable agency standards. Existing sight-distance at the project access driveway on Lemon Avenue is good and would be provided and maintained per applicable agency standards.

According to latest accepted trip generation rates published by the Institute of Transportation Engineers (ITE), the project will produce 56 outbound trips during AM school day peak hours and 64 outbound trips during PM school day peak hours. These traffic volumes do not warrant two exit lanes, considering existing traffic volumes on Lemon Avenue. Nominal vehicle queuing is anticipated at the school exit driveway during AM or PM peak hours, and drivers are expected to

4 Federal Railroad Administration website. https://www.fra.dot.gov/Page/P0395 , Accessed: January 15, 2016
5 California Public Utilities Commission website. http://www.cpuc.ca.gov/rosb/ , Accessed: January 15, 2016

enter and exit the school comfortably with acceptable LOS with a single egress lane. As discussed in response to section (f) above, a two lane exit may create unsafe situations for pedestrians if cars compete for line of sight.

In order to prevent peripheral visibility at the driveways from being obstructed, the new project driveway would be designed to provide full-access with no restrictions on turning movements from the driveway. Additionally, the proposed access driveway would provide a single lane egress in each direction. Provision of a single lane egress would eliminate the potential that an exiting right-turning vehicle could have their line of sight (i.e., looking south at northbound approaching traffic or pedestrians) blocked or compromised by an exiting vehicle waiting to turn left onto southbound Lemon Avenue.

With adherence to Caltrans' Highway Design Manual requirements and other applicable agency standards, and implementation of project driveway features described above, impacts related to peripheral visibility would be less than significant.

4.17 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (RWQCB)?			**X**	
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				**X**
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				**X**
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			**X**	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				**X**
f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			**X**	
g) Would the project comply with federal, state, and local statutes and regulations related to solid waste?				**X**

(a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (RWQCB)?

Less than Significant

The project site is within the jurisdiction of the Los Angeles Regional Water Quality Control Board (RWQCB). New development and significant redevelopment projects are required by the RWQCB to incorporate post-construction BMPs to comply with the local Standard Urban Stormwater Mitigation Plan (SUSMP), Drainage Area Management Plan (DAMP) and/or Water Quality Management Plan (WQMP) to reduce the quantity of rainfall runoff and improve the quality of

water that leaves a site. The local SUSMP requires new developments to implement appropriate routine structural and nonstructural BMPs. Examples of routine structural BMPs include filtration, common area runoff minimizing landscape, energy dissipaters, inlet trash racks, and catch basins. Routine nonstructural BMPs include litter control, inspection and maintenance of catch basins, and spill contingency plans. A site-specific Stormwater Pollution Prevention Plan (SWPPP) must be prepared before soil disturbance begins, and must address methods for treating discharged water and minimizing water pollution during construction. For these reasons, exceedances of RWQCB wastewater treatment requirements, if any, would be less than significant.

(b) Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact

Long Beach Water Department (LBWD) will provide wastewater collection services for the proposed project. Wastewater from the facility will be transferred to existing sanitary sewer pipelines beneath Lemon Avenue and Ridgewood Street. LBWD delivers over 40 million gallons per day (mgd) of wastewater to Los Angeles County Sanitation District facilities. Currently, a majority of the City's wastewater is treated at the Joint Water Pollution Control Plant (JWPCP), which provides primary and secondary treatment for approximately 280 million gallons of wastewater per day, and has a total permitted capacity of 400 mgd. A portion of the City's wastewater is also treated at the Long Beach Water Reclamation Plant, which provides primary, secondary, and tertiary treatment for 25 million gallons of wastewater per day.[1],[2] Because the project site is serviced by large water and wastewater treatment facilities with permitted capacities that exceed existing commitments, implementation of the proposed project would not require the construction of new water or wastewater facilities, and no impacts are anticipated.

(c) Would the project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact

After project construction, the impervious area within the Educare Facility will be reduced by approximately four percent from the current 286,959 to 274,579 square feet (see **Section 2.2.5**), which would tend to reduce the amount of runoff from the project site. For this reason, construction of new stormwater drainage facilities or expansion of existing facilities would not be needed, and no significant environmental effects are anticipated.

