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OAKLAND UNIFIED SCHOOL DISTRICT
Community Schools, Thriving Students

Memo

To Board of Education

From Devin Dillon, Interim Superintendent and Secretary, Board of Education
By: Vernon Hal, Senior Business Officer VEH
Joe Dominguez, Deputy Chief, Facilities Planning and Management

Board Meeting Date June 28, 2017

Subject Authorizing the District to file a Final Environmental Impact Report (FEIR) Notice for the Fremont High School New Construction Project

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Action Requested Adoption of resolution 1617-0221 Authorizing the District to file a Final Environmental Impact Report (FEIR) Notice for the Fremont High School New Construction Project

Discussion

Pursuant to the District's Bond Measure J, the District developed the Fremont High School Measure J Project ("Proposed Project") to provide redevelopment; demolishing the existing athletic field, gymnasium building; bleachers, paved parking lot and pathway building.

Prior to approving the Proposed Project, the District must comply with the California Environmental Quality Act ("CEQA"). The District staff determined that the Proposed project:

The Fremont High School Project (Project) involves site reconstruction portions of the existing Fremont High School. The proposed redevelopment includes demolishing the existing athletic field, gymnasium building (Building D), and portable buildings (P5 - P12). Proposed new structures include an athletic field, bleachers, paved parking lot, gymnasium, and academic pathway building. There would be no changes to the current physical layout of other buildings at the school site, and no increase in school classrooms or enrollment capacity would result

The Project meets the criteria stated in CEQA Guidelines Section 15089 and 15132, the District caused to be prepared the Final Environmental Impact Report, which include the FEIR, Appendices thereto, Amendments, Comments, Responses to Comments, and the Mitigation Monitoring and Reporting Program ("MMRP") for the Project ("FEIR", collectively, the "EIR") (attached hereto as Exhibit "A" and incorporated herein). The District has independently reviewed and analyzed the information contained in the EIR, and the conclusions of the EIR reflect the independent judgment and analysis of the District and provisions of CEQA Guideline per agreement with the reviewing public agencies.

Once the District's Board of Trustees has independently reviewed and analyzed the information contained in the FEIR, the project is no longer subject to either the procedural or substantive requirements of CEQA, and construction of the project can begin upon its approval.

Should be Board adopt the Resolution, District staff will file a FEIR Notice with the Alameda County Clerk.

LBP (Local Business Participation Percentage)

0.0%

Recommendation

Adoption of resolution 1617-0221 authorizing the district to file a Final Environmental Impact Report (FEIR) Notice for the Fremont High School New Construction Project

Fiscal Impact

N/A

Attachments

- Resolution No. 1617-0221 and The Fremont High School New Construction Final Environmental Impact Report (FEIR) Notice

RESOLUTION OF THE
BOARD OF EDUCATION
OF THE OAKLAND UNIFIED SCHOOL DISTRICT

RESOLUTION NO. 1617 - 0221

ADOPTING AND CERTIFYING THE FINAL ENVIRONMENTAL IMPACT REPORT FOR FREMONT HIGH SCHOOL REDEVELOPMENT PROJECT, ADOPTING ENVIRONMENTAL FINDINGS FOR THE PROJECT PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA), ADOPTING AND APPROVING THE MITIGATION MONITORING AND REPORTING PROGRAM FOR THE PROJECT, AND APPROVING THE PROJECT

WHEREAS, the Oakland Unified School District (District") has developed the Fremont High School ("School") Measure J Project described in detail below, located within the existing school grounds of the Fremont School Campus ("Campus") at 4610 Foothill Boulevard, Oakland, CA 94605, to provide redevelopment; demolishing the existing athletic field, gymnasium building; bleaches, paved parking lot, and pathway building.

WHEREAS, The Fremont High School Redevelopment Project ("Project") involves site reconstruction portions of the existing Fremont High School. The proposed redevelopment includes demolishing the existing athletic field, gymnasium building (Building D), and portable buildings (P5 – P12). Proposed new structures include an athletic field, bleachers, paved parking lot, gymnasium, and academic pathway building. There would be no changes to the current physical layout of other buildings at the school site and no increase in school classrooms or enrollment capacity would result.

WHEREAS, the District is the lead agency for the Project;

WHEREAS, after providing Notice of Preparation ("NOP") on or about September 27. 2016, the District directed the preparation of the Draft Environmental Impact Report ("DEIR", SCH # Fremont High School) for the Project pursuant to and in accordance with the California Environmental Quality Act (California Public Resources Code Section 21000, *et seq.*) ("CEQA") and the Guidelines for Implementation of CEQA (Title 14, California Code of Regulations, Sections 15000, *et seq.*) ("CEQA Guidelines");

WHEREAS, on March 23, 2017, the District caused a Notice of Availability ("NOA") of the DEIR to be mailed to the occupants and owners of contiguous property within 300-feet of the Project Site pursuant to Section 15087 of the California Code of Regulations, sent to local public entities, sent to the State Clearinghouse, and posted on the District's website and at locations on the Project Site and District Office;

WHEREAS, the DEIR was distributed to the State Clearinghouse and was made available to the public for a 45-day review and comment period between March 22, 2017, and May 5, 2017;

WHEREAS, the DEIR informed the public of the District's efforts in addressing the environmental effects and adopting feasible mitigation measures associated with the Project,

informed the public of the District's intent to pursue the Project, and invited the public to examine the DEIR in support of such findings;

WHEREAS, written comments were received from the reviewing public agencies and the public during the 45-day review period, and the District's responses to said written comments were provided in the Final Environmental Impact Report and made available in a manner prescribed by CEQA and the CEQA Guidelines and per agreement with the reviewing public agencies;

WHEREAS, pursuant to California Code of Regulations Sections 15089 and 15132, the District caused to be prepared the Final Environmental Impact Report, which includes the DEIR, Appendices thereto, Amendments, Comments, Responses to Comments, and the Mitigation Monitoring and Reporting Program ("MMRP") for the Project ("FEIR", collectively, the "EIR") (attached hereto as Exhibit "A" and incorporated herein);

WHEREAS, all actions required to be taken by applicable law related to the preparation, circulation, posting, and review of the NOP, DEIR, NOA Comments, Responses to Comments, MMRP, and FEIR have been taken;

WHEREAS, pursuant to Public Resources Code Section 21082.1 and California Code of Regulations Section 15090(a)(3), the District has independently reviewed and analyzed the information contained in the EIR, and the conclusions of the EIR reflect the independent judgment and analysis of the District; and

WHEREAS, the District's Board of Trustees has independently reviewed and analyzed the information contained in the FEIR (Exhibit "A"), including all Comments and Responses thereto.

NOW, THEREFORE, BE IT RESOLVED by the Governing Board of Education of the Oakland Unified School District at the meeting held on June 28, 2017, as follows:

SECTION 1:

The above recitals are true and correct.

SECTION 2:

The FEIR for the Project is an adequate and complete document completed in accordance with CEQA and the CEQA Guidelines.

SECTION 3:

The Board of Education ("Board") hereby certifies that:

a. The District is the lead agency for the Project.

b. A full and fair public workshop and hearing was held on April 19, 2017, on the DEIR; likewise the public was provided a 45-day review and comment period for the DEIR, and the District received comments thereon and provided

responses thereto, which comments and responses are included in the FEIR and have been considered by the Board.

c. The Board, as the governing board of the lead agency, has reviewed and considered the FEIR and the information contained therein prior to deciding whether to approve the Project.

d. The Board finds that the FEIR reflects the independent judgment and analysis of the San Carlos School District Board of Trustees.

These actions having been taken, the Board hereby approves, certifies, and adopts the FEIR for the Project (attached hereto as Exhibit "A" and incorporated herein).

SECTION 4:

A mitigation, monitoring, and reporting program (the MMRP) has been prepared to meet the requirements of Public Resources Code Section 21081.6. The MMRP is designed to ensure compliance with project changes and mitigation measures imposed to avoid or substantially lessen the significant effects identified in the FEIR. The Board hereby makes, approves, and adopts the MMRP as set forth in Exhibit "A" hereto (and incorporated herein).

SECTION 5:

The Board hereby finds, pursuant to Public Resources Code Section 21081 and CEQA Guidelines Section 15091, and based on the entire record on this action, that implementation of the MMRP will reduce each and every "significant impact" identified in the DEIR and FEIR for the Project as proposed and all Project Alternatives to "less than significant."

SECTION 6:

The Board finds that the Project Alternatives identified in the FEIR would not achieve the primary objectives of the Project and that these Project Alternatives are infeasible. Accordingly, and for reasons set forth herein, including in the FEIR (Exhibit "A") attached hereto, the Board hereby rejects such other Alternatives.

SECTION 7:

The FEIR is on file and available at the District Facilities Offices located at 955 High Street, Oakland, California or may be downloaded from the District's website. The District is the custodian of all documents in the record.

SECTION 8:

The Board hereby authorizes the President of the Governing Board to execute this Resolution and a Notice of Determination ("NOD"), and the Secretary to attest and certify to the passage and adoption thereof and those officers and the District's Superintendent and the Superintendent's designees to execute all documents and perform all actions necessary to carry out the intent of this Resolution.

SECTION 9:

The Board directs District staff to file with the County Clerk-Recorder of the County of Alameda and the State Clearinghouse the NOD pursuant to California Code of Regulations Section 15094.

SECTION 10:

The Board hereby finds that all actions required to be taken by applicable law related to the approval of the Project have been taken and hereby approves the Project as identified and evaluated in the EIR.

SECTION 11:

The Board hereby authorizes the Superintendent and his authorized designees, to take all steps necessary to proceed with, carry out and complete the Project.

PASSED AND ADOPTED by the Governing Board of Education of the Oakland Unified School District, this **29th Day of June, 2017**, by the following vote:

AYES: Jody London, Aimee Eng, Jumoke Hinton-Hodge, Roseann Torres, Shanthi Gonzales, Vice President Nina Senn, President James Harris

NOES: None

ABSTAINED: None

ABSENT: None

CERTIFICATION

I, Devin Dillon, Interim Secretary of the Board of Education of the Oakland Unified School District does herby certify that the foregoing Resolution was duly approved and adopted by the Board of Education of said district at a meeting thereof held on the **28th Day of June, 2017**, with a copy of the Resolution being on file in the Administrative Office of the District.

Devin Dillon, Interim Secretary
Board of Education

OAKLAND UNIFIED SCHOOL DISTRICT
Office of General Counsel
APPROVED FOR FORM & SUBSTANCE
By: _____
Attorney at Law

EXHIBIT A
Environment Impact Report

OAKLAND UNIFIED SCHOOL DISTRICT

FREMONT HIGH SCHOOL REDEVELOPMENT PROJECT

ENVIRONMENTAL IMPACT REPORT

MARCH 2017




SCH # 2016092074

PREPARED FOR:

OAKLAND UNIFIED SCHOOL DISTRICT
955 HIGH STREET
OAKLAND, CA 94601

PREPARED BY

Michael Baker
INTERNATIONAL

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ENERGY	CalEEMod Outputs for Construction Fuel Usage
GEO	Geotechnical Evaluation and Geological Hazards Assessment, Ninyo & Moore (October 10, 2016)
GHG	CalEEMod Outputs for Greenhouse Gas Emissions
HAZ	Phase I Environmental Site Assessment, ACC Environmental Consultants (August 18, 2016)
NOP	Notice of Preparation (September 30, 2017) and comment received from DTSC

ABBREVIATIONS

AB	Assembly Bill
ABAG	Association of Bay Area Governments
ALUC	Airport Land Use Commission
API	Area of Primary Importance
ASCE	American Society of Civil Engineers
ASI	Area of Secondary Importance
ASTM	American Society of Testing and Materials
BAAQMD	Bay Area Air Quality Management District
BMP	best management practice
BTU	British thermal unit
CAAQS	California ambient air quality standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
Cal Fire	California Department of Forestry and Fire Protection
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH_4	methane
CMP	Congestion Management Program
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent

CRHR	California Register of Historical Resources
CTC	Alameda County Transportation Commission
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DHP	Designated Historic Property
DRRP	Diesel Risk Reduction Plan
DTSC	California Department of Toxic Substances Control
EBMUD	East Bay Municipal Utility District
ECAP	Energy and Climate Action Plan (Oakland)
ECM	Energy and Climate Measure
EIR	Environmental Impact Report
EPA	US Environmental Protection Agency
ESA	Phase I Environmental Site Assessment
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
FEMA	Federal Emergency Management Agency
GHG	greenhouse gas
gpd	gallons per day
HCP	habitat conservation plan
I-880	Interstate 880
IBC	International Building Code
LUST	leaking underground storage tank
mgd	million gallons per day
MM	mitigation measure
MMI	Modified Mercalli Intensity
NAAQS	national ambient air quality standards
NCCP	natural community conservation plan
NHPA	National Historic Preservation Act
NIOSH	National Institute for Occupational Safety and Health
NOA	naturally occurring asbestos
NOC	Notice of Completion
NOI	Notice of Intent
NOP	Notice of Preparation
NO_2	nitrogen dioxide
NOx	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
N_2O	nitrous oxide
OCHS	Oakland Cultural Heritage Survey

OEHHA	Office of Environmental Health Hazard Assessment
OFD	Oakland Fire Department
OPD	Oakland Police Department
OSHA	Occupational Safety and Health Administration
O_3	ozone
OUSD	Oakland Unified School District
PCB	polychlorinated biphenyl
pCi/L	picocuries per liter
PDHP	Potentially Designated Historic Property
PG&E	Pacific Gas and Electric Company
PM_{10}	coarse particulate matter
$PM_{2.5}$	fine particulate matter
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
RCRA	Resource Conservation and Recovery Act
RMS	root mean square
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SCA	Standard Conditions of Approval
SFBAAB	San Francisco Bay Area Air Basin
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act
SO_2	sulfur dioxide
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCM	Transportation Control Measure
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
UST	underground storage tank
VMT	vehicle miles traveled
VOC	volatile organic compound

This section summarizes the proposed Fremont High School Redevelopment Project (project) in Oakland, identifies the alternatives evaluated in this Draft Environmental Impact Report (Draft EIR), discusses areas of controversy, and summarizes the project's environmental impacts.

ES.1 PURPOSE AND SCOPE OF THE ENVIRONMENTAL IMPACT REPORT

This Draft EIR analyzes the potential physical environmental effects associated with project implementation, pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code Sections 21000–21177).

The analysis focuses on the physical environmental impacts that could arise from project implementation through the redevelopment of Fremont High School. The Fremont High School Redevelopment Draft EIR is an environmental impact report, per CEQA Guidelines Section 15063(c)(3).

ES.2 PROJECT CHARACTERISTICS

The project would construct new facilities and involve minor remodeling to existing facilities at Fremont High School to address the issues outlined in the Fremont High School Master Plan.

The project would include minor renovations to Buildings B and C, the construction of a new academic building, a new gymnasium, an athletic stadium with a regulation-size football/soccer field and informal running track, and a wellness center, along with associated site improvements. The project would require the demolition of the existing gymnasium. The project would accommodate 1,200 students and would not increase student enrollment over the existing level at the school.

The project would take place per the following phasing:

- **Phase 1** – Main School Entry Plaza/Library
- **Phase 2** – Academic Pathway Building/Gymnasium/Wellness Center
- **Phase 3** – Demolition of Old Gym**/**Construction of Athletic Stadium

PROJECT CONSTRUCTION

Construction would take place during the school year; however, all efforts would be made to reduce disturbance to students. Construction activities would generally take place during the hours between 7:00 AM and 9:00 PM on weekdays and between 8:30 AM and 6:00 PM on Saturdays, in accordance with the City of Oakland construction noise requirements. Construction would not take place on Sundays or holidays.

Each phase would incorporate site preparation activities, trenching for utilities, necessary excavation and grading, pavement and concrete walkways, and building construction activities such as laying foundation and constructing retaining walls. Construction equipment would include excavators, backhoes, bobcats, forklifts, compactors, concrete mixers and pump, scrapers, front loaders, jackhammers, pile drivers, and electric lifts.

Construction vehicles would access the site via Interstate 880 (I-880), High Street, 47th Avenue, Ygnacio Boulevard, and Foothill Boulevard. Roads would not be closed, and all road access

would be maintained during construction. Signage would be used to warn motorists approaching High Street and Foothill Boulevard of construction.

ES.3 PROJECT ALTERNATIVES SUMMARY

CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project which could feasibly attain the basic objectives of the project and avoid and/or lessen the environmental effects of the project. Further, CEQA Guidelines Section 15126.6(e) requires that a "no project" alternative be evaluated in an EIR. The Draft EIR evaluates the following alternatives:

- **Alternative 1 – No Project Alternative.** Under Alternative 1, the project would not be approved. The existing buildings at Fremont High School would not be remodeled and the four new buildings would not be constructed as proposed by the Oakland Unified School District (OUSD). The proposed site improvements such as the football/soccer field reconfiguration and safety upgrades would also not be implemented.

- **Alternative 2 – Gymnasium Preservation Alternative**. Alternative 2 would include all project site improvements as described in Section 2.0, Project Description, but would not include the demolition of Building D, the historic gymnasium. Instead, the existing gymnasium would be remodeled to meet structural safety requirements. Due to space restrictions, the athletic fields would not be reconfigured to fit a regulation-size football field, bleachers, or nighttime lighting.

ES.4 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

In accordance with CEQA Guidelines Section 15082, the Oakland Unified School District prepared and distributed a Notice of Preparation (NOP) for this project that was circulated for public review on September 30, 2016. The NOP included a summary of probable effects on the environment from project implementation. Written comments received in response to the NOP were considered in the Draft EIR preparation. A scoping meeting was held on October 5, 2016, to receive additional comments.

A copy of each letter and comment card from the scoping meeting is provided in **Appendix NOP** of this Draft EIR. The following issues were raised during the comment period and/or during the scoping meeting:

- Aesthetics: See Section 3.2 for a discussion of project impacts on aesthetics.

- Air Quality: See Section 3.3 for a discussion of construction and operational project impacts on air quality.

- Cultural Resources**:** See Section 3.4 for an analysis of the project's impact on historic resources and the gymnasium building.

- Geology and Soils: See Section 3.5 for an analysis of environmental impacts related to geology and soils.

- Hazardous Materials: Please see Section 3.6 regarding hazardous materials encountered during the Phase I Environmental Site Assessment.

- Noise: See Section 3.7 for a discussion of construction and operational noise.

- Construction: For a description of construction activities, please see Section 2.0, Project Description.

- Economic issues: Economic issues are not analyzed in CEQA documents.

ES.5 SUMMARY OF ENVIRONMENTAL IMPACTS

Table ES-1 displays a summary of project impacts and proposed mitigation measures that would avoid or minimize potential impacts. In the table, the level of significance is indicated both before and after the implementation of each mitigation measure.

For detailed discussions of these environmental impacts, refer to the appropriate environmental topic section (i.e., Sections 3.2 through 3.7 and Section 4.0).