(d) Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less Than Significant Impact

Currently, LBWD serves a total population of 470,292 with over 900 miles of pipelines[3], and would provide potable and non-potable water to the project site through pipelines beneath Lemon

1 http://www.lbwater.org/sewage-treatment
2 http://www.lacsd.org/wastewater/wwfacilities/joint_outfall_system_wrp/long_beach.asp
3 http://www.lbwater.org/sites/default/files/documents/CCR%202015%20FINAL.pdf

Avenue. Approximately 60 percent of potable water in the City is obtained from local groundwater pumped from wells located within the City.[4] The remaining 40 percent of potable water is purchased through the Metropolitan Water District (MWD). According to the LBWDs' 2010 Urban Water Management Plan, the City's need for a reliable water supply will be satisfied through 2035. Imported water, as a percent of total supplies, will decline from 61% in 1980's to 12% by 2035; recycled water will increase as a percent of supplies from only 2% in the 1980's to 14% in 2035; and conservation will supply about 27% of demand by 2035 using the 1980's benchmark (no conservation),.[5]

Over the past five years, LBWD has implemented extensive conservation measures to reduce water usage by 15%. The City has adopted the Long Beach Sustainable City Action Plan that includes a goal of per capita water use reduction of 20% by 2020. The City has also adopted a landscape ordinance that requires new landscapes to include drought-tolerant plants, efficient irrigation systems, and other important measures.[6] Long Beach satisfies non-potable water demand through the use of reclaimed water from the Long Beach Water Reclamation Plant for irrigating parks, golf courses and other outdoor landscape.[7]

LBWD is actively working on projects that will ensure reliable long-term water supply within the City. LBWD, in partnership with United States Bureau of Reclamation and the Los Angeles Department of Water and Power, is conducting research and development for desalting seawater. LBWD is also involved in aggressive recycled water system expansions that will increase citywide recycled water consumption to approximately 9,000 acre-feet annually, meeting 15 percent of the City's total water demand.[8] In addition, Long Beach Conjunctive Use Project would allow LBWD to maximize use of the groundwater beneath the City, further strengthening the City's water supply reliability.[9]

Increased implementation of aggressive conservation programs, expansion of reclaimed water use, increased utilization and management of groundwater, and continued water desalination research and development would significantly strengthen long term water supply reliability in Long Beach. Therefore, because future water supplies would be available to serve the proposed project, impacts would be less than significant.

(e) Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact

As previously described in **Section 4.17(b) and 4.17(c)**, the proposed project will reduce stormwater runoff from the project site, and wastewater generated by the project would be insignificant compared to the permitted capacity for existing wastewater treatment facilities that provide service to the area. Therefore, the project would be within the existing capacity of the wastewater treatment provider, and no impacts are anticipated.

4 Ibid.
5 Long Beach Water Department, 2010 Urban Quality Management Plan. Available at: http://www.water.ca.gov/urbanwatermanagement/2010uwmps/Long%20Beach%20Water%20Department/2010%20UWMP%20-%20Revised%20110915%20-%20FINAL.pdf. Accessed: December 4, 2015.
6 Ibid.
7 http://www.lbwater.org/sources-water. Accessed December 4, 2015
8 http://www.lbwater.org/recycled-water. Access December 4, 2015
9 http://www.lbwater.org/long-beach-conjunctive-use-projects. Accessed December 4, 2015

(f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less than Significant Impact

The California Department of Resources Recycling and Recovery (CalRecycle) provides Estimated Solid Waste Generation Rates as a forecasting tool for waste generated by development projects. This rate accounts for all waste materials that are disposed, and does not consider recycling.

The proposed project includes construction of an approximately 32,000 square feet early education facility designed to accommodate up to 191 students. Based on a CalRecycle 0.007 pound per square feet per day generation rate for institutional ("school")[10] uses, the school site would generate almost 210 pounds (0.1 tons) of solid waste per day. In addition, solid waste would be temporarily generated from construction and demolition activities. Information about permitted capacity at landfills serving the City of Long Beach is provided in **Table 4.17-1**.

Table 4.17-1
LANDFILL CAPACITY FOR THE CITY OF LONG BEACH

Landfill	Location	Remaining Capacity (cubic yards)	Maximum Capacity (cubic yards)	Estimated Close Date	Maximum Daily Loads (tons)
Azusa Land Reclamation Co. Landfill (30)	1211 West Gladstone Street Azusa, CA 91702	51,512,201	80,571,760	1/1/2045	8,000
Chiquita Canyon Sanitary Landfill (58)	29201 Henry Mayo Drive Valencia, CA 91384	22,400,000	63,900,000	11/24/2019	6,000
Lancaster Landfill and Recycling Center	600 East Avenue 'F' Lancaster, CA 93535	14,514,648	27,700,000	03/01/2044	5,100
Sunshine Canyon City/County Landfill	14747 San Fernando Road Sylmar, CA 91342	96,800,000	140,900,000	12/31/2037	12,100

Source: CalRecycle, Facility/Site Summary Detail, Azusa Land Reclamation Co. Landfill (2012), http://www.calrecycle.ca.gov/SWFacilities/Directory. Accessed: December 4, 2015.

As shown in Table 4.17-1, given the available landfill capacity, adequate capacity exists to dispose of project-generated solid waste. Therefore, impact on permitted landfill capacity to accommodate the project's solid waste is less than significant.

(g) Would the project comply with federal, state, and local statutes and regulations related to solid waste?

No Impact

The project would comply with AB 939 (Zero Waste program) and County of Los Angeles Countywide Integrated Waste Management Plan (CIWMP) requirements for waste reduction. For these reasons, no impacts to federal, state and local statutes and regulations related to solid waste are anticipated.

10 http://www.calrecycle.ca.gov/wastechar/WasteGenRates/Institution.htm Accessed on December 4, 2015.

4.18 Mandatory Findings of Significance

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) The potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		**X**		
b) Impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		**X**		
c) Environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			**X**	

(a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less than Significant Impact with Mitigation Incorporated

Section 4.4 of this Initial Study (IS) addressed impacts on Biological Resources. The project site is located in an urban area and contains structures, sidewalks, and a paved surface parking lot that would not support sensitive habitats or special-status plant or wildlife species.

The project site supports ornamental vegetation and structures that could potentially provide cover and nesting habitat for bird species that have adapted to urban areas. Construction activities may have temporary direct or indirect impacts on bird species protected under the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code. Therefore, incorporation of mitigation measures **BR-1** (Construction during Breeding Season), **BR-2** (General Plant and Wildlife

Avoidance Measures), and **BR-3** (Construction Best Management Practices) would reduce impacts to less than significant levels.

Section 4.5 of this IS addressed potential impacts on Cultural Resources. No known cultural resources were identified within the planned Educare facility site during previous investigations; however; unknown or unrecorded resources may potentially be revealed during precise grading activities. This may occur if ground disturbance activities penetrate deeper than previous work performed.

In the unlikely event that cultural resources are discovered during precise grading activities, adherence to all applicable California Public Resources Code requirements would reduce the potential for eliminating important examples of major periods in California history or prehistory, and impacts would be less than significant.

(b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less than Significant Impact with Mitigation Incorporated

The proposed project is consistent with the City's General Plan goals, objectives and policies, and located within a consistent land use designation. Furthermore, the project would be consistent with regional plans and programs that address environmental factors such as air quality, water quality, and other applicable regulations that have been adopted by public agencies with jurisdiction over the project for the purpose of avoiding or mitigating environmental effects.

Section 4.12 and **Section 4.16** of this IS addressed potential impacts related to Noise and, Transportation and Traffic. With the incorporation of mitigation measures **N-1, N-2, N-3, N-4, N-5** (Noise Controls during Construction) and **TT-1** (Restricted Parking on Lemon Avenue) project impacts associated with excessive noise levels during project construction and reduced peak hour level of service at Lemon Avenue/Del Amo Boulevard intersection would be reduced to less than significant levels.

The project would generate new jobs in the project area. However, due to relatively small size and location within an urban area, the project is anticipated to support existing residential uses in the vicinity and not induce substantial growth in the region. The project does not include a housing component or otherwise support an increase in the resident population of the City and would utilize existing infrastructure for its operation. Therefore, indirect population growth resulting solely from the project is expected to be less than significant.

Because the project would not increase environmental impacts after mitigation measures are incorporated, the incremental contribution to cumulative impacts is anticipated to be less than significant.

(c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant Impact

As discussed in **Sections 4.1 through 4.17** of this Initial Study, no environmental effects were identified as having any significant impacts after mitigation measures were incorporated. No environmental factors or effects were found to cause a substantial adverse effect on human beings, either directly or indirectly. For these reasons, less than significant impacts are anticipated.

5.0 REFERENCES

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6.0 LIST OF PREPARERS

6.1 Lead Agency

Long Beach Unified School District
Facilities, Development and Planning Branch
2425 Webster Avenue, Long Beach, CA 90810

Contact: Edith C. Florence
Facilities Project Manager

6.1.1 UltraSystems Environmental, Inc.

Environmental Planning Team

Ken Koch, MS
Associate Principal

Hina Gupta, MURP
Environmental Planner

Technical Team

Dan Herlihy, PG, CEG, CHG, QSD
Geology and Soils, Hazards, Hydrology, and Mineral Resources

Michael Rogozen, D. Env.
Senior Principal Engineer
Air Quality/GHG/Noise Technical Analysis