Project implementation would generate one significant and unavoidable impact and one cumulatively considerable impact. Throughout the Draft EIR, the terms *project* and *proposed project* are used to refer to project implementation. The term *cumulative* refers to development as outlined in the City of Oakland General Plan.

TABLE ES-1
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact		Level of Significance Without Mitigation	Mitigation Measure		Resulting Level of Significance
Aesthetics					
Impact 3.2.1	The project would not permanently degrade the visual character or quality of the project site. Construction of the project would temporarily degrade the visual character and quality of the project site from demolition and renovation activities.	PS	**MM 3.2.1**	The District shall install temporary fencing around the construction areas on the project site. The fencing shall remain in place for the duration of demolition and construction activities.	LS
Impact 3.2.2	The project would include the addition of new outdoor lighting fixtures, which would result in an increase in overall lighting and create new sources of nighttime light.	PS	**MM 3.2.2**	The project applicant shall develop a lighting plan as part of final construction specifications. The lighting plan shall incorporate the Oakland Outdoor Lighting Standards, including the requirements for glare, light pollution, safety, security, and energy efficiency.	LS
Impact 3.2.3	The project would not result in a significant contribution to the cumulative conversion of open space or illumination of the night sky.	LCC	None required.		LCC
Air Quality					
Impact 3.3.1	The project could result in short-term construction emissions that could violate or substantially contribute to a violation of federal and state standards.	PS	**MM 3.3.1a**	During construction activities, the Oakland Unified School District and/or its contractor shall ensure that all off-road diesel-fueled equipment (e.g., rubber-tired dozers, graders, scrapers, excavators, asphalt paving equipment, cranes, and tractors) is California Air Resources Board (CARB) Tier 4 Certified.	LS

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		MM 3.3.1b Prior to the issuance of grading or building permits, the Oakland Unified School District shall ensure that the Bay Area Air Quality Management District's (BAAQMD) Basic Construction Mitigation Measures are noted on the construction documents. These basic construction mitigation measures include the following: • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph). • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. • All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • A publicly visible sign shall be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.	

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.3.2	The project would not result in long-term operational emissions that could violate or substantially contribute to a violation of federal and state standards.	LS	None required.	LS
Impact 3.3.3	The project would not conflict with implementation of the Bay Area 2010 Clean Air Plan.	N	None required.	N
Impact 3.3.4	The project would not result in increased exposure of existing or planned sensitive land uses to construction-source toxic air contaminant emissions (i.e., diesel PM).	LS	None required.	LS
Impact 3.3.5	The project would result in the development of a school (sensitive land use) near stationary or mobile-source TACs.	N	None required.	N
Impact 3.3.6	The proposed project would not include sources that could create objectionable odors affecting a substantial number of people or expose residents to existing sources of odor.	LS	None required.	LS

Impact		Level of Significance Without Mitigation	Mitigation Measure		Resulting Level of Significance
Impact 3.3.7	The proposed project, in combination with cumulative development in the SFBAAB, would not result in a cumulatively considerable net increase of criteria air pollutants for which the air basin is designated nonattainment.	LCC	Implement mitigation measures **MM 3.3.1a** and **MM 3.3.1b**, above.		LCC
Cultural Resources					
Impact 3.4.1	The 1938 gymnasium building is listed by the City of Oakland as a contributing element to an Area of Secondary Importance and was found eligible for the CRHR under Criterion 3.	S	**MM 3.4.1a**	The historic resources evaluation report noted that the character-defining features of the gymnasium are almost entirely found on its original exterior elements, including the stucco surface with its pilasters and parapets, its steel window sash, and its Art Deco panels. Interior features of interest include the tiled stairway leading to the upper gymnasium floor and the Medart collapsible bleachers. To mitigate the loss of these features, the District shall produce archival documentary photography that meets the Secretary of the Interior's standards for content and methodology for photographic documentation of historic features. The work shall include approximately 22 large-format film views of the gymnasium's exteriors and interiors. Prints, together with supporting documentation, shall be deposited at the California State Library and the Oakland History Room of the Oakland Public Library.	SU
			MM 3.4.1b	The District shall prepare a historical exhibit that highlights the history of Fremont High School, with a particular focus on prominent teams, coaches, and players that used the gymnasium. Historical information shall be presented in a scale and format to be decided in consultation with OUSD, students, local stakeholders, and the architects of the new gymnasium. Final display decision shall be made by OUSD in consultation with architects and local stakeholders.	

Impact		Level of Significance Without Mitigation	Mitigation Measure		Resulting Level of Significance
			MM 3.4.1c	Furnishings of the gymnasium building, like the original bleachers, shall be reused or displayed in the new gymnasium as feasible. Final reuse decisions shall be made by OUSD in consultation with architects and local stakeholders.	
Impact 3.4.2	The library is the major remaining part of the 1931 Fremont High School campus and appears to be eligible for the CRHR under Criterion 3. The project would renovate the interior and exterior of the library building.	PS	**MM 3.4.2**	Renovations to the library shall follow the Secretary of the Interior's Standards for Rehabilitation as codified at 36 CFR 67. A qualified architectural historian shall review renovation plans to ensure that they conform to all 10 of the rehabilitation standards.	LS
Impact 3.4.3	Project implementation could indirectly result in the potential disturbance of undiscovered cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts and features), paleontological resources (i.e., fossils and fossil formations), and unrecorded human remains.	PS	**MM 3.4.3**	If during the course of grading or construction unknown archaeological and paleontological resources are discovered, the contractor shall halt work immediately within 50 feet of the discovery, the Oakland Unified School District shall be notified, and a professional archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology shall be retained to determine the significance of the discovery. A qualified archaeologist shall determine impacts, significance, and mitigation in consultation with recognized local Native American groups, if appropriate. In addition, prior to the commencement of project site preparation, all construction personnel shall be informed of the potential to inadvertently uncover cultural resources and the procedures to follow subsequent to an inadvertent discovery of cultural resources.	LS

Impact		Level of Significance Without Mitigation	Mitigation Measure		Resulting Level of Significance
Impact 3.4.4	Project implementation, in addition to existing, approved, proposed, and reasonably foreseeable development in the region, could result in cumulative impacts on cultural resources.	CC	Implement mitigation measures **MM 3.4.1a, MM 3.4.1b, MM 3.4.1c, MM 3.4.2**, and **MM 3.4.3**, above.		CC
Geology and Soils					
Impact 3.5.1	Because of the seismically active nature of the San Francisco Bay region, the project would inherently result in the exposure of people, structures, and infrastructure to adverse effects associated with seismic activity.	PS	**MM 3.5.1a**	A qualified geotechnical engineer shall evaluate the response of existing structures to ground shaking in accordance with American Society of Civil Engineers (ASCE) Standards 41-13 and 41-06.	LS
			MM 3.5.1b	The project engineer shall design foundations for the new buildings in accordance with the following structural considerations: • Design spread footings using the criteria listed in Tables 12 and 13 of the Geotechnical Evaluation and Geologic Hazards Assessment for Fremont High School (**Appendix GEO**). • Design building floor slabs based on anticipated loading conditions, and reinforce slabs with deformed steel bars. • Design drilled piers for minor structures in accordance with the recommendations outlined in Section 9.3.3 of the Geotechnical Evaluation and Geologic Hazards Assessment for Fremont High School (**Appendix GEO**).	
Impact 3.5.2	The project would require extensive grading, excavation, and trenching for the construction of new buildings and a sports field on the project site, which could expose site soils to erosion.	PS	**MM 3.5.2**	Project construction shall comply with the City of Oakland's Grading Ordinance (Municipal Code Section 16.20.70) to ensure adequate measures have been taken during grading work to prevent erosion on the site and/or deposition of eroded material on the site or on lower or adjacent properties.	LS

Impact		Level of Significance Without Mitigation	Mitigation Measure		Resulting Level of Significance
Impact 3.5.3	The soils in the project area have the potential to expand and contract in response to soil moisture and cause building instability.	PS	**MM 3.5.3**	To reduce the shrink-swell potential of near-surface soils, the project engineer shall create a zone of material with low expansion potential below building slabs and exterior flatwork by removing existing soil and placing fill with low expansion characteristics. Alternatively, the on-site soil may be chemically treated to reduce the expansion characteristics and create a zone of low expansion material, if the project engineer deems it necessary.	LS
Impact 3.5.4	The project, in addition to other existing, planned, proposed, approved, and reasonably foreseeable development projects in Oakland, may result in cumulative soil erosion impacts. However, compliance with existing regulations intended to reduce soil erosion during construction would reduce this impact to less than cumulatively considerable.	LCC	None required.		LCC
Hazards and Hazardous Materials					
Impact 3.6.1	The project would involve the transport, use, and disposal of hazardous materials during construction and operation. Such activities would continue to be regulated under existing law in order to protect public health.	LS	None required.		LS

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.6.2 The project site is listed in the hazardous waste regulatory databases as manifesting PCBs, waste oil, asbestos, and other hazardous waste. Additionally, the project site has the potential to contain soils with naturally occurring asbestos. The project would include the remodel of structures that were found to potentially contain asbestos and lead-based materials. As such, the project could 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.	PS	**MM 3.6.2a** If hazardous materials are encountered during construction or accidentally released as a result of construction activities, the District and/or its contractor shall implement the following procedures: • Stop all work in the vicinity of any discovered contamination or release. • Identify the scope and immediacy of the problem. • Coordinate with responsible agencies including the DTSC, the San Francisco Bay Regional Water Quality Control Board, or the EPA. • Conduct the necessary investigation and remediation activities to resolve the situation before continuing construction work. **MM 3.6.2b** Prior to construction, the District shall conduct a soil assessment pursuant to the DTSC guidance on naturally occurring asbestos to determine whether NOA is present on the project site. The results of the soil assessment shall be provided to the DTSC. If NOA is found to be present at the project site, measures included in the soil assessment shall be implemented as part of project design and construction. **MM 3.6.2c** Prior to construction, the District shall implement an Operations and Maintenance Plan. The plan shall include measures which would ensure that the assessment, repair, and maintenance of damaged materials within the buildings are completed in a manner that protects the health and safety of workers and building occupants as described in applicable state and local regulations. If necessary, the District shall retain a Cal/OSHA-registered asbestos contractor to remove asbestos-containing materials to ensure safety to the surrounding neighborhoods. **MM 3.6.2d** Because of the potential exposure to hazardous materials (asbestos and lead-based paint) during demolition, building demolition shall not take place when school is in session.	LS

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		MM 3.6.2e Prior to construction, the District shall consult with a certified lead risk assessor to determine options for control and correction of lead-based paint hazards. If lead-based paints are found to be present, to prevent the accidental release of lead-based paint, the District and/or its contractor shall use the following techniques during construction: • Stabilize loose and flaky paint prior to construction activities. • Require all workers to wear OSHA-level protective material for handling lead-based paint per OSHA requirements for lead in construction. • Remove all lead-based paint materials to a scrap yard or landfill that can accept such materials.	
Impact 3.6.3 The project would involve the use, transport, disposal, and/or release of hazardous materials in the vicinity of an existing school site.	PS	Implement mitigation measures **MM 3.6.2a** through **MM 3.6.2e.**	LS
Impact 3.6.4 The proposed project would be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As such, project implementation could create a significant hazard to the public or the environment.	PS	Implement mitigation measures **MM 3.6.2a** through **MM 3.6.2e**.	LS
Impact 3.6.5 The project would not interfere with adopted emergency response and evacuation plans that apply to the project area.	LS	None required.	LS

Impact		Level of Significance Without Mitigation	Mitigation Measure		Resulting Level of Significance
Impact 3.6.6	The project, along with increased urban development in Oakland, would not result in cumulative hazards impacts.	LCC	None required.		LCC
Noise					
Impact 3.7.1	The proposed project would not result in the exposure of persons to or generation of noise levels in excess of local noise standards with mitigation measures implementation.	PS	**MM 3.7.1a**	Standard Condition of Approval 58 – Construction Days/Hours. OUSD shall comply with the following restrictions concerning construction days and hours: a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise-generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturdays. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise-generating activities greater than 90 dBA are allowed on Saturdays. c. No construction is allowed on Sundays or federal holidays. Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area. Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case	LS

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		basis by the City of Oakland, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. OUSD shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, OUSD shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice. **MM 3.7.1b** **Standard Condition of Approval 59 – Construction Noise**. OUSD shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following: a. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) wherever feasible. b. Except as provided herein, impact tools (e.g., jackhammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a	

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures. c. OUSD shall use temporary power poles instead of generators where feasible. d. Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction. e. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.	
		MM 3.7.1c **Standard Condition of Approval 60 – Extreme Construction Noise.** Prior to any extreme noise-generating construction activities (e.g., pier drilling, pile driving, and other activities generating greater than 90 dBA), the project construction manager shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for OUSD review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise-generating activities. OUSD shall require the implementation of the approved plan during construction. Potential attenuation measures include, but are not limited to, the following: a. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings. b. Implement "quiet" pile driving technology (such as predrilling of piles, the use of more than one pile	

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;. c. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site. d. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts. e. Monitor the effectiveness of noise attenuation measures by taking noise measurements. OUSD shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.	
		MM 3.7.1d **Standard Condition of Approval 61 – Project-Specific Construction Noise Reduction Measures.** The project construction manager shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for OUSD review and approval that contains a set of site-specific noise attenuation measures to further reduce construction noise impacts. OUSD shall implement the approved plan during construction.	
		MM 3.7.1e **Standard Condition of Approval 62 – Construction Noise Complaints**. OUSD shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise and shall implement the procedures during construction. At a minimum,	

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		the procedures shall include: a. Designation of an on-site construction complaint and enforcement manager for the project. b. A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit. c. Protocols for receiving, responding to, and tracking received complaints. d. Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request. **MM 3.7.1f** All pier drilling and/or other extreme noise-generating activities greater than 90 dBA shall be restricted to hours when school is not in session.	
Impact 3.7.2 The proposed project would not involve the long-term use of any equipment or processes that would result in potentially significant levels of groundborne vibration. Predicted groundborne vibration levels associated with short-term construction activities would not be anticipated to exceed applicable thresholds with adequate mitigation.	PS	**MM 3.7.2** The following measures shall be required during construction of the proposed project: • To reduce pile-driving ground vibration impacts, holes shall be predrilled to the maximum feasible depth to reduce the number of blows required to seat the pile. • All construction equipment on the project site shall be operated as far away from vibration-sensitive sites as reasonably possible.	LS

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.7.3 The proposed project would not increase the exposure of people to airport noise impacts.	N	None required.	N
Impact 3.7.4 Project operation would not result in a substantial contribution to cumulative noise levels.	LCC	None required.	LCC

This Draft Environmental Impact Report (Draft EIR) was prepared in accordance with and in fulfillment of the California Environmental Quality Act (CEQA) and the CEQA Guidelines. As described in CEQA Guidelines Section 15121(a), an environmental impact report (EIR) is a public informational document that assesses the potentially significant environmental impacts of a project. CEQA requires that an EIR be prepared by the agency with primary responsibility over the approval of a project (the lead agency). The Oakland Unified School District (OUSD, District) is the lead agency for the proposed Fremont High School Redevelopment project (project). Public agencies are charged with the duty to consider and minimize environmental impacts of proposed development where feasible and have the obligation to balance economic, environmental, and social factors.

1.1 PURPOSE OF THE EIR

CEQA requires the preparation of an EIR prior to approving any project which may have a significant effect on the environment. OUSD has determined that the proposed project is a project under CEQA.

This Draft EIR provides a review of the environmental effects of project implementation. OUSD has prepared this Draft EIR for the following purposes:

- To satisfy the requirements of CEQA (Public Resources Code, Sections 21000–21178) and the CEQA Guidelines (California Code of Regulations, Title 4, Chapter 14, Sections 15000–15387).
- To inform the general public, the local community, and responsible and interested public agencies of the project nature, its possible environmental effects, recommended measures to mitigate those effects, and alternatives to the proposed project.
- To evaluate the project's potential significant environmental effects.

1.2 TYPE OF DOCUMENT

The Fremont High School Redevelopment project Draft EIR is an environmental impact report focusing on six environmental topics: aesthetics, air quality, cultural resources, geology and soils, hazards and hazardous materials, and noise. These resource areas were determined based on the project description and OUSD's understanding of the environmental issues associated with the project.

Other environmental resource areas will not be addressed in detail in the Draft EIR because of the project's location and duration.

1.3 INTENDED USE OF THE EIR

This Draft EIR is intended to evaluate the environmental impacts of project implementation and to help decision-makers in the permit approval process. The EIR in its final form may also be considered in the review of any subsequent permit actions, if any, to facilitate the project.

1.4 ORGANIZATION AND SCOPE

CEQA Guidelines Sections 15122 through 15132 identify content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact

analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. The environmental issues addressed in the Draft EIR were established through review of environmental documentation developed for the project, environmental documentation for nearby projects, and responses to the Notice of Preparation (NOP) and public scoping meeting comments. This Draft EIR is organized in the following sections:

SECTION ES – EXECUTIVE SUMMARY

This section provides a project narrative and identifies environmental impacts and mitigation measures through a summary matrix consistent with CEQA Guidelines Section 15123.

SECTION 1.0 – INTRODUCTION

This section provides an overview that describes the intended uses of the EIR, as well as the review and certification process.

SECTION 2.0 – PROJECT DESCRIPTION

This section describes the proposed project in detail, as well as the project objectives, and includes background information and physical characteristics consistent with CEQA Guidelines Section 15124.

SECTION 3.0 – ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

This section contains analyses relative to each environmental topic. Included in this section is a comprehensive analysis related to impacts and mitigation measures that correspond to project implementation. Each subsection contains a description of the existing setting of the project area. The environmental topics are summarized as follows:

- Impacts Found Not Significant
- Aesthetics
- Air Quality
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Noise

SECTION 4.0 – ALTERNATIVES

This section discusses alternatives to the proposed project, including the CEQA mandatory "No Project" alternative, that are intended to avoid or reduce significant project environmental impacts.

SECTION 5.0 – OTHER CEQA ANALYSIS

This section contains discussions of significant irreversible environmental changes which would be involved in the proposed project should it be implemented as well as significant unavoidable

environmental effects, including those that can be mitigated but not reduced to a level of insignificance.

SECTION 6.0 – REPORT PREPARERS

This section lists all authors and agencies that assisted in the preparation of the report by name, title, and company or agency affiliation.

APPROACH TO CUMULATIVE IMPACT ANALYSIS

CEQA Guidelines Section 15130 requires that EIRs include an analysis of the project's cumulative impacts, when the project's effect is considered cumulatively considerable. Each technical section in the Draft EIR considers whether the project's effect on anticipated cumulative setting conditions is cumulatively considerable (i.e., a significant effect). The environmental effects of potential development in Oakland in the cumulative impact analysis are contained in each technical section.

TECHNICAL APPENDICES

The appendices contain all technical material prepared to support the analyses.