Amanda Beck
Senior Biologist

Sloane Seferyn
Staff Biologist

Mina Rouhi
GIS Technician

Steve O'Neil
Cultural Resources Manager

Megan Black
Cultural Resources Staff

Bridget Glenn
Secretary/Word Processor

Subcontractors

VA Consulting
Traffic Impact and Parking Analysis

7.0 MITIGATION MONITORING AND REPORTING PROGRAM

The Mitigation Monitoring and Reporting Program (MMRP) has been prepared in conformance with § 21081.6 of the Public Resources Code and § 15097 of the California Environmental Quality Act (CEQA) Guidelines, which requires all state and local agencies to establish monitoring or reporting programs whenever approval of a project relies upon a Mitigated Negative Declaration (MND) or an Environmental Impact Report (EIR). The MMRP ensures implementation of the measures being imposed to mitigate or avoid the significant adverse environmental impacts identified through the use of monitoring and reporting. Monitoring is generally an ongoing or periodic process of project oversight. Reporting generally consists of a written compliance review that is presented to the decision making body or authorized staff person.

It is the intent of the MMRP to (1) provide a framework for document implementation of the required mitigation, (2) identify monitoring/reporting responsibility, (3) provide a record of the monitoring/reporting, and (4) ensure compliance with those mitigation measures that are within the responsibility of the Long Beach Unified School District (District) to implement.

As discussed in the Environmental Analysis of the Initial Study/MND, impact areas requiring mitigation are:

- Biological Resources
- Noise
- Transportation and Traffic

The following table lists impacts, mitigation measures adopted by the District in connection with approval of the proposed project, level of significance after mitigation, responsible and monitoring parties, and the project phase in which the measures are to be implemented.

MITIGATION MONITORING AND REPORTING PROGRAM

Impact	Mitigation Measure	Responsible/ Monitoring Party	Monitoring Action or Implementation Stage
BIOLOGICAL RESOURCES			
Threshold 4.4 (a): Indirect impacts on breeding birds could occur from increased noise, vibration, and dust during construction, which could adversely affect the breeding behavior of some birds, and lead to the loss (take) of eggs and chicks, or nest abandonment.	**BR-1:** ***Construction During Breeding Season*** • The breeding bird nesting season is typically from February 15 through September 15, but can vary slightly from year to year, usually depending on weather conditions. If construction cannot be avoided during the breeding season, a qualified biologist will conduct a pre-construction survey for breeding birds, and active and potential nesting sites within the limits of project disturbance up to seven days prior to mobilization, staging and other disturbances. • If no breeding birds or active nests are observed during the pre-construction survey, or if they are observed and will not be impacted, then project activities may begin and no further breeding bird monitoring will be required. • If an active bird nest is located during the pre-construction survey and potentially will be impacted, a no-activity buffer zone will be delineated on maps and marked by fencing, stakes, flagging, or other means up to 500 feet for special-status avian species and raptors, or 100 feet for non-special-status avian species. The biologist will determine the appropriate size of the buffer zone based on the type of activities planned near the nest and bird species because some bird species are more tolerant than others to noise and other disturbances. Buffer zones will not be disturbed until a qualified biologist determines that the nest is inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, or the young will no longer be impacted by project activities. Periodic monitoring by a biologist will be performed to determine when nesting is complete. After the nesting cycle, project activities may begin within the buffer zone. • Birds or their active nests will not be disturbed, captured, handled or moved except as noted above. Inactive nests may be moved by a qualified biologist, if necessary, to avoid disturbance by project	Construction Contractor & Long Beach Unified School District/ California Department of Fish and Wildlife	Prior to earthmoving activities or construction