1.5 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR will involve the following general procedural steps:

NOTICE OF PREPARATION

In accordance with CEQA Guidelines Section 15082, the Oakland Unified School District prepared a Notice of Preparation of an EIR on September 30, 2016. OUSD was identified as the lead agency for the proposed project. The notice was circulated to the public, local and state agencies, and other interested parties to solicit comments on the proposed project. A scoping meeting was held on October 5, 2016, to receive additional comments. Concerns raised in response to the NOP were considered during preparation of the Draft EIR. The NOP and responses by interested parties are presented in **Appendix NOP.**

DRAFT EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives. Upon completion of the Draft EIR, OUSD will file the Notice of Completion (NOC) with the Governor's Office of Planning and Research to begin the public review period (Public Resources Code Section 21161).

PUBLIC NOTICE/PUBLIC REVIEW

Concurrent with the NOC, the District will provide public notice of the availability of the Draft EIR for public review and invite comment from the general public, agencies, organizations, and other interested parties. The public review and comment period is required to be a minimum of 30 days. Public comment on the Draft EIR will be accepted in written form at public hearings

and by e-mail or mail. Notice of the time and location of the hearing will be published prior to the hearing. All comments or questions regarding the Draft EIR should be addressed to:

Oakland Unified School District
955 High Street
Oakland, CA 94601
Attention: Kenya Chatman, Facilities Coordinator

RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

OUSD will review and consider the Final EIR. If OUSD finds that the Final EIR is "adequate and complete," the District may certify the Final EIR. Upon Final EIR review and consideration, OUSD may act upon the project. A decision to approve the project must be accompanied by written findings in accordance with CEQA Guidelines Sections 15091 and 15093, as applicable. OUSD is also required to adopt a Mitigation Monitoring and Reporting Program, as described below, for mitigation measures that have been incorporated into or imposed on the project to reduce or avoid significant effects on the environment. The Mitigation Monitoring and Reporting Program will be designed to ensure that these measures are carried out during project implementation.

MITIGATION MONITORING

CEQA Section 21081.6(a) requires lead agencies to adopt a mitigation monitoring and reporting program to describe measures which have been adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. The specific "reporting or monitoring" program required by CEQA is not required to be included in the EIR; however, it will be presented to the decision-making body for adoption and incorporation into the project.

1.6 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

OUSD received one comment letter on the project's Notice of Preparation. A copy of the letter is provided in **Appendix NOP** of this Draft EIR. The following issue was raised during the comment period:

- Hazardous Materials: The Department of Toxic Substances Control (DTSC) brought up the issue of the presence of hazardous materials on the project site, including lead-based paint, pesticides from termite applications, polychlorinated biphenyls (PCBs), pesticides and fertilizers, and naturally occurring asbestos (NOA) in the soil. The DTSC recommended the completion of a Phase I Environmental Site Assessment (ESA) and mitigation, if necessary, of the hazardous materials on the project site. As a result, a Phase I ESA was prepared for the project. The conclusions of the Phase I ESA and a discussion of the hazardous materials impacts and proposed mitigation measures are included in this Draft EIR.

This issue has been analyzed and addressed in the appropriate section of this EIR (Section 3.6, Hazards and Hazardous Materials), as indicated above.

This section of the Draft Environmental Impact Report (Draft EIR) contains the project description for the proposed Fremont High School Redevelopment Project (project). The purpose of the project description is to present the project in a meaningful way to the public, reviewing agencies, and decision-makers. As described in California Environmental Quality Act (CEQA) Guidelines Section 15124, a complete project description must contain the following information: (1) the location and boundaries of the proposed project on a regional and detail map; (2) a statement of objectives sought by the proposed project; (3) a general description of the proposed project's technical, economic, and environmental characteristics; and (4) a statement briefly describing the intended uses of the EIR.

2.1 REGIONAL AND LOCAL SETTING

Fremont High School is located at 4610 Foothill Boulevard in Oakland, California, and is under the jurisdiction of the Oakland Unified School District (OUSD). Oakland is the largest city in Alameda County, which is one of the nine counties that make up the San Francisco Bay Area. Alameda County extends along the eastern shore of the San Francisco Bay and is bordered by Contra Costa County to the north and Santa Clara County to the south (**Figure 2.0-1, Regional Vicinity**). The San Francisco Bay is less than 2 miles west of Fremont High School.

The project site is the Fremont High School campus, which is an 8.6-acre, L-shaped site bordered by Foothill Boulevard to the southwest, 47th Avenue to the southeast, Ygnacio Avenue to the northeast, and High Street to the northwest. A portion of the campus extends farther northeast between 46th and 47th avenues (**Figure 2.0-2, Project Location**).

Interstate 880 (I-880), which runs generally in a north–south direction, is approximately one-half mile west of the project site. International Boulevard, a major thoroughfare, is located three blocks south of the project site.

2.2 EXISTING CONDITIONS

Fremont High School has approximately 770 students enrolled in ninth through twelfth grades, with a total capacity of approximately 1,200 students. The core buildings of Fremont High School, Buildings A, B, and C, are organized around a central courtyard located on the east side of the campus. Building A is a two-story building that consists of the theater/auditorium, the cafeteria, a wellness center, and various classrooms. Building B is a two-story building consisting primarily of classrooms. Building C is a three-story building that consists of offices and classrooms in the basement, administrative offices and conference rooms on the first floor, and the school library on the second floor (**Figure 2.0-3, Existing Site Plan**). Building C is part of the original academic building built in 1931.

Building D, the gymnasium, is located in the central portion of campus and was constructed in the 1930s. Building E, located on the southeast side of campus, was previously used as the boiler room and is not currently used. Building E was also constructed in 1931.

Buildings F, G, H, M, N, and O are located on the northeast portion of campus and are used for classrooms. An athletic field at the west edge of campus is used for campus athletics; however, the field is not regulation size and thus cannot be used for competitive football games. There are portable classrooms situated between the athletic field and Building B along Foothill Boulevard. As shown in **Figure 2.0-3**, a connection between the east and west sides of campus is lacking because of grade changes and narrow passageways between buildings (Cody Anderson Wasney Architects 2012).

SURROUNDING LAND USES

The project site is in an urban area and is surrounded by single- and multi-family residential development and commercial land uses. Development along 46th, 47th, and Ygnacio avenues consists of single-family residences as well as one multi-family residential building. High Street adjacent to the project site is lined with single-family residences, as well as a church and a gas station. On the corner of High Street and Foothill Boulevard, across the street from the project site, is a large commercial development that includes both retail uses and fast-food eateries. Continuing down Foothill Boulevard adjacent to the project site, there is another fast-food eatery, the Fremont Community Pool, an auto body shop, and a small number of undeveloped lots.

Courtland Creek flows across the site from northeast to southwest in an underground culvert (**Appendix GEO**).

EXISTING ZONING

The Fremont High School campus is under the jurisdiction of OUSD; therefore, City of Oakland zoning does not apply to the project site. Nonetheless, city zoning and adjacent land uses are considered in the evaluation of environmental impacts in the Draft EIR.

According to the City of Oakland (2016) Zoning Map, the project site is zoned Mixed Housing Type Residential - 3 (RM-3), Mixed Housing Type Residential - 4 (RM-4), and Urban Residential - 5 Zone (RU-5). The intent of the Mixed Housing Type Residential zones is to create, maintain, and enhance residential areas characterized by a mix of single-family homes, duplexes, townhouses, and small multi-unit buildings. The intent of the Urban Residential zone is to create, maintain, and enhance areas of the city that are appropriate for multi-unit, low-rise, or mid-rise residential structures and neighborhood businesses where appropriate. Community education is an allowed use in these zones with the approval of a conditional use permit.

2.3 PROJECT BACKGROUND

Fremont High School has been at its current site since 1905. Several of the existing buildings on campus were constructed as early as the 1930s, after the original schoolhouse burned down. According to the Fremont High School Master Plan, prepared by Cody Anderson Wasney Architects in 2012, the campus has undergone various types of changes since the 1930s and as a result, lacks cohesive organization. Currently, the campus configuration is not intuitive or easily navigable, and the existing facilities do not adequately serve the student population, as the facilities are outdated.

In 2012, Cody Anderson Wasney Architects, on behalf of OUSD, developed the Fremont High School Master Plan to address how Fremont High School can be transformed into a safe and sustainable campus. The Master Plan identified several key issues with the current campus and ways in which those issues could be addressed. The key issues are outlined below.

T:_GIS\Alameda_County\Mxds\OUSD\Fremont_HS\Figure 1 Regional Location.mxd (11/16/2016)

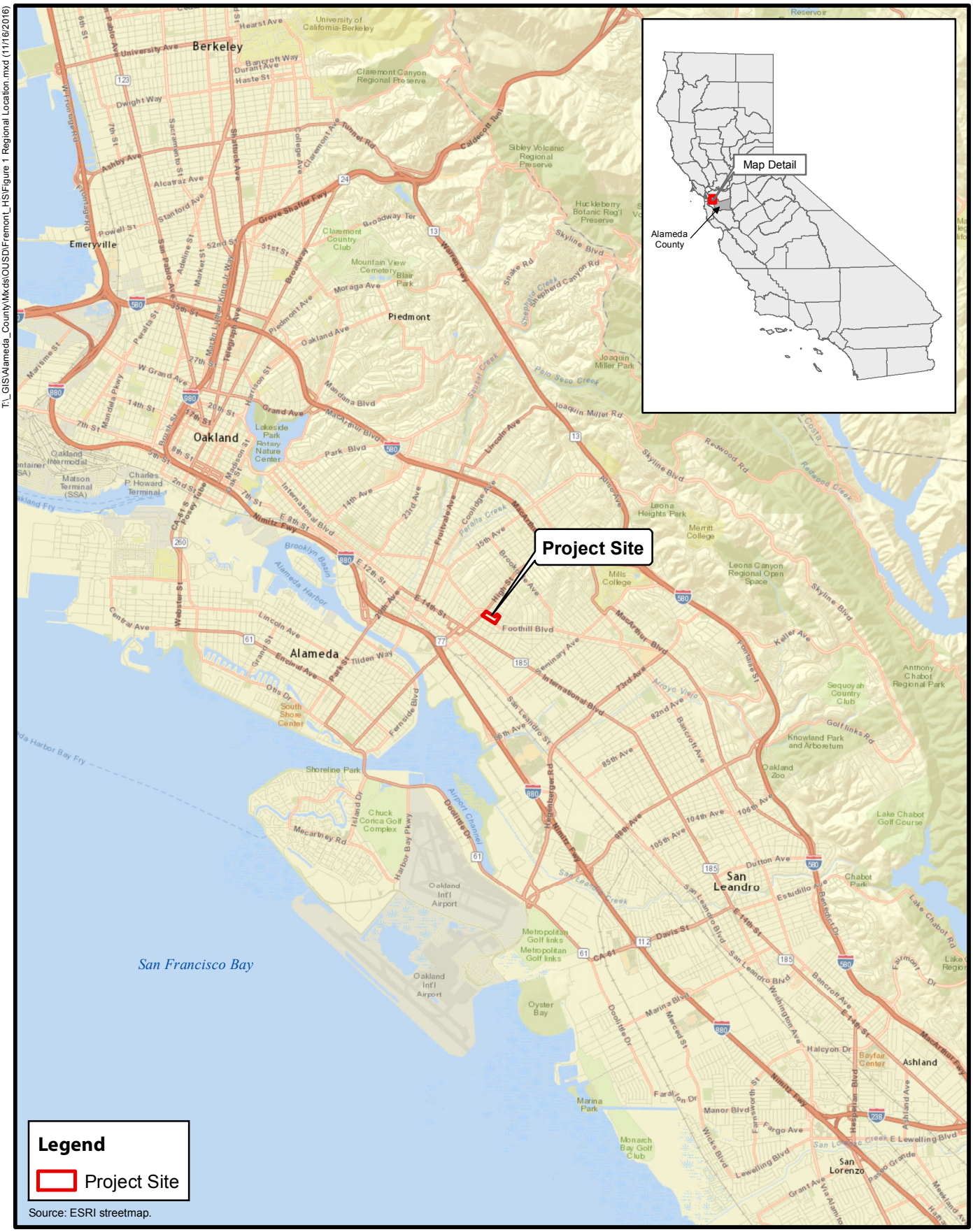

FIGURE 2.0-1
Regional Vicinity

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FIGURE 2.0-2
Project Location

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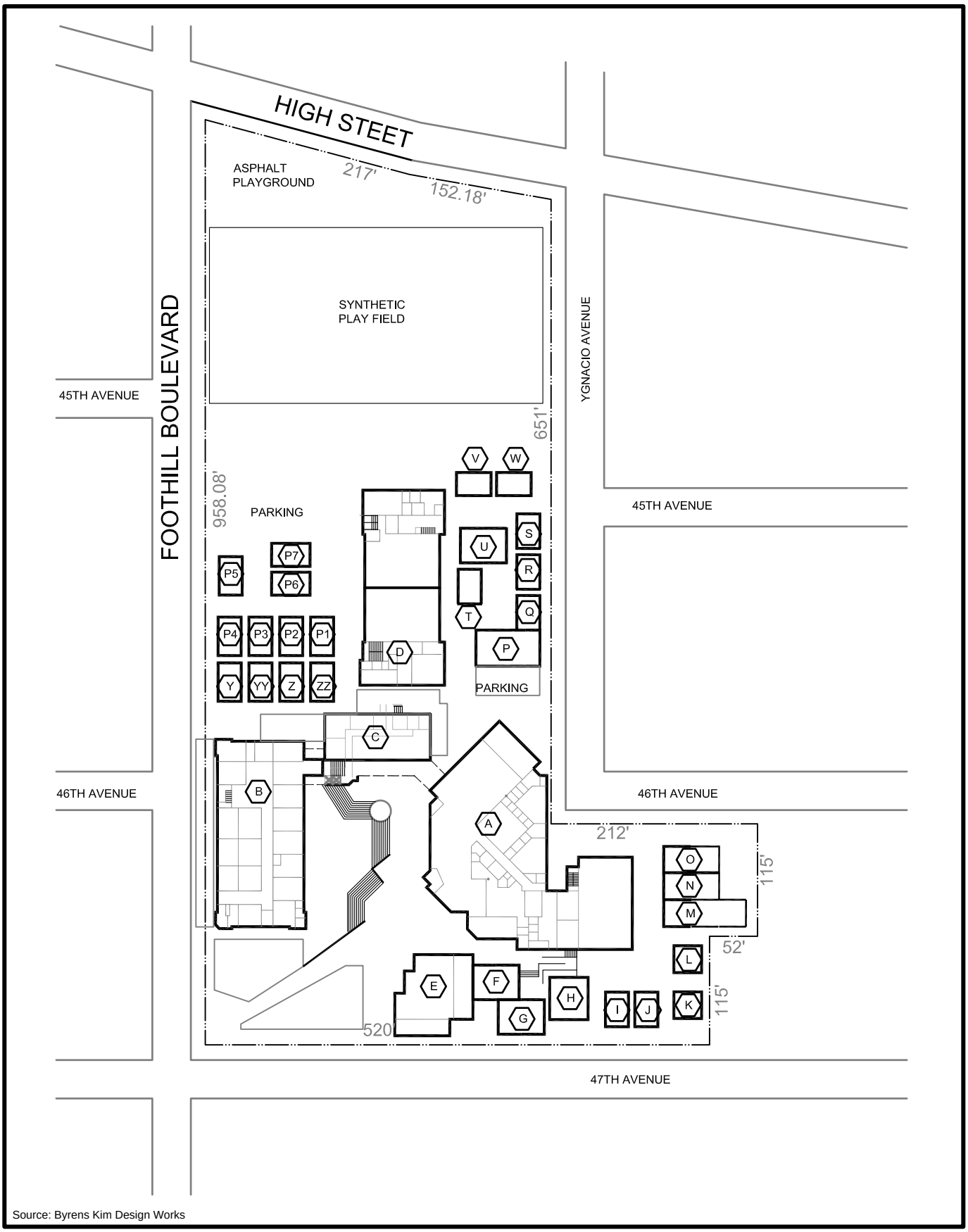

Source: Byrens Kim Design Works

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FIGURE 2.0-3
Existing Site Plan

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SAFETY AND SECURITY

- The configuration of the buildings and outdoor spaces makes it difficult for staff to effectively monitor students.
- The vehicular traffic adjacent to the campus poses a hazard to students, particularly for those walking to school.
- The topography on the east side of campus prevents certain entrances from being adequately accessed.
- There is limited emergency access to the campus, and the existing fire lanes do not allow for full coverage of all buildings with a fire truck hose.

STRUCTURAL

- Campus buildings could experience structural damage as the result of a moderate to severe earthquake.

ENVIRONMENT

- The site is organized in a manner that is inefficient and difficult to navigate.
- The main student courtyard is not connected to other outdoor spaces, and there is a lack of continuity between areas.
- The campus does not have a strong perimeter and thus faces issues due to security and safe access.

COMMUNITY

- Fremont High School is often perceived by the community as having a negative influence on the surrounding neighborhood.

UTILITIES

- Several of the site's utility systems are inadequate, including the fire water system and the storm drainage system.

ATHLETIC FIELDS

- The existing football field is not a regulation-sized field and is not usable for competitive football games.

2.4 PROJECT DESCRIPTION

The project would construct new facilities and provide minor remodeling to existing facilities at Fremont High School to address the issues outlined in the Fremont High School Master Plan.

The project would include minor renovations to Buildings B and C, the construction of a new academic building, a new gymnasium, an athletic stadium with a regulation-size football/soccer

field and informal running track, and a wellness center, and associated site improvements (**Figure 2.0-4, Conceptual Site Plan**). The project would require the demolition of the existing gymnasium. The project would accommodate 1,200 students and would not increase current student enrollment at the school.

The project would take place per the following phasing:

- **Phase 1** – Main School Entry Plaza/Library
- **Phase 2** – Academic Pathway Building/Gymnasium/Wellness Center
- **Phase 3** – Demolition of Old Gym/Construction of Athletic Stadium

PROJECT ELEMENTS

Phase 1

The area between the existing field and the auditorium (Building A) would be improved with a new visitor parking lot, student drop-off area, accessible parking, and establishment of a school entry plaza in front of the library building. This work would include two new curb cuts, improvements to the street paving, and replacement of the city sidewalk.

The existing two-story library building (Building C) would remain as the school's administration area on the first floor with a large library on the second floor. In order to establish the new school main entry off of Ygnacio Avenue, the library building would receive minor renovations along the north side of the building facing Ygnacio Avenue to help the general public clearly see where to go when entering the campus and to provide a clear line of sight for Administration to maintain visual surveillance on the main school entry throughout the day. The existing elevator associated with the library building would be repaired.

Phase 2

A new three-story, steel-framed academic pathway building would be constructed at the corner of Foothill Boulevard and 47th Avenue. The new academic building would contain the core functions for the school's three pathways: (1) Digital Media & Technology, (2) Mandela Law & Public Service, and (3) Engineering & Architectural Design. The building would be connected to the existing Building B with internal corridors on floors 1 and 2. The building would be designed for twenty-first century learning with transparency between classrooms and corridors, and corridors enhanced with informal gathering areas and small-group rooms. The classrooms would be constructed so that they receive significant natural light and ventilation.

The existing two-story, wood-framed classroom facility, Building B, would remain as an academic building with minor modifications. The east side of the building would need to be reconfigured to create corridors on both floors to connect to the new academic pathway building, as well as be modified to create a fire wall and seismic joint between the two facilities. The building would potentially require both floors to have fire sprinklers installed in order for the building to meet current codes. The exterior of the building would be painted along Foothill Boulevard so it blends in with the new construction surrounding it on both sides.

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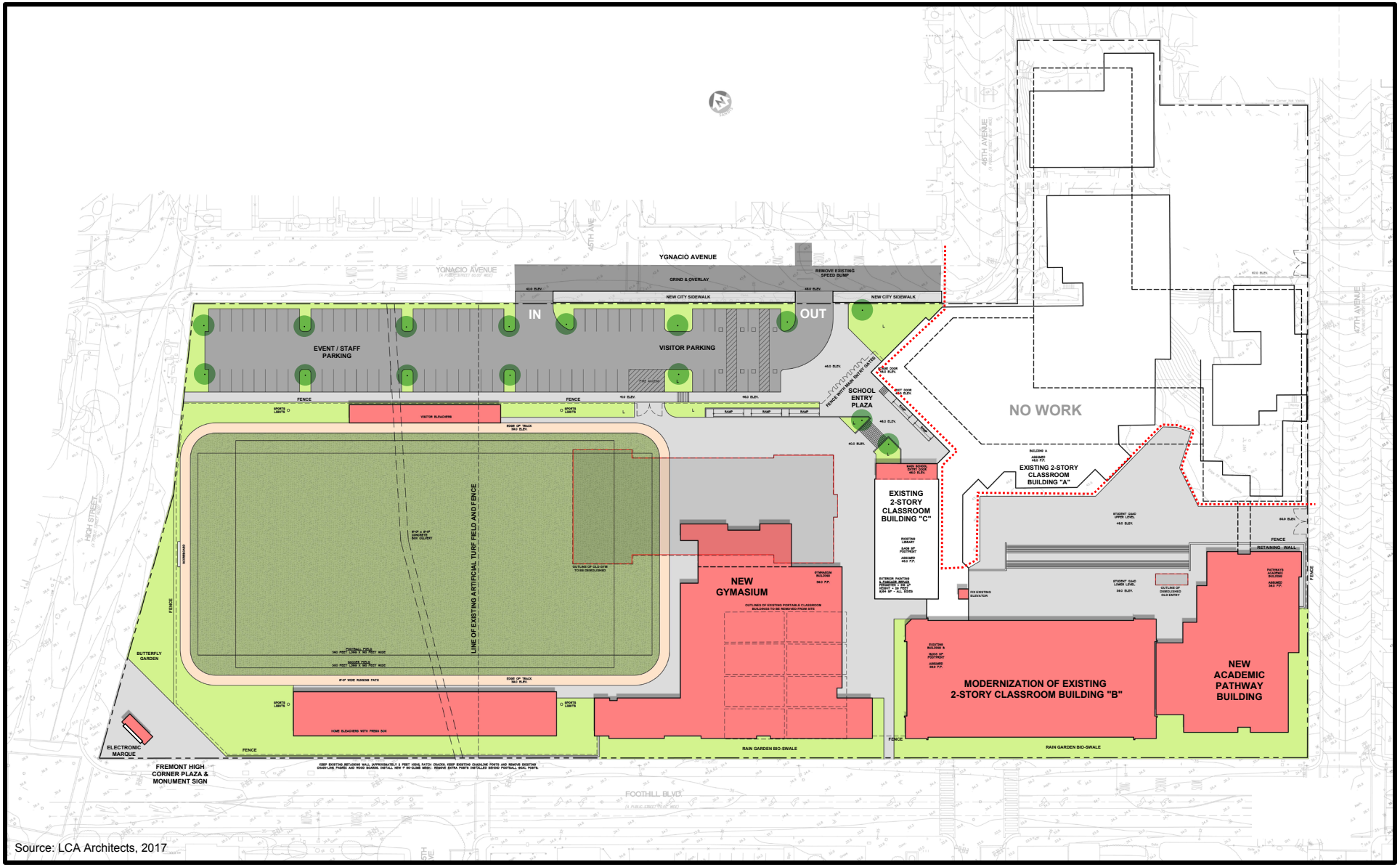

Source: LCA Architects, 2017

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FIGURE 2.0-4
Conceptual Site Plan

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The new one-story, steel-framed gymnasium would be constructed on the site of the existing portable classrooms on Foothill Boulevard, directly adjacent to Building B. The building would contain a gymnasium with bleachers for 1,500 people, a regulation-size basketball/volleyball court, practice basketball and volleyball courts, a fitness room, a PE classroom, locker rooms, coaches' offices, and team rooms. The locker rooms would be shared with the athletic field. Because the new facility is to be constructed while the old gymnasium remains operational, the area of the building that houses the tickets, concessions, and public bathrooms would not be built during this phase.

The existing wellness center is currently housed within the first floor of the old gymnasium (Building D). A new wellness center would be constructed either as a renovation inside the existing Building A, or as a stand-alone modular building (see **Figure 2.0-4**). This EIR assumed that the wellness center would be constructed as a stand-alone building. Once the new facility is operational, the current center would relocate and evacuate the gym in preparation for its demolition. In this way, health services would be provided to the students and community with minimal disruption. Currently, the wellness center admits students to offer free resources, exams, and other services. The new facility would include staff offices, exam rooms, counseling rooms, a seating area, and a laboratory. Eventually, the wellness center could remain open after school hours to serve the community.

Phase 3

Once the main portion of the gymnasium is completed, the old gymnasium (Building D) would be demolished, and construction of the remaining area of the new Gymnasium would be completed. The new tickets, concessions, and public bathrooms housed within the gymnasium would be shared and accessed by the athletic stadium.

The new athletic stadium would be located west of the new gymnasium. The stadium would include a regulation-size football/soccer field, an informal running track, visitor bleachers, home bleachers with a press box, a scoreboard, and sports lighting to accommodate evening practices and games.

Included with this phase would be the establishment of a formal outdoor plaza at the corner of Foothill Boulevard and High Street with a prominent monument sign with an electronic marquee.

UPGRADES TO CAMPUS UTILITY SYSTEMS

The existing campus utility systems would be updated to serve the new buildings. A new on-site sanitary system would be installed, including new laterals to the street, unless it is determined that the existing laterals could be reused. A new domestic water system would be installed to meet the required on-site capacity. Low impact development features, such as flow-through planters and bioretention areas, would be installed to facilitate stormwater treatment.

SITE CIRCULATION

The project would reconfigure the campus circulation system to allow for more open lines of sight and to facilitate pedestrian and emergency access. The main entrance to the school would be established on Ygnacio Avenue and an entry plaza would be constructed in front of the existing library building with upgraded landscaping.

The current parking lot between the athletic field and the portable classrooms would be removed and a new visitor parking lot, a student drop-off area, and accessible parking would be

constructed along Ygnacio Avenue. This work would include two new curb cuts, improvements to the street paving, and replacement of the city sidewalk. The project would increase access for emergency vehicles and fire suppression equipment through changes to on-site traffic circulation and access points.

CONSTRUCTION

The proposed construction schedule is shown in **Table 2.0-1**, **Proposed Construction Phases and Schedule**. Construction would take place during the school year; however, all efforts would be made to reduce disturbance to students. Construction activities would generally take place during the hours of 7:00 a.m. and 9:00 p.m. on weekdays and between 8:30 a.m. and 6:00 p.m. on Saturdays, in accordance with the City of Oakland construction noise requirements (Oakland 2016). Construction would not take place on Sundays or holidays.

TABLE 2.0-1
PROPOSED CONSTRUCTION PHASES AND SCHEDULE

Construction Phase	Proposed Activities	Proposed Time Frame
Phase 1	• Main School Entry Plaza Improvements • Library Minor Renovations	September 2017–March 2018 (7 months)
Phase 2	• Academic Pathway Building Construction • Building B Minor Renovations • Gymnasium Construction • Wellness Center Construction	June 2018–May 2020 (24 months)
Phase 3	• Old Gym Demolition • Athletic Stadium Construction	January 2020–September 2020 (8 months)

Each phase would incorporate site preparation activities, trenching for utilities, necessary excavation and grading, pavement and concrete walkways, and building construction activities such as laying foundation and constructing retaining walls. Construction equipment would include excavators, backhoes, bobcats, forklifts, compactors, concrete mixers and pump, scrapers, front loaders, jackhammers, pile drivers, and electric lifts.

Construction vehicles would access the site via I-880, High Street, 47th Avenue, Ygnacio Avenue, and Foothill Boulevard. Roads would not be closed, and all road access would be maintained during construction. Signage would be used to warn motorists approaching High Street and Foothill Boulevard of construction.

2.5 PROJECT OBJECTIVES

OUSD has identified several objectives or goals to be achieved through project implementation:

- Provide a more secure campus perimeter with controlled access on Ygnacio Avenue.
- Create a strong center for the academic pathways.
- Strengthen the unity of the campus, and allow for future growth.
- Maintain and expand health services to the students and community.

- Provide a new gymnasium that can facilitate all-school gatherings.
- Provide a regulation-size sports field for competitive play on campus.

2.6 RELATIONSHIP OF PROJECT TO OTHER PLANS

CITY OF OAKLAND GENERAL PLAN

The project site is under the jurisdiction of OUSD and is not required to comply with the policies of the City of Oakland General Plan. However, since the General Plan includes valuable information regarding physical setting and surrounding land uses, the Draft EIR considers the General Plan policies in the analysis of project environmental impacts.

CITY OF OAKLAND ZONING

The project site is under the jurisdiction of OUSD and is not required to comply with existing City zoning. However, similar to consideration of the Oakland General Plan, the Draft EIR considers existing zoning of the adjacent land uses in the analysis of project environmental impacts.

REFERENCES

Cody Anderson Wasney Architects. 2012. *Fremont High School Master Plan*. Developed for Oakland Unified School District.

LCA Architects. 2016. General Project Schedule. Prepared for Oakland Unified School District.

Oakland, City of. 2016a. Planning Code. Accessed November 2016. http://www2.oaklandnet.com/oakca/groups/ceda/documents/report/oak032032.pdf.

———. 2016b. Zoning and Estuary Policy Plan Maps. Accessed November 2016. http://www2.oaklandnet.com/oakca1/groups/ceda/documents/report/oak059232.pdf.

3.1.1 INTRODUCTION

In the course of evaluating the project, certain impact areas included in CEQA Appendix G checklist were found to have a less than significant impact or no impact because the project type and location would not create such impacts. This section briefly describes the effects found to have no impact. Note that a number of impacts found to have no impact or a less than significant are addressed in the various Draft EIR sections (Sections 3.2 through 3.7) to provide a more comprehensive discussion as to why impacts are less than significant, in order to better inform decision-makers and the general public.

This section contains a description of the project area's existing setting, identifies standards of significance, identifies project-related impacts or the lack thereof, and recommends mitigation measures where necessary to reduce or eliminate impacts.

3.1.2 EXISTING SETTING

The project site (Fremont High School) is located at 4610 Foothill Boulevard in Oakland, California. The project site is an 8.6-acre, L-shaped site bordered by Foothill Boulevard to the southwest, 47th Avenue to the southeast, Ygnacio Avenue to the northeast, and High Street to the northwest. A portion of the campus extends farther northeast between 46th and 47th avenues (**Figure 2.0-2, Project Location,** in Section 2.0, Project Description). The campus lies at 40 feet in elevation, approximately 1 mile east of the Oakland estuary. To the east, hills rise rapidly to an elevation of 200 feet in the Maxwell Park neighborhood.

The Fremont High School campus is under the jurisdiction of the Oakland Unified School District (OUSD); therefore, City of Oakland General Plan policies and zoning do not apply to the project site. Nonetheless, City policies and zoning are considered in the evaluation of environmental impacts in the Draft Environmental Impact Report (Draft EIR), and incorporated as best management practices or mitigation measures as needed.

The existing outdoor spaces on the project site comprise mainly concrete, a few trees, and minimal landscaping. The project site changes drastically in elevation from the southern end at Foothill Boulevard to the northeastern corner of campus, with an elevation change of 44 vertical feet. Courtland Creek flows across the site from northeast to southwest in an underground culvert (**Appendix GEO**).

The project site is surrounded on all sides by urban development. There is a large commercial development northwest of the project site, on the corner of High Street and Foothill Boulevard, which includes both retail and fast-food eateries. The areas east of the project site on 46th, 47th, and Ygnacio avenues are developed with a mix of single-family and multi-family residential uses. Immediately north of the project site is an automotive service station. West of the project site, along Foothill Boulevard, are various retail uses, with multi-family housing beyond.

3.1.3 ENVIRONMENTAL ANALYSIS

AGRICULTURAL AND FORESTRY RESOURCES

According to the State CEQA Guidelines, Appendix G, agricultural and forestry resource impacts are considered to be significant if the project would result in any of the following:

1) 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 nonagricultural use.

2) Conflict with existing zoning for agricultural use, or a Williamson Act contract.

3) Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).

4) Result in the loss of forestland or conversion of forestland to non-forest use.

5) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forestland to non-forest use.

Impact 3.1.1 The project site is currently developed and is surrounded by existing urban development. There are no agricultural or forestland resources in the vicinity of the project site or in the surrounding area. **No impact** would occur.

The project site is located in an urbanized area on a previously developed site. The project site is not designated as Prime or Unique Farmland or Farmland of Statewide Importance on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Department of Conservation (2016). There are no forestlands or timberlands on the project site or in the immediate vicinity of the project site. There are no Williamson Act contracts on the property. Therefore, the proposed project would not involve direct or indirect conversion of farmland to nonagricultural use or conversion of forestland to non-forest use. **No impact** would occur.

Mitigation Measures

None required.

BIOLOGICAL RESOURCES

According to the State CEQA Guidelines, Appendix G, biological resource impacts are considered to be significant if the project would result in any of the following:

1) 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 or US Fish and Wildlife Service.

2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.

3) 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.

4) 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 wildlife nursery sites.

5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

6) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

Impact 3.1.2 The proposed project does not provide suitable habitat for the majority of special-status species identified in the project vicinity; however, tree removal associated with the project has the potential to impact migratory birds, raptors, and bats. This impact would be **less than significant with mitigation incorporated**.

The project site is fully developed and located in a highly urbanized area. The project site is dominated by ornamental vegetation and trees. Additionally, the project site does not contain any protected open space or other areas that could potentially serve as habitat. The proposed project would not convert any undeveloped land to developed land.

Based on the urbanized, developed nature of the project site, little habitat exists on the site to support any special-status plants or animals. However, the proposed project does have the potential to impact migratory birds, raptors, and bats through removal of trees and existing buildings on the campus. The trees and structures on the project site may provide suitable nesting habitat for birds protected under the Migratory Bird Treaty Act, as well as under Fish and Game Code Sections 3503.5 and 3800–3806. In addition, the structures on-site have the potential to provide suitable roosting habitat for bats. Therefore, the demolition of these structures could result in noise, dust, human disturbance, and other direct or indirect impacts to nesting birds and roosting bats on or in the vicinity of the project site.

Potential nest abandonment and mortality to eggs and chicks of protected bird species, as well as the potential mortality of roosting bat species during construction, would be considered a **potentially significant** impact. As such, mitigation measures **MM 3.1.2a** and **MM 3.1.2b** are required.

Mitigation Measures

MM 3.1.2a **Preconstruction Surveys for Migratory Birds and Raptors.** If clearing and/or construction activities occur during the migratory bird and raptor nesting season (February 1–September 1), preconstruction surveys for active nest sites shall be conducted by a qualified biologist, within14 days prior to initiation of construction activities. The qualified biologist shall survey the construction zone and a 200-foot radius surrounding the construction zone to determine whether the activities taking place have the potential to disturb or otherwise harm nesting birds.

If active nest(s) in trees or structures are identified during the preconstruction survey, a qualified biologist shall monitor the nest(s) to determine when the young have fledged. Monthly monitoring reports, documenting the nest status, shall be submitted to the District until the nest(s) is deemed inactive. The biological monitor shall have the authority to cease construction if there is any

sign of distress to a raptor or migratory bird. Reference to this requirement and the Migratory Bird Treaty Act shall be included in the construction specifications.

MM 3.1.2b **Surveys for Potential Bat Roosts.** Prior to demolition of structures on the project site, a qualified wildlife biologist shall conduct preconstruction surveys. Bats shall be absent or flushed from roost locations prior to building demolition. If flushing of bats from buildings is necessary, it shall be done by a qualified biologist during the non-breeding season from October 1 to March 31. When flushing bats, structures shall be moved carefully to avoid harming individuals, and torpid bats given time to completely arouse and fly away. During the maternity season from April 1 to September 30, prior to building demolition or construction, a qualified biologist shall determine whether a bat nursery is present at any sites identified as potentially housing bats. If an active nursery is present, disturbance of bats shall be avoided until the biologist determines that breeding is complete and young are reared.

Implementation of mitigation measures **MM 3.1.2a** and **MM 3.1.2b** would ensure that nesting birds or roosting bats are not negatively affected during the nesting or breeding season and would reduce impacts to a **less than significant** level.

Impact 3.1.3 No riparian habitats or sensitive habitats occur on or adjacent to the project site. Therefore, the project would have **no impact** to riparian habitat or other sensitive natural communities.

Sensitive habitats include those that are of special concern to resource agencies and those that are protected under CEQA, Fish and Game Code Section 1600, and Clean Water Act Section 404. Riparian habitats are those found along rivers, creeks, streams, and lakes. There are no sensitive natural communities, riparian habitats, waters of the State or waters of the United States on the project site. Therefore, **no impact** would occur as a result of the project.

Mitigation Measures

None required.

Impact 3.1.4 The project would not interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors. **No impact** would occur.

The project site is located in a fully urbanized area and it is unlikely that any significant wildlife corridors exist in the project vicinity. Therefore, project implementation would not interfere with the movement of native resident or migratory fish or wildlife species. Therefore, **no impact** to the movement of any native resident or migratory fish or wildlife species would occur.

Mitigation Measures

None required.

Impact 3.1.5 The project would not conflict with any adopted or proposed local policies or ordinances protecting biological resources or with any adopted or proposed habitat conservation plans (HCPs), natural community conservation plans (NCCPs), or other approved local, regional, or state habitat conservation plans.

Therefore, this impact would be **less than significant with mitigation incorporated**.

There are currently no adopted or proposed HCPs, NCCPs, or other approved local, regional, or state HCPs that affect the project site.

City of Oakland Municipal Code Chapter 12.36, Protected Trees, provides for the protection and preservation of significant trees by designating the types of trees located on various types of properties that are protected. Project development may require the removal of trees on the project site to accommodate project construction and implementation. This is a **potentially significant** impact, and in order to prevent potential conflicts with Oakland Municipal Code Chapter 12.36, mitigation measure **MM 3.1.5** is required.