Impact	Mitigation Measure	Responsible/ Monitoring Party	Monitoring Action or Implementation Stage
	activities.		
Threshold 4.4 (a): Construction-related impacts on general plant and wildlife.	**BR-2:** ***General Plant and Wildlife Avoidance Measures*** • To minimize construction-related mortalities of nocturnally active species such as mammals and snakes, it is recommended that all work be conducted during daylight hours. Night-time work (and use of artificial lighting) will not be permitted unless specifically authorized. If required, night lighting will be shielded to protect species from direct night lighting. All unnecessary lights will be turned off at night to avoid attracting wildlife such as insects, migratory birds, and bats. • Wildlife encountered during the course of project activities will be allowed to freely leave the area unharmed. Wildlife will not be disturbed, captured, harassed, or handled. • Active nests cannot be removed or disturbed. Nests can be removed or disturbed if determined inactive by a qualified biologist. • To avoid impacts on wildlife, the applicant will comply with all litter and pollution laws and will institute a litter control program throughout project construction. All contractors, subcontractors, and employees will adhere to this program. Trash and food items will be disposed of promptly in predator-proof containers with resealing lids. These covered trash receptacles will be placed at each designated work site and the contents will be properly disposed at least once a week. Trash removal will reduce the attractiveness of the area to opportunistic predators such as common ravens (*Corvus corax*), coyotes (*Canis latrans*), northern raccoons (*Procyon lotor*), and Virginia opossums (*Didelphis virginiana*).	Construction Contractor & Long Beach Unified School District/ California Department of Fish and Wildlife	Field Verification/ Construction phase
Threshold 4.4 (a): Construction-related impacts on general plant and wildlife.	**BR-3:** ***Construction Best Management Practices (BMPs)*** Project work crews will be directed to use BMPs where applicable. These measures will be identified prior to construction and incorporated into the	Construction Contractor & Long Beach	Construction Phase

Impact	Mitigation Measure	Responsible/ Monitoring Party	Monitoring Action or Implementation Stage
	construction operations.	Unified School District/ California Department of Fish and Wildlife	
NOISE			
Threshold 12.6(a) The Long Beach Municipal Code limits construction activities to the hours of 7:00 AM and to 7:00 PM Monday through Friday, and 9:00 AM to 6:00 PM on Saturdays. This would preclude construction noise exposures during the evening and nighttime hours, when people are most sensitive to noise. Except for building construction, construction phases will be less than or equal to 15 working days. Nevertheless, short-term absolute exposures and exposure increases are potentially significant and need to be mitigated.	***Noise Controls during Construction*** **N-1** If residents complain of excessive noise during construction, then the District will conduct noise monitoring in the residential area of concern during the suspected noise-producing construction activities. If the monitored noise levels exceed regulatory noise restrictions or standards, then the District will mitigate noise levels using temporary noise shields, noise barriers or other mitigation measures to comply with those restrictions or standards. **N-2** The construction contractor will ensure that all construction equipment, fixed or mobile, is properly operating (tuned-up) and that mufflers are working adequately. **N-3** Construction activities will not occur between the hours of 7:00 p.m. and 7:00 a.m. Mondays through Thursdays; between the hours of 7:00 p.m. on Fridays and 9:00 a.m. Saturdays; after 6 p.m. on Saturdays, and anytime on. No permit for construction activity during these prohibited hours will be sought. **N-4** Construction equipment will not be allowed to idle for more than five minutes when not in use. **N-5** The District will notify residents surrounding the school site of the construction schedule and updates thereof, at least two	Long Beach Unified School District	Construction Phase

Impact	Mitigation Measure	Responsible/ Monitoring Party	Monitoring Action or Implementation Stage
	weeks in advance of a change in construction phase.		
TRANSPORTATION AND TRAFFIC			
Threshold 4.16 (a,b) For Baseline 2017 with project conditions, the study area intersections are predicted to continue to operate at the same LOS as for existing (2015) and Baseline 2017 conditions with two exceptions: 1) at the Lemon Avenue and Luray Street (project access) intersection the AM peak hour LOS is reduced from "A" to "B" which is higher than maximum allowable peak hour LOS C; and 2) at Lemon Avenue and Del Amo Boulevard the PM peak hour LOS is reduce from "D" to "F". Similar to Bentree/Del Amo intersection, the poor LOS "F" at Lemon/Del Amo intersection is associated with the stop-controlled Lemon Avenue approach only and the LOS on Del Amo Boulevard is LOS "A". However, at Lemon Avenue, this approach is directly impacted by project traffic.	***TT-1: Restricted Parking on Lemon Avenue*** The District shall coordinate with the City of Long Beach to (1) post signs on the east side of Lemon Avenue between the proposed project access driveway and Del Amo Boulevard to restrict on-street parking during school day peak traffic periods, and (2) eliminate approximately 100 feet (4 parking spaces) of on-street parking along the east side of Lemon Avenue during peak periods on school days. The resulting clear 18-foot half-section width of the existing roadway will then be wide enough to provide a "defacto" or unofficial right-turn lane. The loss of on-street parking during peak school periods would be mitigated by the proposed 18-space drop-off/pick-up parking lot accessed from the Lemon Avenue driveway. The restriction of on-street parking along the school side of Lemon Avenue north of the access driveway will also improve sight-distance and enhance pedestrian and vehicular safety. No change to existing on-street parking along the west side of Lemon Avenue will be required.	Long Beach Unified School District/ City of Long Beach Planning Department	Prior to Operation Phase