Mitigation Measures

MM 3.1.5 Prior to any tree removal, the District shall designate which trees on the property are protected per City of Oakland Municipal Code Chapter 12.36. If any protected trees would be impacted the District shall compile a replanting plan and all protected trees shall be replaced at a ratio that meets City of Oakland standards.

With implementation of mitigation measure **MM 3.1.5**, the project would have a **less than significant** impact on policies intended to protect biological resources.

GREENHOUSE GAS EMISSIONS

According to the State CEQA Guidelines, Appendix G, greenhouse gas emissions impacts are considered to be significant if the project would result in any of the following:

1) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

2) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Impact 3.1.6 The project would generate greenhouse gas emissions over the short term from construction activities and would also contribute to long-term regional emissions associated with indirect source emissions. This impact is **less than significant**.

Greenhouse gas (GHG) emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects contributes substantially to the phenomenon of global climate change and its associated environmental impacts and as such is addressed only as a cumulative impact.

GHG emissions associated with the project would occur over the short term from construction activities, consisting primarily of emissions from equipment exhaust. There would also be long-term regional emissions associated with indirect source emissions such as electricity and water usage.

Construction Emissions

The Bay Area Air Quality Management District (BAAQMD) does not have an adopted threshold of significance for construction-related GHG emissions; however, the air district recommends the quantification and disclosure of construction-generated GHG emissions.

Table 3.1-1, Construction-Related Greenhouse Gas Emissions, summarizes the project's estimated construction source emissions.

TABLE 3.1-1
CONSTRUCTION-RELATED GREENHOUSE GAS EMISSIONS – METRIC TONS PER YEAR

Construction Year	Carbon Dioxide (CO_2)	Methane (CH_4)	Nitrous Oxide (N_2O)	CO_2e
2018	666.58	0.14	0.00	670
2019	1,680.29	0.32	0.00	1,689
2020	880.61	0.18	0.00	885
2021	565.92	0.11	0.00	569
Total CO_2e	3,813			

*Source: CalEEMod version 2016.3.1. See **Appendix GHG** for emission model outputs.*

Note: Project construction activities are assumed to occur from July 2018 through September 2021.

As shown, construction would generate approximately 3,813 metric tons of carbon dioxide equivalents (CO_2e) over the course of construction. Once construction is complete, generation of GHG emissions would cease. As previously stated, the BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. Nonetheless, any development on the project site would be subject to the California Green Building Standards Code (Part 11, Title 24), which was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations). Current mandatory standards include the diversion of 50 percent of construction waste from landfills, thereby implementing one of the BAAQMD's recommended best management practices for reducing construction-generated GHG emissions.

Operational Emissions

For the purposes of disclosure, projected GHG emissions associated with proposed operations are quantified and compared to the existing baseline. No changes to enrollment or staffing are proposed as part of the project. Further, no additional activities or events are proposed beyond those which currently occur on the campus site. The project would not represent a new type of land use on the site or a wholly new land use or air emissions generation source, as the project is the modernization of an existing facility as opposed to the construction of a wholly new facility. The purpose and objective of this project is to provide for greater educational opportunities to accommodate an existing school. When complete, the project would not increase existing traffic; thus, it would not increase existing traffic-generated GHG emissions.

The project's long-term operational emissions are summarized in **Table 3.1-2, Greenhouse Gas Emissions – Project Operations**.

TABLE 3.1-2
GREENHOUSE GAS EMISSIONS – PROJECT OPERATIONS (METRIC TONS PER YEAR)

Emissions Source	CO_2e
Proposed Project	
Area Source (landscaping, hearth)	0
Energy	353
Mobile	2,031
Waste	110
Water	29
Total	**2,523**
Existing Baseline	
Area Source (landscaping, hearth)	0
Energy	407
Mobile	2,031
Waste	110
Water	29
Total	**2,578**
Difference	
Area Source (landscaping, hearth)	0
Energy	-54
Mobile	0
Waste	0
Water	0
Total	**-54**
BAAQMD Potentially Significant Impact Threshold	1,100
Exceed BAAQMD Threshold?	**No**

*Source: CalEEMod version 2016.3.1. See **Appendix GHG** for emission model outputs*

As shown in **Table 3.1-2**, the proposed project would result in a decrease in operational GHG emissions compared with the existing baseline and therefore would not surpass the BAAQMD threshold. The reduction in GHG emissions is attributable to the increase in energy efficiency associated with the replacement of older, less energy-efficient buildings with new buildings constructed under the requirements of the California Green Building Standards Code (Part 11, Title 24), which results in substantially more energy-efficient buildings as compared to the existing school buildings. BAAQMD thresholds were developed based on substantial evidence that such thresholds represent quantitative levels of GHG emissions, compliance with which means that the environmental impact of the GHG emissions will normally not be cumulatively considerable under CEQA (BAAQMD 2012). Therefore, the project would have a **less than significant** impact concerning the generation of GHG emissions.

Mitigation Measures

None required.

Impact 3.1.7 The project would not conflict with the City's Energy and Climate Action Plan. This impact is **less than significant**.

In December 2012, the City of Oakland approved an Energy and Climate Action Plan (Oakland ECAP) that identifies and prioritizes actions the City can take to reduce energy consumption and GHG emissions generated within the city. The plan includes a GHG emissions reduction target for the year 2020 of 36 percent below 2005 levels. This goal aligns with those of the State of California, and thus Assembly Bill 32 and other legislation intended to reduce greenhouse gas emissions. The Oakland ECAP also presents a number of strategies that will make it possible for the City to meet the recommended targets, including GHG reduction actions, frameworks for coordinating implementation, and monitoring and reporting. Additionally, the ECAP specifically addresses statewide post-2020 GHG-reduction targets by seeking to reduce greenhouse gas emissions in the city consistent with these targets.

As shown in **Table 3.1-2**, the proposed project would result in a decrease in operational GHG emissions compared with the existing baseline, attributable to the increased energy efficiency associated with the replacement of older, less energy-efficient buildings with new buildings constructed under the requirements of California Green Building Standards Code (Part 11, Title 24). Therefore, the project would not conflict with the ECAP's greenhouse gas reduction targets. This impact would be **less than significant**.

Mitigation Measures

None required.

HYDROLOGY AND WATER QUALITY

According to the State CEQA Guidelines, Appendix G, hydrology and water quality impacts are considered to be significant if the project would result in any of the following:

1) Violate any water quality standards or waste discharge requirements.

2) 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.

3) 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 that would result in substantial erosion or siltation on- or off-site.

4) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.

5) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

6) Otherwise substantially degrade water quality.

7) Place housing within a 100-year flood hazard area as mapped on Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

8) Place within a 100-year flood hazard area structures which would impede or redirect flood flows.

9) 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.

10) Inundation by seiche, tsunami, or mudflow

Impact 3.1.8 Compliance with the requirements of the applicable National Pollutant Discharge Elimination System (NPDES) permit would minimize the potential for water quality degradation and ensure that the project would not contribute to a violation of water quality standards. This impact would be **less than significant.**

Project construction would introduce sediments and other contaminants typically associated with construction into stormwater runoff, potentially resulting in the degradation of downstream surface water and groundwater quality. Stormwater flowing over the project site during construction could carry various pollutants downstream such as sediment, nutrients, bacteria and viruses, oil and grease, heavy metals, organics, pesticides, gross pollutants, and miscellaneous waste. These pollutants could originate from soil disturbances, construction equipment, building materials, and workers. Project construction activities would disturb soil on the project site, which could result in sedimentation that reaches the City's storm drain system and the Oakland estuary.

The project would be required to comply with the San Francisco Bay Municipal Regional Stormwater Permit (MRP) (Order R2-2009-0074; NPDES Permit No. CAS612008) administered by the San Francisco Bay Regional Water Quality Control Board (RWQCB). The MRP ensures attainment of applicable water quality objectives and protection of the beneficial uses of receiving waters and associated habitat. It requires that discharges not cause exceedances of water quality objectives nor cause certain conditions to occur that create a condition of nuisance or water quality impairment in receiving waters. Because the project would connect to City services, Provision C.3 of the MRP requires new and redevelopment projects that create or replace 10,000 square feet or more of impervious surface to implement certain measures to protect water quality and prevent erosion by minimizing sediment and other pollutants in site runoff so that post-project runoff would not exceed pre-project rates and durations. The goal of Provision C.3 is to include appropriate source control, site design, and stormwater treatment measures in new development and adaptive reuse projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and adaptive reuse projects. Provision C.3 would reduce potential water quality impacts associated with the proposed project.

Compliance with the requirements of the Municipal Regional Stormwater Permit would ensure that project construction and operation would not contribute to a violation of water quality standards. The project would have a **less than significant** impact regarding the generation of substantial additional sources of polluted runoff that would contribute to a water quality violation.

Mitigation Measures

None required.

Impact 3.1.9 The project's domestic water demands would be provided by the East Bay Municipal Utility District from surface water supplies. Additionally, the project

would not increase the impact to groundwater recharge. This impact would be **less than significant.**

The proposed project would receive water from the East Bay Municipal Utility District (EBMUD). On average, 90 percent of the water used by EBMUD comes from the protected watershed of the Mokelumne River (EBMUD 2013). In addition, EBMUD stores water from local runoff in several East Bay reservoirs. A local groundwater injection well (Bayside) is being used to move some water into a deep underground aquifer for storage so it can be treated and used during droughts, adding another one million gallons per day of supplemental supply during an emergency situation (EBMUD 2013).

Currently EBMUD only uses groundwater for water supply during emergency conditions. This groundwater is actually surface water injected to the groundwater basin by EBMUD. As such, the proposed project would not rely on groundwater to meet any portion of the day-to-day normal water demand and would have no potential to deplete groundwater supplies. Additionally, the project site is currently developed and covered with impervious surfaces. Therefore, redevelopment of the site as proposed would have no potential to further interfere with recharge of the underlying groundwater basin. The project would have a **less than significant** impact.

Mitigation Measures

None required.

Impact 3.1.10 The project would not substantially alter the existing drainage pattern of the site or area, nor would it exceed the capacity of existing or planned stormwater drainage systems or generate substantial additional sources of polluted runoff. This impact would be **less than significant.**

The project site is almost completely covered with man-made facilities including buildings, concrete walkways and student courtyards, asphalt parking lots, a synthetic grass athletic field, and asphalt basketball courts. No natural drainages exist on the project site. Currently, all stormwater drains into the surrounding storm drainage system located in the adjacent streets or within the project site. According to the conceptual site plan, upon project construction the only areas of pervious surfaces would be the athletic field and the community garden, with a scattering of planters and small grass areas. However, the redesign would not substantially change the amount of impervious surfaces on the project site over existing conditions. The proposed project would result in the removal of approximately 9,000 square feet of lawn area at the school's main entrance. However, with the addition of the school's new natural grass athletic field (approximately 134,000 square feet) and community garden (approximately 12,000 square feet), the amount of pervious area would actually increase over existing conditions. This would allow more stormwater to percolate into the ground as compared to current conditions and would reduce the amount of stormwater flowing off the site.

The proposed project would not result in a substantial change to existing drainage patterns or result in a substantial increase in polluted runoff during operation of the project.

For these reasons, impacts related to site drainage, surface runoff, and stormwater capacity would be **less than significant**.

Mitigation Measures

None required.

Impact 3.1.11 Project implementation would not place any housing or other structures within a 100-year flood hazard area. Therefore, **no impact** would occur associated with flood hazard zones.

According to the Federal Emergency Management Agency (FEMA) Flood Map Panel No. 06001C0089G dated August 3, 2009, the project site is designated as Unshaded Zone X (areas of 0.2 percent annual chance flood [500-year flood]) and Shaded Zone X (outside of 0.2 percent annual chance floodplain). The project would have **no impact**.

Mitigation Measures

None required.

Impact 3.1.12 Project implementation would not expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of a failure of a levee or dam. Therefore, **no impact** would occur.

According to the City of Oakland (2004) General Plan Safety Element, Figure 6.1, Flooding Hazards, the project site is not located within a levee or dam inundation area. Therefore, development of the project would not expose people or structures to significant risks resulting from dam or levee failure and would have **no impact** in this area.

Mitigation Measures

None required.

Impact 3.1.13 The project site is not subject to potential inundation by seiche, tsunami, or mudflow. Therefore, **no impact** would occur.

A seiche is a periodic oscillation of a body of water such as a reservoir resulting from seismic shaking or other causes such as landslides. The project site is not located near any reservoirs or other enclosed bodies of water capable of seiche. A tsunami is a series of waves caused by earthquakes that occur on the seafloor or in coastal areas. A mudflow is a flow of dirt and debris that occurs after intense rainfall or snowmelt, volcanic eruption, earthquake, or severe wildfire. According to the City of Oakland (2004) General Plan Safety Element, the project site is not located in an area at risk of inundation as a result of tsunami or seiche wave. Furthermore, while the site is located in an area that has some elevation gain, the area is not identified as an area with a potential for landslides (see Oakland General Plan Figure 3.1), the area has been urbanized for many years and sufficient storm drainage facilities exist in the area. These conditions would limit the potential for mudflow. For these reasons, **no impact** would occur associated with potential inundation by seiche, tsunami, or mudflow.

Mitigation Measures

None required.

LAND USE AND PLANNING

According to the State CEQA Guidelines, Appendix G, land use and planning impacts are considered to be significant if the project would result in any of the following:

1) Physically divide an established community.

2) Conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

3) Conflict with any applicable habitat conservation plan or natural community conservation plan.

Impact 3.1.14 The project would not result in the physical division of an established community. **No impact** would occur.

The project site is currently developed with an existing school and is surrounded by commercial and residential uses. The site does not currently provide any vehicular or pedestrian connections between adjacent land uses. The project does not propose any major linear features such as a major roadway. Therefore, the proposed project would not physically divide the surrounding community and there would be **no impact**.

Mitigation Measures

None required.

Impact 3.1.15 The project is under the jurisdiction of the Oakland Unified School District and is not required to comply with the City's General Plan policies or Municipal Code regulations. Nonetheless, the project would not conflict with the City's General Plan or any other land use plan, policy, or regulation of an agency with jurisdiction over the project. This impact would be **less than significant**.

The project site is surrounded by existing development, with a mix of commercial and residential uses. The proposed project is the redevelopment of an existing educational site. This use would be consistent with the existing General Plan land use designation and zoning for the project site. The project site has a General Plan land use designation of Institutional. Educational facilities are one of the allowed land uses under the Institutional designation. The project site is zoned Mixed Housing Type Residential - 3 (RM-3), Mixed Housing Type Residential - 4 (RM-4), and Urban Residential - 5 Zone (RU-5). The intent of the Mixed Housing Type Residential zones is to create, maintain, and enhance residential areas characterized by a mix of single-family homes, duplexes, townhouses, and small multi-unit buildings. The intent of the Urban Residential zones is to create, maintain, and enhance areas of the city that are appropriate for multi-unit, low-rise, or mid-rise residential structures and neighborhood businesses where appropriate. Community education is an allowed use in these zones with the approval of a conditional use permit.

The project site is listed is rated B2+ in the Oakland Cultural Heritage Survey (OCHS) and is identified as an Area of Secondary Importance (ASI) by the Oakland General Plan. Areas of Secondary Importance are defined as "similar to an Area of Primary Importance except that (1) an ASI does not appear eligible for the National Register of Historic Places and (2) altered properties which do not now contribute to the ASI but would if restored are counted as contributors for purposes of the two-thirds threshold" (Oakland 1998).

Tables 4-1 and 4-2 in the General Plan Historical Preservation Element identify the procedures required for the alteration/demolition of those properties considered to be of historical importance in Oakland. As such, for the alteration of the existing buildings on the project site that are considered to be historical resources, the District would consider these procedures to ensure

the project would not conflict with the General Plan. Further discussion as to the historical importance of the site is presented in Draft EIR Section 3.4, Cultural Resources.

The project would not result in significant environmental impacts and would not conflict with plans, policies, or regulations intended to reduce or avoid environmental effects. Therefore, this impact would be **less than significant.**

Mitigation Measures

None required.

Impact 3.1.16 The project site is not subject to an adopted or proposed HCP, natural community conservation plan, or other approved local, regional, or state HCP. **No impact** would occur.

The project site is not located in an area with an adopted or proposed HCP, NCCP, or another approved local, regional, or state HCP. Therefore, the project would not conflict with any applicable HCPs or NCCPs. There would be **no impact**.

Mitigation Measures

None required.

MINERAL RESOURCES

According to the State CEQA Guidelines, Appendix G, mineral resources impacts are considered to be significant if the project would result in any of the following:

1) 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.

2) 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.

Impact 3.1.17 The project would not affect mineral resources. **No impact** would occur.

According to the City of Oakland (1996, p. 3.10) General Plan Open Space, Conservation and Recreation Element, areas of the Oakland Hills are identified by the Surface Mining and Reclamation Act (SMARA) as a regionally significant resource for rhyolite. The project site is not located in the Oakland Hills. Furthermore, the site is developed as an existing school campus and is surrounded by similar urban uses. Therefore, project implementation would not result in the loss of availability of a known mineral resources or a locally important mineral resource recovery site. There would be **no impact**.

Mitigation Measures

None required.

POPULATION AND HOUSING

According to CEQA Guidelines Appendix G, population and housing impacts are considered to be significant if implementation of the project would result in any of the following:

1) 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).

2) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

3) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Impact 3.1.18 The proposed project would not result in an increase in the number of residents or housing units in the area. The project would have **no impact**.

The proposed project is the redevelopment of an existing school site. No new dwelling units would result from project construction and the school population would not increase as a result of the project. Therefore, the project would not induce substantial population or housing unit growth. The proposed project would have **no impact**.

Mitigation Measures

None required.

Impact 3.1.19 The proposed project would not displace substantial numbers of people or housing. **No impact** would occur.

The project site is currently developed with educational uses and does not contain any housing. Therefore, project implementation would not displace any existing housing or people and would not necessitate the construction of replacement housing elsewhere. There would be **no impact**.

Mitigation Measures

None required.

PUBLIC SERVICES

According to the State CEQA Guidelines, Appendix G, public services impacts are considered to be significant if the project would result in any of the following:

1) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the 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 following public services: fire protection, police protection, schools, parks, and other public facilities.

Impact 3.1.20 The proposed project would not result in substantial adverse physical impacts associated with the provision of public services, nor would it increase the use of existing public services and recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. Therefore, impacts would be **less than significant**.

Fire

The City of Oakland Fire Department (OFD) provides fire, paramedic advanced life support emergency medical, and emergency services to all areas within the city limits. The OFD maintains 25 operating stations. The department's Field Operations Bureau has 500 uniformed personnel to handle an average of 60,000 calls annually (OFD 2016). The closest station to the project site is Station #13 located at 1225 Derby Avenue, approximately 1 mile to the west.

The proposed project is the redevelopment of an existing high school. The redevelopment would not significantly expand the current building square footages. Additionally, the student capacity would not increase as a result of the project.

Generally, the need for new or expanded fire facilities is based on response time, the time from the initial emergency call to arrival on the site. The project would not result in an increase in the student population or a significant increase in building square footages. Therefore, no new or expanded fire protection facilities would be required. Additionally, the proposed project would be constructed in accordance with the most current building and fire code standards and would include adequate site access for emergency responders in order to maximize fire prevention and public safety. Therefore, this impact would be **less than significant**.

Police

The Oakland Police Department (OPD) provides police protection services in the city. The OPD is headquartered in downtown Oakland at 455 7th Street. Oakland is divided into six geographic areas and 57 patrol beats numbered 1X through 35Y (Oakland 2016). The project site is in patrol beat area 27X.

The OPD employed 737 sworn officers in 2015. This staffing level was increased to 777 sworn officers in July 2016 (OPD 2016, p. 12). The average number of residents per officer is 573 (OPD 2016, p. 6). According to the OPD Strategic Plan 2016 (p. 12), based on population, the OPD should have 842 sworn officers, and based on the violent crime rate, the department should have 1,805 sworn officers.

As discussed previously, implementation of the proposed project would not increase the student capacity of Fremont High School. The High School and the surrounding area would not require an increase in police personnel or new police facilities as a result of the project. Therefore, there would be **no impact**.

Schools

The project is the construction of new/expanded school facilities. This Draft EIR analyzes the environmental impacts related to the expansion of Fremont High School.

Parks

Because the proposed project is the redevelopment of a school and would not result in an increase in the city's population, the project would not result in the need for new or expanded park facilities. Therefore, the proposed project would have **no impact** in this area.

Mitigation Measures

None required.

RECREATION

According to the State CEQA Guidelines, Appendix G, recreation impacts are considered to be significant if the project would result in any of the following:

1) 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.

2) Require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Impact 3.1.21 The proposed project would not increase the use of existing recreational facilities such that substantial physical deterioration of facilities would occur. This impact would be **less than significant**.

Because the proposed project would not result in an increase of the city's population, the use of the city's recreational facilities would not increase due to the proposed project. In addition, the project would enlarge the football/soccer field to a regulation size, as well as construct spectator bleachers. This would allow regulation games to be played on-site, which would provide more recreational opportunities for the student population and the surrounding neighborhood. Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

Impact 3.1.22 The proposed project does not include nor would it require the construction of recreational facilities that may have an adverse impact on the environment. This impact would be **less than significant**.

The project proposes construction of a regulation size football/soccer field to replace the existing undersized field. The proposed field is a component of the proposed project, and therefore any potential environmental impacts associated with its construction are addressed throughout this Draft EIR. Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

TRANSPORTATION AND TRAFFIC

According to the State CEQA Guidelines, Appendix G, transportation and traffic impacts are considered to be significant if the project would result in any of the following:

1) 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.

2) 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.

3) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

4) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

5) Result in inadequate emergency access.

6) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Impact 3.1.23 The proposed project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. This impact would be **less than significant**.

During construction, the proposed project may cause temporary traffic impacts due to construction vehicles, street closures, and construction adjacent to the street resulting in traffic rerouting. However, these traffic impacts are considered short term and would not result in a long-term decrease in the level of service on the surrounding streets. All projects in the city are required to follow City regulations for street encroachments.

The surrounding roadway system has the capacity to support the current student and staff population. The project would not increase the student capacity of Fremont High School. Therefore, this this impact would be **less than significant**.

Mitigation Measures

None required.

Impact 3.1.24 The proposed project would not conflict with an applicable congestion management program. This impact would be **less than significant**.

In Oakland, the Congestion Management Program (CMP) is administered by the Alameda County Transportation Commission (CTC). Foothill Boulevard, adjacent to the project site, is identified as a Tier 2 roadway in the CMP (Alameda CTC 2015, Table 3.1). Tier 2 roadways consist of principal and major local arterials of countywide significance. This second tier network forms a supplemental network that the Alameda CTC monitors for informational purposes only and is not used in the conformity findings process (Alameda CTC 2015, p. 20). As discussed above, the proposed project would not increase the student capacity at the project site nor the roadway capacity. As such, the proposed project would not conflict with the Alameda County CMP.

Mitigation Measures

None required.

Impact 3.1.25 The proposed project would not result in a change in air traffic patterns, substantially increase roadway hazards due to a design feature, or result in inadequate emergency access. **No impact** would occur.

The proposed project is located on an existing school site and would result in the same use as currently exists on the site. The nearest airport is Oakland International Airport, approximately 3 miles south of the project site. The project would not increase building heights to a level that would interfere with airport operations or air traffic patterns.

The project would not change the existing roadway network. Therefore, the project would not substantially increase roadway hazards due to a design feature. Additionally, the proposed project would provide multiple access points to the high school campus.

As such, the project would have **no impact** regarding a change in air traffic patterns, an increase roadway hazards, or inadequate emergency access.

Mitigation Measures

None required.

Impact 3.1.26 The proposed project would not result in conflicts with adopted policies, plans, or programs regarding bicycle, pedestrian, or public transit facilities, or otherwise decrease the performance or safety of such facilities. This impact would be **less than significant**.

Currently, Foothill Boulevard, adjacent to the site, incorporates a Class 2 bike lane. According to the Oakland (2007) Bicycle Master Plan, a Class 3A arterial bike route is proposed for this bike lane. All improvements identified for the proposed project would occur on the project site and would not result in changes to the existing roadway network. As such, none of these improvements would conflict with the current bike lane or result in the inability to improve the bike lane to a Class 3A bike route.

The project site is completely surrounded by sidewalks allowing for adequate pedestrian travel. All improvements identified for the proposed project would occur on the project site and would not result in changes to the existing sidewalks.

Public transit to the project site is served by Alameda-Contra Costa Transit District Routes 40, 641, and 840. Route 40 runs every 20 minutes, while Routes 641 and 840 run on an hourly basis. The student population would not increase as a result of the project, therefore, the project would result in an increase in ridership or affect the performance or safety of public transit.

The project would have a **less than significant** impact regarding bicycle, pedestrian, or public transit facilities.

Mitigation Measures

None required.

UTILITIES AND SERVICE SYSTEMS

According to the State CEQA Guidelines, Appendix G, utilities and service systems impacts are considered to be significant if the project would result in any of the following:

1) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

2) 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.

3) 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.

4) Have insufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements.

5) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

6) Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.

7) Not comply with federal, state, and local statutes and regulations related to solid waste.

Impact 3.1.27 The proposed project would not exceed the wastewater treatment requirements of the Regional Water Quality Control Board. This impact would be **less than significant**.

Wastewater generated by the proposed project would be conveyed by the City of Oakland sewer facilities and treated at the EBMUD treatment plant at 2020 Wake Avenue in Oakland at the base of the Bay Bridge. EBMUD provides secondary treatment for a maximum flow of 168 million gallons per day (mgd). The plant's primary treatment capacity is up to 320 mgd. Storage basins provide plant capacity for a short-term hydraulic peak of 415 mgd. On average, about 63 million gallons of wastewater are treated every day (EBMUD 2016a).

The project would not increase the student capacity, therefore the existing wastewater flow would be similar to the current flows. As such, wastewater flow would not exceed the EBMUD treatment plant's capacity. Therefore, the proposed project would not result in an exceedance of any wastewater treatment requirements and this impact would be **less than significant.**

Mitigation Measures

None required.

Impact 3.1.28 The proposed project would be adequately served by existing water and wastewater infrastructure and would not require or result in the construction of new or expanded water or wastewater treatment facilities. This impact would be considered **less than significant**.

The proposed project would receive water from the East Bay Municipal Utility District. EBMUD has water rights for up to 325 million gallons daily from the Mokelumne River watershed. EBMUD also has a contract with the US Bureau of Reclamation for a supplemental water supply from the Sacramento River. EBMUD has rights to up to 100 million gallons per day from the Sacramento River in dry years (EBMUD 2016b). In 2014, EBMUD enacted a Water Shortage Emergency Action Plan, which had requirements to assist in the reduction of water use. Because of precipitation in the Mokelumne River watershed, EBMUD ended its drought emergency requirements on May 10, 2016. Anticipated end of year storage in September 2016 is estimated to be 600,000 acre-feet (EBMUD

2016c). In 2015, the annual water demand for EBMUD amounted to 190 million gallons, which is expected to increase to 230 million gallons by 2040 (EBMUD 2015, p. 53).

According to EBMUD's (2015, p. G-8) Urban Water Management Plan, institutional uses, such as a school, average approximately 52 gallons per day per student. As shown in **Table 3.1-3, Project Water Demand**, based on these demand factors, the proposed project would have a total water demand of up to approximately 26,000 gallons per day (gpd) or 29.1 acre-feet per year, which represents approximately 2.9 percent of the total annual water allocation for EBMUD.[1] The demand factor was calculated using current student enrollment at Fremont High School. The project would not increase student capacity at the project site, which was built for 1,200 students. As such, this demand would be within the allocated EBMUD water rights.

TABLE 3.1-3
PROJECT WATER DEMAND

Student Population	Demand Factor	Project Water Demand	
		Daily (gallons)	Annually (acre-feet)
700	52 gallons/student/day	36,400	40.8

Source: EBMUD 2015, p. G-8; Michael Baker International

Because the proposed project would not increase water demand or necessary wastewater treatment capacity (as discussed in Impact Table 3.1-3) beyond current allocations or capacity, the project would be adequately served by existing water and wastewater infrastructure and would not require the construction of new or expanded water or wastewater treatment facilities. Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

Impact 3.1.29 The proposed project would not require new or expanded stormwater drainage facilities. Therefore, impacts would be **less than significant**.

The project site is currently fully developed and served by the City's public storm drain system. Project site redevelopment as proposed would include construction of on-site drainage systems as necessary to collect and convey site runoff to the City's public storm drain system. Because the site is currently fully developed, it is not anticipated that the proposed project would significantly increase runoff from the site, and no expansion of existing off-site facilities would be required.

The proposed project includes a proposed drainage system as a project component. Any potential environmental impacts associated with its construction are addressed throughout this Draft EIR. Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

[1] 26,000 gpd x 365 days = 9,490,000 gallons per year/325,000,000 gallons per year (allocation) = 2.9 percent

Impact 3.1.30 The proposed project would be served by a landfill with adequate capacity and would comply with federal, state, and local statutes and regulations related to solid waste. Therefore, this impact would be **less than significant**.

The City contracts with Waste Management, Inc., a private company, for garbage collection and disposal services. Oakland disposes of approximately 78 percent of its solid was at the Altamont Landfill (CalRecycle 2015). This landfill has a remaining permitted capacity of 65.4 million cubic yards (as of December 31, 2014) and an expected cease operations date of January 1, 2025 (CalRecycle 2016). The landfill has a maximum permitted throughput of 11,500 tons per day.

The proposed project would not result in an increase in the student capacity. Therefore, the project would not increase the amount of municipal solid waste entering the Altamont Landfill during operation. The project would generate waste associated with demolition and renovation activities, some of which would end up at Altamont Landfill. As described above, the landfill would have adequate capacity to serve the project's waste disposal needs. Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

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This section describes the existing visual character and resources of the project site and discusses the potential impacts associated with the Fremont High School Redevelopment project. Key issues addressed in this section include alteration of existing scenic resources, visual character, and lighting and glare.

A summary of the impact conclusions of visual resources and aesthetics is provided below.

Impact Number	Impact Topic	Impact Significance
3.2.1	Degrade Visual Character or Quality	Less than significant with mitigation
3.2.2	Nighttime Light and Increased Overall Lighting and Glare	Less than significant with mitigation
3.2.3	Cumulative Impacts to Visual Resources and Aesthetics	Less than cumulatively considerable
N/A	Adverse Effect on a Scenic Vista	No impact
N/A	Substantially Damage Scenic Resources within a State Scenic Highway	No impact

3.2.1 EXISTING SETTING

REGIONAL CONTEXT

Oakland is situated between the cities of Berkeley, Emeryville, and San Leandro and is just east of the San Francisco Bay. The city's location between the San Francisco Bay and the East Bay Hills offers a scenic backdrop to a densely urbanized area. The visual character of the city is primarily urban and industrial interspersed with parks and historic buildings. Visual resources in Oakland include views of the San Francisco Bay, historic buildings in downtown Oakland, Lake Merritt, the waterfront, and the scenic Oakland Hills.

PROJECT SITE

Visual character is the overall impression of a landscape created by its unique combination of visual features such as landform, vegetation, water, and structures. Scenic quality is a measure of the degree to which these elements blend to create a landscape that is visually pleasing to a viewer. Viewer sensitivity informs the degree to which changes in visual quality may be considered significant.

The project site, Fremont High School, is currently occupied by five main buildings, several ancillary buildings, portable buildings, two parking lots, and an athletic field. Two of the buildings, Buildings C and D, were constructed in the 1930s; the remaining buildings were constructed in the 1970s. The campus has undergone various types of changes since the 1930s. Buildings C and D and an archway near the central courtyard have historical significance to the campus (Cody Anderson Wasney Architects 2012). For a full discussion of the historic properties on campus, refer to Section 3.4, Cultural Resources.

The main campus buildings, Buildings A, B, and C, are situated around a central courtyard on the west side of the campus. Building D, the gymnasium, is located in the central portion of campus. Building A is a wood-framed, split-level, irregularly shaped building that houses the auditorium, a cafeteria, and classrooms. Building B is a wood-framed, two-story rectangular building containing various classrooms. The portable units, located adjacent to Building B, range

in age and are used for a variety of classrooms. Building C is a three-story concrete building with exposed wood trusses. The building houses administrative offices, conference rooms, classrooms, and the school library. Building D is a two-story concrete building that houses the gymnasium as well as locker rooms and exercise rooms.

The existing outdoor spaces mainly comprise concrete low walls and yards, a few trees, and minimal landscaping. There are limited shaded areas on campus. Currently, the main courtyard on campus is not connected to other outdoor spaces, which contributes to a lack of continuity and cohesion on campus (Cody Anderson Wasney Architects 2012). The project site changes drastically in elevation from the southern end at Foothill Boulevard to the northeastern corner of campus, 44 vertical feet in elevation. The project site's current visual character is that of institutional buildings, meant for schools uses. Photos of the project site are included in **Figure 3.2-1, Existing Setting Photos**.

The areas north and east of the project site, along Ygnacio and 47th avenues, respectively, are developed as residential neighborhood characterized by single-story detached homes. The neighborhood features sidewalks, street lighting, fencing, and landscaping. The area along Foothill Boulevard, to the north and west of the project site, is developed with commercial uses including retail uses, fast-food eateries, and auto shops. The surrounding area's visual character is that of an urban area comprising single- and multi-family residential development and commercial land uses.

SENSITIVE VIEWER GROUPS

Potentially impacted viewers can be categorized into groups of shared sensitivity to changes in the existing scenic quality of a landscape. Viewer sensitivity (or public concern) for the scenic quality of a landscape or particular view is informed by the activity in which a user is engaged at the time something is visible. Further considerations include the number of viewers, duration of exposure, and degree of public interest in a particular view. For example, highly sensitive viewers are generally assumed to include residents, recreationists, and motorists traveling on designated scenic highways. Less sensitive viewer groups are assumed to include viewers from commercial or industrial type land uses, or recreational users using motorized equipment such as off-highway vehicles.

The project site is visible by two primary sensitive viewer groups—campus users and neighborhood residents—and one less sensitive viewer group—motorists using the streets adjacent to the high school. Campus users include students, faculty, and staff who are present on the Fremont High School campus each school day. Neighborhood residents include residents of the homes adjacent to the project site on 46th, 47th, and Ygnacio avenues. Campus users and neighborhood residents are considered to be the most sensitive viewer groups because of the duration of exposure and their degree of interest in the project site's view. Their exposure is considered long term, and their interests in the view are considered to relate to both the visual quality and the character of the area.

Motorists using Foothill Boulevard, High Street, Ygnacio Avenue, 46th Avenue, and 47th Avenue are considered less sensitive viewers because of the short duration of exposure to the view and their interest in the view, which is primarily for circulation purposes. From Foothill Boulevard, motorists have views of Fremont High School to the east, and of commercial development and undeveloped land to the west, as well as streetlights, billboards, overhead utility lines, and a few trees. From High Street, motorists have views of Fremont High School to the south, commercial development and a church to the north, and a few trees, streetlights, and overhead utility lines.

Courtyard Adjacent to Ygnacio Avenue

Gymnasium with Athletic Field in Background

Main Courtyard and 47th Avenue Entrance

Main Courtyard and Buildings B and C

Source: Michael Baker International; 2016.

FIGURE 3.2-1
Existing Setting Photos

Michael Baker INTERNATIONAL

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Driving east on High Street, motorists also have distant views of the Oakland Hills. From Ygnacio, 46th, and 47th avenues, motorists have views of Fremont High School to the north and west, and of single-family residences to the south and east.

SCENIC VISTAS

According to the California Scenic Highway Mapping System (Caltrans 2016), portions of Interstate 580 (I-580) and Interstate 680 (I-680) and a portion of State Route 84 (SR 84) in Alameda County are officially designated scenic highways. The remaining portions of I-580 and I-680 in Alameda County are eligible state scenic highways but are not officially designated. The project site is located approximately 0.75 mile from the officially designated portion of I-580, approximately 11 miles from the officially designated portion of I-680, and approximately 19 miles from the officially designated portion of SR 84. None of these highways are visible from the project site, and the project site is not visible from these highways.

The project site is not used as a viewing point and therefore is not considered a setting for a scenic vista. Views of the San Francisco Bay, the Oakland Hills, or other visual resources in Oakland are not available from the street level of the project site. Views of these resources are available from certain second-story windows on the project site.

LIGHTING AND GLARE

Sources of nighttime lighting on and near the project site include pole-mounted streetlights, parking lot lighting, exterior building lighting, and interior light escaping through building doors and windows. Source of daytime glare include the reflection of sunlight off building windows and parked vehicle windows. Oakland is classified as Lighting Zone 3 (LZ3), urban area, under the California Energy Commission (CEC) outdoor lighting standards (CEC 2016; US Census Bureau 2015).

3.2.2 REGULATORY FRAMEWORK

STATE

State Scenic Highway Program

In 1963, the California Legislature created the scenic highway program to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to state highways. The state regulations and guidance governing the scenic highway program are found in the Streets and Highways Code, Section 260 et seq. A highway may be designated scenic depending on how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes on the traveler's enjoyment of the view. A scenic corridor is the land generally adjacent to and visible from the highway and is identified using a motorist's line of vision. A reasonable boundary is selected when the view extends to the distant horizon.

Nighttime Sky – Title 24 Outdoor Lighting Standards

The CEC regulates the energy efficiency of outdoor lighting for residential and nonresidential development. The standards, put in place in 2005, and updated in 2013, are intended to improve the quality of outdoor lighting and reduce the impacts of light pollution, light trespass, and glare. The standards regulate lighting characteristics such as maximum power and brightness, shielding, and sensor controls to turn lighting on and off. Different lighting standards are set by classifying

areas by outdoor lighting zone. The CEC defines the boundaries of outdoor lighting zones based on the US Census Bureau boundaries for urban and rural areas and the legal boundaries of wilderness and park areas. Areas are designated as LZ1 (dark – parks, recreation, wildlife preserves), LZ2 (rural), and LZ3 (urban). Lighting requirements for dark and rural areas are stricter in order to protect the areas from new sources of light pollution and light trespass.

LOCAL

Although City of Oakland regulations do not apply to lands under OUSD jurisdiction, the District will consider the following local regulations during project implementation and implement them as best practices when deemed necessary.

City of Oakland Municipal Code

Oakland Municipal Code Title 17, Planning Code, provides development standards for each land use zone in the city. The development standards include building height limits, building density, building design, landscaping standards, setback requirements, sign regulations, and open space requirements. The code promotes good design and careful planning of development projects to enhance the visual environment and preserve the historic character of Oakland.

The City's development review process includes the review of preliminary plans and the consideration of public input by the Zoning Administrator, the Planning Commission, and the City Council. Oakland's Zoning Division reviews private and public development applications for conformance with City plans, ordinances, and policies related to zoning, urban design, subdivision, and the California Environmental Quality Act (CEQA).

City of Oakland Design Guidelines

The City has outlined design guidelines for various types of development projects in Oakland. The guidelines build on the City's zoning regulations to provide descriptive design guidelines that are transparent and straightforward. The design guidelines for corridors and commercial areas, which are applicable to this project site, are intended to enhance existing neighborhoods, encourage high quality design and construction, utilize sustainability design techniques, and create a safe urban environment.

The City has adopted guidance for Crime Prevention Through Environmental Design, which outlines ways in which buildings can be designed to improve safety and security. These features include the use of interior and exterior lighting, the configuration of windows and doors to maintain visibility, landscaping that does not create blind spots or hiding spots, and clearly defined property lines and parking areas.

City of Oakland Outdoor Lighting Standards

The City developed guidance for outdoor lighting in Oakland applicable to City streetlights, City properties, and private development projects on public rights-of-way. The lighting standards establish the requirements related to light pollution, glare, safety, security, and energy efficiency. The requirements are intended to ensure that outdoor lighting will be designed in such a way to limit uplighting, minimize light pollution, and not introduce glare to pedestrians and drivers.

3.2.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Per the CEQA Guidelines, Appendix G, an aesthetic or visual resource impact is considered significant if implementation of the project would result in any of the following:

1) Have a substantial adverse effect on a scenic vista.

2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

3) Substantially degrade the existing visual character or quality of the site and its surroundings.

4) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

As described in the Existing Setting subsection, the project site is not used as a viewing point and therefore is not considered a setting for a scenic vista. Although views are available of the San Francisco Bay, the Oakland Hills, or any other visual resources in Oakland from the second story of buildings, such views would be maintained and would not be hindered by project implementation. These views are only available to campus users and not to the general public. Additionally, the project would not substantially change the existing physical features of the project site, which would continue to operate as a school after the alterations and improvements. Views of the site from the surrounding neighborhood would remain essentially unchanged, with the exception of changes in circulation and lighting. Therefore, Standard of Significance 1 is not discussed further, as the project would have **no impact** on scenic vistas.

As described in the Existing Setting subsection, the project site is not located in the vicinity of any officially designated state scenic highways. Therefore, Standard of Significance 2 is not discussed further, as the project would have **no impact** on visual resources in a state scenic highway.

METHODOLOGY

The following impact analysis is based on field review of the project site, review of topographic conditions and aerial photographs, and review of the project description. This analysis is based on anticipated changes on the site from project implementation.

PROJECT IMPACTS AND MITIGATION MEASURES

Degrade Visual Character or Quality (Standard of Significance 3)

Impact 3.2.1 The project would not permanently degrade the visual character or quality of the project site. Construction of the project would temporarily degrade the visual character and quality of the project site during demolition and renovation activities. This impact would be **less than significant with mitigation incorporated**.

Generally, the key factors in determining the potential impact on visual character and quality are based on overall visual change/contrast, dominance, and view blockage. An adverse visual

impact may occur when a project (1) perceptibly and substantially changes the existing physical features of the landscape that are characteristic of the region or locale; (2) introduces new features to the physical landscape that are perceptibly uncharacteristic of the region or locale or that become visually dominant from common view points; or (3) blocks or completely obscures scenic resources within the landscape. The degree of impact depends on how noticeable the adverse change might be to sensitive viewer groups.

The project site is currently developed as a high school with academic buildings, an auditorium, a cafeteria, a library, portable classrooms, and an athletic field. The project would renovate several existing buildings and construct a new academic building, a gymnasium, a football/soccer field, and a wellness center (**Figure 2.0-4, Conceptual Site Plan**).

Short-Term

Project construction would involve demolition, trenching for utilities, excavation and grading, and building construction and renovation activities. These activities would temporarily degrade the existing visual character and quality of the project site through the introduction of equipment and materials, the movement of soil, and the demolition of existing buildings. This is a **potentially significant** impact, and mitigation measure **MM 3.2.1** would be required.

Long-Term

The project would not permanently change the existing physical features of the project site, and the school would accommodate the same number of students. The renovations of existing buildings and the construction of new buildings would improve the visual appearance of the project site by modernizing building design and improving the organization of campus buildings.

The project would reconfigure the campus circulation system to allow for more open lines of sight and to facilitate pedestrian and emergency access. The area between the existing athletic field and auditorium would be improved with a new visitor parking lot, student drop-off area, accessible parking, and the establishment of a school entry plaza in front of the library with upgraded landscaping, which would generally improve the project site's visual appearance.

The new soccer/football field would be constructed in the location of the existing athletic field and the existing gymnasium. The field would include a four-lane track, visitor bleachers, home bleachers with a press box, a scoreboard, and nighttime lighting to accommodate evening practices and games. These improvements would be consistent with the overall character of the site and would not degrade the visual quality of the campus.

Overall, the project would improve the visual appearance of the project site by updating the design and organization of existing buildings, improving site circulation, and upgrading landscaping. The project site would maintain its visual character as a campus with institutional buildings, while the project area would maintain its suburban neighborhood character. The project would not involve any notable changes to the project site's appearance or block scenic views for the two identified sensitive viewer groups: motorists and neighborhood residents Therefore, the long-term development of the project would have a **less than significant** impact on the visual character and quality of the project site.

Mitigation Measures

MM 3.2.1 Prior to construction, the District shall install temporary fencing around the construction areas on the project site. The fencing shall remain in place for the duration of demolition and construction activities.

Nighttime Light and Increased Overall Lighting and Glare (Standard of Significance 4)

Impact 3.2.2 The project would include the addition of new outdoor lighting fixtures, which would result in an increase in overall lighting and create new sources of nighttime light. This impact would be **less than significant with mitigation**.

The project site is currently developed as a high school with academic buildings, an auditorium, a cafeteria, a library, portable classrooms, and an athletic field. The project would renovate several existing buildings and construct a new academic building, a gymnasium, a football/soccer field, and a wellness center (**Figure 2.0-4, Conceptual Site Plan**). The project would not substantially change the existing physical features of the project site, and the school would accommodate the same number of students.

Lighting

As part of project construction, new outdoor lighting would be installed to improve safety and security on campus. A formal outdoor plaza would be established at the corner of Foothill Boulevard and High Street with a prominent monument sign and an electronic marquee. Additionally, the reconfiguration of the football/soccer field would include the installation of nighttime lighting to allow for games and practices at night. This would be a substantial increase in the amount of light on campus. The impact would be **potentially significant**, and mitigation measure **MM 3.2.2** would be required.

Glare

The project would not substantially increase the amount of glare on-site, as the project would not include reflective building materials, a greater number of parked cars, or other potential sources of glare. Therefore, this impact would be **less than significant**.

Mitigation Measures

MM 3.2.2 The District shall develop a lighting plan as part of final construction specifications. The lighting plan shall incorporate the Oakland Outdoor Lighting Standards, including the requirements for glare, light pollution, safety, security, and energy efficiency.

3.2.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The project site and Oakland as a whole must be considered for the purpose of evaluating cumulative impacts related to aesthetics. The project's cumulative setting considers the project and planned, proposed, and approved development in Oakland. These land use changes and developments have the potential to adversely affect visual character and quality of the city.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts to Visual Resources and Aesthetics

Impact 3.2.3 The project would not result in a significant contribution to the cumulative degradation of visual character or quality or illumination of the night sky. This impact would be **less than cumulatively considerable**.

As discussed under Impact 3.2.1, the project would result in modifications to a previously developed site, which would not substantially degrade its visual character or quality or impact any scenic vistas. Therefore, the proposed project's contribution to cumulative visual impacts in the region would be **less than cumulatively considerable**.

As discussed under Impact 3.2.2, the project would add new lighting fixtures to the project site that could contribute to a cumulative increase in nighttime lighting and illumination of the night sky. However, the project would implement mitigation measure **MM 3.2.2,** which would require the submittal of a lighting plan that complies with the Oakland Outdoor Lighting Standards. Therefore, the proposed project's contribution to cumulative lighting impacts in the city would be **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

Caltrans (California Department of Transportation). 2016. California Scenic Highway Mapping System, Alameda County. Accessed November 2016. http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/.

CEC (California Energy Commission). 2016. Determination of Outdoor Lighting Zones and Adopted Local Outdoor Lighting Ordinances. http://www.energy.ca.gov/title24/2008standards/outdoor_lighting/.

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This section examines the air quality in Oakland and the region, includes a summary of applicable air quality regulations, and analyzes potential air quality impacts associated with the proposed project.

A summary of the impact conclusions related to air quality is provided below.

Impact Number	Impact Topic	Impact Significance
3.3.1	Violate Air Quality Standards – Short-Term Construction Emissions	Less than significant with mitigation
3.3.2	Violate Air Quality Standards – Long-Term Operational Emissions	Less than significant
3.3.3	Conflict with the Bay Area 2010 Clean Air Plan	No impact
3.3.4	Exposure to Toxic Air Contaminants During Construction	Less than significant
3.3.5	Exposure to Toxic Air Contaminants During Operations	No impact
3.3.6	Creation of Odors	Less than significant
3.3.7	Cumulatively Considerable Increase in Nonattainment Criteria Pollutants	Less than cumulatively considerable

3.3.1 EXISTING SETTING

SAN FRANCISCO BAY AREA AIR BASIN

The proposed project is located in the San Francisco Bay Area Air Basin (SFBAAB). The Bay Area Air Quality Management District (BAAQMD) is the regional air quality agency for SFBAAB, which comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, the southern portion of Sonoma County, and the southwestern portion of Solano County. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions.

Climate is primarily affected by marine air flow and the basin's proximity to the San Francisco Bay. Within the SFBAAB, Oakland is in the Northern Alameda/Western Contra Costa Counties climatological subregion. This climatological subregion stretches from Richmond to San Leandro. Its western boundary is defined by the bay and its eastern boundary by the Oakland-Berkeley Hills. The Oakland-Berkeley Hills have a ridgeline height of approximately 1,500 feet, a significant barrier to air flow. The subregion's most densely populated area is in a strip of land between the bay and the lower hills.

In this area, marine air traveling through the Golden Gate, as well as across San Francisco and through the San Bruno Gap, is a dominant weather factor. The Oakland-Berkeley Hills cause the westerly flow of air to split off to the north and south of Oakland, which causes diminished wind speeds. The prevailing winds for most of this subregion are from the west. At the northern end, near Richmond, prevailing winds are from the south-southwest.

Air Pollution Potential

The air pollution potential is lowest for the parts of the subregion that are closest to the bay, due largely to good ventilation and less influx of pollutants from upwind sources. The occurrence of light winds in the evenings and early mornings occasionally causes elevated pollutant levels. The air pollution potential at the northern (Richmond) and southern (Oakland, San Leandro) parts of the subregion is marginally higher than in communities directly east of the Golden Gate because of the lower frequency of strong winds.

The subregion contains a variety of industrial air pollution sources. Some industries are quite close to residential areas. The subregion is also traversed by frequently congested major freeways. Traffic and congestion, and the motor vehicle emissions they generate, are increasing.

AIR POLLUTANTS OF CONCERN

Air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. These regulated air pollutants are known as criteria air pollutants and are categorized into primary and secondary pollutants. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_X), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$), lead, and fugitive dust are primary air pollutants. Of these, CO, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NO_X are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and nitrogen dioxide (NO_2) are the principal secondary pollutants. **Table 3.3-1** includes a description of each of the primary and secondary criteria air pollutants and their known health effects.

TABLE 3.3-1
CRITERIA AIR POLLUTANTS – SUMMARY OF COMMON SOURCES AND EFFECTS

Pollutant	Major Man-Made Sources	Human Health & Welfare Effects
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, effecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities and industrial sources.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (NOx) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Particulate Matter (PM_{10} & $PM_{2.5}$)	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).

Pollutant	Major Man-Made Sources	Human Health & Welfare Effects
Sulfur Dioxide (SO_2)	A colorless, nonflammable gas formed when fuel containing sulfur is burned. Examples are refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, can damage marble, iron and steel; damage crops and natural vegetation. Impairs visibility.

Source: CAPCOA 2011

AMBIENT AIR QUALITY

Ambient air quality in Oakland, and thus at the project site, can be inferred from measurements conducted at nearby air quality monitoring stations. Existing levels of ambient air quality and historical trends and projections in the vicinity of Oakland are documented by measurements made by the BAAQMD, the air pollution regulatory agency in the San Francisco Bay Area Air Basin that maintains air quality monitoring stations which process ambient air quality measurements.

O_3, PM_{10}, and $PM_{2.5}$ are the pollutants most intensely affecting the SFBAAB. The 9925 International Boulevard air quality monitoring station (in Oakland) is the closest station to the project site, approximately 3 miles to the southeast. This station monitors ambient concentrations of O_3, PM_{10}, and $PM_{2.5}$. Ambient emission concentrations will vary due to localized variations in emission sources and climate and should be considered generally representative of ambient concentrations in Oakland.

Table 3.3-2 summarizes the published data since 2012 from the 9925 International Boulevard air quality monitoring station for each year that monitoring data is provided.

TABLE 3.3-2
SUMMARY OF AMBIENT AIR QUALITY DATA

Pollutant Standards	2013	2014	2015
Ozone			
Max 1-hour concentration (ppm)	0.076	0.083	0.094
Max 8-hour concentration (ppm) (state/federal)	0.064 / 0.064	0.069 / 0.068	0.074 / 0.074
Number of days above state 1-hour standard	0	0	0
Number of days above state/federal 8-hour standard	0 / 0	0 / 0	0 / 0
Respirable Particulate Matter (PM_{10})			
Max 24-hour concentration ($\mu g/m^3$) (state/federal)	— / —	— / —	— / —
Number of days above state/federal standard	— / —	— / —	— / —
Fine Particulate Matter ($PM_{2.5}$)			
Max 24-hour concentration ($\mu g/m^3$) (state/federal)	37.9 / 37.9	37.6 / 37.6	44.7 / 44.7
Estimated number of days above 24-hour standard	2.0	1.0	1.0

Source: CARB 2016
Notes: $\mu g/m^3$ = micrograms per cubic meter; ppm = parts per million
— = No data is currently available from CARB to determine the value.
** Only the months of September through December are recorded for 2015.*

As previously stated, O_3, PM_{10}, and $PM_{2.5}$ are the pollutants most affecting the SFBAAB. The US Environmental Protection Agency (EPA) and the State of California have established health-

based ambient air quality standards (CAAQS) for 11 air pollutants: O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, lead, sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Air quality standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

Table 3.3-3 shows the federal and state attainment status for the SFBAAB and thus for Oakland. Areas with air quality that exceed adopted air quality standards are designated as nonattainment areas for the relevant air pollutants, while areas that comply with air quality standards are designated as attainment areas for the relevant air pollutants. The air basin's current attainment status with regard to federal and state ambient air quality standards is summarized in **Table 3.3-3**. The region is nonattainment for federal O_3 and $PM_{2.5}$ standards, as well as for state O_3, PM_{10}, and $PM_{2.5}$ standards (BAAQMD 2016).

TABLE 3.3-3
FEDERAL AND STATE AMBIENT AIR QUALITY ATTAINMENT STATUS FOR THE SAN FRANCISCO BAY AREA AIR BASIN

Pollutant	Averaging Time	California Standards		National Standards	
		Concentration	Attainment Status	Concentration	Attainment Status
Ozone (O_3)	8 Hours	0.070 ppm (137$\mu g/m^3$)	N	0.075 ppm	N
	1 Hour	0.09 ppm (180 $\mu g/m^3$)	N	No standard	Not applicable
Carbon Monoxide (CO)	8 Hours	9.0 ppm (10 mg/m^3)	A	9 ppm (10 mg/m^3)	A
	1 Hour	20 ppm (23 mg/m^3)	A	35 ppm (40 mg/m^3)	A
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 $\mu g/m^3$)	A	0.100 ppm	U
	Annual Arithmetic Mean	0.030 ppm (57 $\mu g/m^3$)	—	0.053 ppm (100 $\mu g/m^3$)	A
Sulfur Dioxide (SO_2)	24 Hours	0.04 ppm (105 $\mu g/m^3$)	A	0.14 ppm (365/$\mu g/m^3$)	A
	1 Hour	0.25 ppm (665 $\mu g/m^3$)	A	0.075 ppm (196/$\mu g/m^3$)	A
	Annual Arithmetic Mean	—	—	0.030 ppm (80/$\mu g/m^3$)	A
Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 $\mu g/m^3$	N	No standard	Not applicable
	24 Hours	50 $\mu g/m^3$	N	150 $\mu g/m^3$	U
Particulate Matter – Fine ($PM_{2.5}$)	Annual Arithmetic Mean	12 $\mu g/m^3$	N	15 $\mu g/m^3$	U/A
	24 Hours			35 $\mu g/m^3$	N
Lead	30-Day Average	1.5 $\mu g/m^3$	—	—	A
	Calendar Quarter	—	—	1.5 $\mu g/m^3$	A
	Rolling 3-Month Average	—	—	0.15 $\mu g/m^3$	—

Source: BAAQMD 2016

Notes: A = attainment; N = nonattainment; U = unclassified

mg/m^3 = milligrams per cubic meter; ppm = parts per million; ppb = parts per billion; $\mu g/m3$ = micrograms per cubic meter

TOXIC AIR CONTAMINANTS

In addition to the criteria air pollutants listed above, another group of pollutants, commonly referred to as toxic air contaminants (TACs) or hazardous air pollutants, can result in health effects that can be quite severe. The California Air Resources Board (CARB) (1999) has designated 244 compounds as TACs. Many TACs are confirmed or suspected carcinogens, or are known or suspected to cause birth defects or neurological damage. Secondly, many TACs can be toxic at very low concentrations. For some chemicals, such as carcinogens, there are no thresholds below which exposure can be considered risk-free.

Industrial facilities and mobile sources are significant sources of TACs. However, common urban facilities also produce TAC emissions, such as gasoline stations (benzene), hospitals (ethylene oxide), and dry cleaners (perchloroethylene). Automobile exhaust also contains TACs such as benzene and 1,3-butadiene. In addition, diesel particulate matter (diesel PM) is a TAC. Diesel PM differs from other toxic air contaminants in that it is not a single substance but rather a complex mixture of hundreds of substances. BAAQMD (2011) research indicates that mobile-source emissions of diesel PM, benzene, and 1,3-butadiene represent a substantial portion of the ambient background risk from toxic air contaminants in the San Francisco Bay Area Air Basin.

The health effects associated with TACs are diverse and generally are assessed locally rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute affects such as eye watering, respiratory irritation (a cough), runny nose, throat pain, and headaches. For evaluation purposes, TACs are separated into carcinogens and non-carcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. Non-carcinogenic substances differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis (BAAQMD 2011).

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others because of the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases.

Residential areas are considered to be sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Children are considered more susceptible to the health effects of air pollution because of their immature immune systems and developing organs (OEHHA 2007). As such, schools are also considered sensitive receptors because children are present for extended durations and engage in regular outdoor activities. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation.

3.3.2 REGULATORY FRAMEWORK

FEDERAL

The US Environmental Protection Agency is the federal agency responsible for setting and enforcing the federal ambient air quality standards for atmospheric pollutants. The EPA regulates

emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) describing a strategy for the means to attain the federal standards for ozone and particulate matter. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs.

Clean Air Act

The federal Clean Air Act, as amended, establishes air quality standards, divided into primary and secondary standards, for several pollutants. Primary standards are designed to protect public health, and secondary standards are intended to protect public welfare from effects such as visibility reduction, soiling, nuisance, and other forms of damage. The act requires that regional plans be prepared for nonattainment areas illustrating how the federal air quality standards could be met.

Regulation of TACs is achieved through federal and state controls on individual sources. The 1990 Clean Air Act Amendments offered a comprehensive plan for achieving significant reduction in both mobile and stationary source emissions of certain designated hazardous air pollutants, with a goal of achieving the EPA's one in 1 million cancer risk from toxic air contaminants.

STATE

CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs in the state. In this capacity, CARB conducts research, sets state ambient air quality standards, compiles emission inventories, develops suggested control measures, and oversees local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

Air Quality Attainment Plans

The BAAQMD is responsible for preparing plans to attain ambient air quality standards in the San Francisco Bay Area Air Basin. The BAAQMD prepares ozone attainment plans for the national ozone standard and clean air plans for the California standard, both in coordination with the Metropolitan Transportation Commission and the Association of Bay Area Governments (ABAG).

With respect to applicable air quality plans, the BAAQMD prepared the Bay Area 2010 Clean Air Plan to address nonattainment of the national 1-hour ozone standard in the air basin. The Clean Air Plan defines a control strategy that the BAAQMD and its partners will implement to (1) reduce emissions and decrease ambient concentrations of harmful pollutants; (2) safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily impacted by air pollution; and (3) reduce greenhouse gas (GHG) emissions to protect the climate. It is important to note that in addition to updating the previously prepared ozone plan, the Clean Air Plan also serves as a multipollutant plan to protect public health and the climate. This effort to develop its first-ever multipollutant air quality plan is a voluntary initiative by the BAAQMD. The district believes that an integrated and comprehensive approach to planning is critical to respond to air quality and climate protection challenges in the years ahead. In its dual role as an update to the state ozone plan and a

multipollutant plan, the Bay Area 2010 Clean Air Plan addresses four categories of pollutants (BAAQMD 2010):

- Ground-level ozone and its key precursors, ROG and NO_X
- Particulate matter: primary $PM_{2.5}$, as well as precursors to secondary $PM_{2.5}$
- Air toxics
- Greenhouse gases

The Clean Air Plan establishes local guidance for the SIP, which provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards.

Currently, the BAAQMD is updating the 2010 Bay Area Clean Air Plan in partnership with ABAG, the Bay Conservation and Development Commission, and the Metropolitan Transportation Commission.

The 2016 Clean Air Plan/Regional Climate Protection Strategy will be a road map for the air district's efforts over the next few years to reduce air pollution and protect public health and the global climate. The Clean Air Plan is required by the California Clean Air Act to identify potential rules, control measures, and strategies for the Bay Area to implement in order to meet state standards for ozone, or "smog." The plan will include the Bay Area's first-ever comprehensive Regional Climate Protection Strategy, which will identify potential rules, control measures, and strategies that the BAAQMD can pursue to reduce greenhouse gases in the Bay Area.

Toxic Air Contaminant Regulations

The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." The State of California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987).

The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as toxic air contaminants. Once a toxic air contaminant is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance (a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions. To date, CARB has established formal control measures for 11 TACs, all of which are identified as having no safe threshold.

Air toxics from stationary sources are also regulated in California under the Air Toxics "Hot Spot" Information and Assessment Act of 1987. Under AB 2588, toxic air contaminant emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High-priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

California Diesel Risk Reduction Plan

CARB (2010) prepared and adopted the Diesel Risk Reduction Plan (DRRP), which recommends many control measures to reduce the risks associated with diesel PM and achieve a reduction goal of 85 percent by 2020. The DRRP incorporates measures to reduce emissions from diesel-

fueled vehicles and stationary diesel-fueled engines. CARB's ongoing efforts to reduce diesel-exhaust emissions from these sources include the development of specific statewide regulations, which are designed to further reduce diesel PM emissions. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards to reduce diesel PM emissions.

Since initial adoption of the DRRP in September 2000, CARB has adopted numerous rules related to the reduction of diesel PM from mobile sources, as well as the use of cleaner-burning fuels. Transportation sources addressed by these rules pertaining to Oakland include public transit buses, school buses, on-road heavy-duty trucks, and off-road heavy-duty construction equipment.

REGIONAL

Bay Area Air Quality Management District

The BAAQMD attains and maintains air quality conditions in the San Francisco Bay Area Air Basin through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The BAAQMD's clean air strategy includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, and issuance of permits for stationary sources of air pollution. The BAAQMD also inspects stationary sources of air pollution and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by the federal Clean Air Act, the Clean Air Act Amendments, and the California Clean Air Act.

Rules and Regulations

The BAAQMD develops regulations to improve air quality and protect the health and welfare of Bay Area residents and their environment. BAAQMD rules and regulations most applicable to the project area include, but are not limited to, the following:

- **Regulation 2, Rule 2: New Source Review.** Requires any new source resulting in an increase of any criteria pollutant to be evaluated for adherence to best available control technology. For compression internal combustion engines, best available control technology requires that the generator be fired on California diesel fuel (fuel oil with a sulfur content less than 0.05 percent by weight and less than 20 percent by volume of aromatic hydrocarbons). All stationary internal combustion engines larger than 50 horsepower must obtain a Permit to Operate. If the engine is diesel fueled, it must also comply with the BAAQMD-administered Statewide Air Toxics Control Measure for Stationary Diesel Engines.

- **Regulation 7: Odorous Substances.** Establishes general limitations on odorous substances and specific emission limitations on certain odorous compounds.

- **Regulation 8, Rule 3: Architectural Coatings.** Limits the quantity of volatile organic compounds in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the district.

- **Regulation 14: Mobile Source Emissions Reduction Measures.** Includes measures to reduce emissions of air pollutants from mobile sources by reducing motor vehicle use and/or promoting the use of clean fuels and low-emission vehicles.

The above list includes rules and regulations most applicable to the proposed project. Additional rules and regulations may apply, depending on the sources proposed and the activities conducted.

BAAQMD Construction Mitigation Measures

The BAAQMD recommends quantifying a proposed project's construction-generated emissions implementing the Basic Construction Mitigation Measures as mitigation for dust and exhaust construction impacts in California Environmental Quality Act (CEQA) compliance documentation. If additional construction measures are required to reduce construction generated emissions, the Additional Construction Mitigation Measures should then be applied to mitigate construction impacts. **Table 3.3-4** identifies the Basic and Additional Construction Mitigation Measures. In addition, all projects must implement any applicable air toxic control measures. For example, projects that have the potential to disturb asbestos (from soil or building materials) must comply with all the requirements of CARB's air toxic control measures for construction, grading, quarrying, and surface mining operations.

TABLE 3.3-4
BAAQMD BASIC AND ADDITIONAL CONSTRUCTION MITIGATION MEASURES

Basic Construction Mitigation Measures
1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
8. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The air district's phone number shall also be visible to ensure compliance with applicable regulations.
Additional Construction Mitigation Measures
1. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.
2. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
3. Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.
4. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
5. The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.

Basic Construction Mitigation Measures
6. All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
7. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel.
8. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.
9. Minimizing the idling time of diesel-powered construction equipment to 2 minutes.
10. The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOx reduction and 45 percent PM reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.
11. Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).
12. Requiring that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NOx and PM.
13. Requiring all contractors use equipment that meets CARB's most recent certification standard for off-road heavy duty diesel engines.

Source: BAAQMD 2011

3.3.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

This analysis evaluates the proposed project's impacts on air quality based on the standards identified in CEQA Guidelines Appendix G. An air quality impact is considered significant if the project would:

1) Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

2) Conflict with or obstruct implementation of any applicable air quality plan.

3) Expose sensitive receptors to substantial pollutant concentrations.

4) Create objectionable odors affecting a substantial number of people.

5) 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).

CEQA Guidance

The BAAQMD publishes air quality guidelines to assist local jurisdictions and lead agencies in complying with CEQA requirements regarding potentially adverse impacts to air quality. The district's guidelines were updated in June 2010 to include new thresholds of significance (2010 thresholds) adopted by the BAAQMD Governing Board on June 2, 2010. The 2010 thresholds

included new thresholds of significance for construction emissions, cumulative TAC impacts, and fine particulate matter concentration increases. The BAAQMD's guidelines were further updated in May 2011.

On March 5, 2012, the Alameda County Superior Court issued a judgment in connection with a lawsuit filed by the Building Industry Association, finding that the BAAQMD had failed to comply with CEQA when it adopted the 2010 thresholds. The court did not determine whether the 2010 thresholds were valid on the merits, but found that adoption of the 2010 thresholds was a "project" under CEQA. The court issued a writ of mandate ordering the BAAQMD to set aside the 2010 thresholds and cease dissemination of them until the district had complied with CEQA. However, the court did not address the Building Industry Association's remaining arguments. The BAAQMD appealed the Alameda County Superior Court's decision and the case went to the Court of Appeal, First Appellate District.

After the Alameda County Superior Court's decision, the BAAQMD stopped recommending the 2010 thresholds be used as a generally applicable measure of a project's significant air quality impacts. The BAAQMD released a new version of its CEQA air quality guidelines in May 2012 removing the 2010 thresholds. The BAAQMD, however, recommended that lead agencies determine appropriate air quality thresholds of significance based on substantial evidence in the record.

On August 13, 2013, the Court of Appeals reversed the Superior Court's decision, finding that the BAAQMD's thresholds were not a "project" under CEQA and, as such, did not require CEQA review. On November 26, 2013, the California Supreme Court by unanimous vote granted review, but solely to address the legal issue of whether CEQA review is confined to an analysis of a proposed project's impacts on the existing environment or also requires analysis of the existing environment's impacts on the proposed project and its future occupants and users. On December 17, 2015, the Supreme Court of California issued its ruling, concluding that agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents. However, when a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users. In those specific instances, it is the project's impact on the environment—and not the environment's impact on the project. Given the recent date of the Supreme Court decision compared with the writing of this EIR, the BAAQMD has yet to announce a recommendation regarding use of its 2010 thresholds. (A petition for rehearing, filed August 25, 2016, was denied September 9, 2016.) In the meantime, jurisdictions may exercise their discretion and utilize said thresholds based on a determination that they are supported by substantial evidence.

For purposes of this analysis, the Oakland Unified School District (OUSD) has determined, in its discretion, to utilize the BAAQMD's thresholds, finding that the thresholds are supported by substantial evidence. Using these criteria, an air quality impact is considered significant if the project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The BAAQMD thresholds of significance for evaluating construction and operational air quality impacts are listed in **Table 3.3-5**.

TABLE 3.3-5
BAAQMD SIGNIFICANCE THRESHOLDS

Air Pollutant	Construction Activities	Operations	
Reactive Organic Gases (ROG)	54 pounds/day	54 pounds/day	10 tons/year
Nitrogen Oxides (NO_x)	54 pounds/day	54 pounds/day	10 tons/year
Coarse Particulates from exhaust (exhaust PM_{10})	82 pounds/day	82 pounds/day	15 tons/year
Fine Particulates from exhaust (exhaust $PM_{2.5}$)	54 pounds/day	54 pounds/day	10 tons/year
Carbon Monoxide (CO)	None	None	None
Sulfur Oxides (SO_x)	None	None	None

Source: BAAQMD 2011

*Note: The BAAQMD recommends Basic Construction Mitigation Measures (see **Table 3.3-4**) during construction in order to achieve less than significant impacts related to fugitive dust emissions (fugitive dust PM_{10} and $PM_{2.5}$) during construction activities.*

Toxic Air Contaminant Thresholds

In addition to the above thresholds relating to criteria air pollutants and carbon monoxide hot spots, this section evaluates the project's impacts with respect to toxic air contaminants. The BAAQMD regulates levels of air toxics through a permitting process that covers both construction and operation. If emissions of TACs exceed an excess cancer risk level of more than 10 in one million or a non-cancer hazard index greater than 1.0, the project would result in a significant impact.

METHODOLOGY

Air quality impacts were assessed in accordance with methodologies recommended by CARB and the BAAQMD, based on the maximum development potential assumptions provided by the Oakland Unified School District. Criteria air pollutant emissions were modeled using the California Emissions Estimator Model (CalEEMod) (see **Appendix AQ**). CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operation from a variety of land use projects.

Project construction-generated emissions were calculated using the CalEEMod computer program accounting for a construction time frame of approximately 39 months in three phases. Phases 1 and 2 would take place in consecutive order; Phases 2 and 3 would overlap. The project would substantially modify the project site through a combination of building demolition and new construction.

IMPACTS AND MITIGATION MEASURES

Violate Air Quality Standard or Contribute Substantially to an Air Quality Violation: Short-Term Construction Emissions (Standard of Significance 1)

Impact 3.3.1 The project could result in short-term construction emissions that could violate or substantially contribute to a violation of federal and state standards. This impact would be **less than significant with mitigation incorporated**.

The project would generate short-term emissions from construction activities such as site grading, asphalt paving, building construction, and architectural coatings (e.g., painting). Common

construction emissions include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel- and gasoline-powered equipment, portable auxiliary equipment, and worker commute trips. During construction, fugitive dust, the dominant source of PM_{10} and $PM_{2.5}$ emissions, is generated when wheels or blades disturb surface materials. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. Renovation of buildings can also generate PM_{10} and $PM_{2.5}$ emissions. Off-road construction equipment is often diesel-powered and can be a substantial source of NO_X emissions, in addition to PM_{10} and $PM_{2.5}$ emissions. Worker commute trips and architectural coatings are dominant sources of ROG emissions.

Predicted maximum daily construction-generated emissions for the project are summarized in **Table 3.3-6**.

TABLE 3.3-6
CONSTRUCTION-RELATED CRITERIA POLLUTANT AND PRECURSOR EMISSIONS – UNMITIGATED
(MAXIMUM POUNDS PER DAY)

Construction Year	ROG	NO_X	Exhaust PM_{10}	Exhaust $PM_{2.5}$	Fugitive Dust PM_{10}	Fugitive Dust $PM_{2.5}$
2018	19.21	**96.74**	5.22	4.85	19.57	10.33
2019	18.04	**81.59**	4.34	4.06	2.73	4.80
2020	17.20	**77.50**	4.01	3.72	19.57	10.33
2021	8.64	36.27	1.74	1.63	1.36	0.36
Maximum Daily Emissions of All Years of Construction	*19.21*	***96.74***	*5.22*	*4.85*	*19.57*	*10.33*
BAAQMD Potentially Significant Impact Threshold	54 pounds/day	54 pounds/day	82 pounds/day	54 pounds/day	Basic Construction Mitigation Measures	Basic Construction Mitigation Measures
Exceed BAAQMD Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**

*Source: CalEEMod version 2016.3.1. See **Appendix AQ** for emission model outputs.*

Notes: Project construction activities are assumed to occur over a 39-month period in three phases. Phases 1 and 2 would take place in consecutive order; Phases 2 and 3 would overlap.

As shown, all criteria pollutant emissions would remain below their respective thresholds, with the exception of NO_x emissions, which would surpass BAAQMD significance thresholds. This would be a potentially significant impact.

Mitigation Measures

Because NO_x emissions are projected to surpass the significance threshold and NO_x is directly associated with the use of diesel-powered construction equipment, mitigation measure **MM 3.3.1.a** is required. While projected emissions of PM_{10} and $PM_{2.5}$ would remain below significance thresholds, the project would still be required to adhere to the BAAQMD's Basic Construction Measures, which would further reduce PM_{10} and $PM_{2.5}$ emissions, and mitigation measure **MM 3.3.1b** is required.

MM 3.3.1a During construction activities, the Oakland Unified School District and/or its contractor shall ensure that all off-road diesel-fueled equipment (e.g., rubber-tired dozers, graders, scrapers, excavators, asphalt paving equipment, cranes, and tractors) is California Air Resources Board (CARB) Tier 4 Certified.[1]

MM 3.3.1b Prior to the issuance of grading or building permits, the Oakland Unified School District shall ensure that the Bay Area Air Quality Management District's (BAAQMD) Basic Construction Mitigation Measures are noted on the construction documents. These basic construction mitigation measures include the following:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- A publicly visible sign shall be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

[1] NO_x emissions are primarily associated with use of diesel-powered construction equipment (e.g., graders, excavators, rubber-tired dozers, tractor/loader/backhoes). The Clean Air Act of 1990 directed the EPA to study, and regulate if warranted, the contribution of off-road internal combustion engines to urban air pollution. The first federal standards (Tier 1) for new off-road diesel engines were adopted in 1994 for engines over 50 horsepower and were phased in from 1996 to 2000. In 1996, a Statement of Principles pertaining to off-road diesel engines was signed between the EPA, CARB, and engine makers (including Caterpillar, Cummins, Deere, Detroit Diesel, Deutz, Isuzu, Komatsu, Kubota, Mitsubishi, Navistar, New Holland, Wis-Con, and Yanmar). On August 27, 1998, the EPA signed the final rule reflecting the provisions of the Statement of Principles. The 1998 regulation introduced Tier 1 standards for equipment under 50 horsepower and increasingly more stringent Tier 2 and Tier 3 standards for all equipment with phase-in schedules from 2000 to 2008. As a result, all off-road, diesel-fueled construction equipment manufactured in 2006 or later has been manufactured to Tier 3 standards. On May 11, 2004, the EPA signed the final rule introducing Tier 4 emission standards, which are currently phased-in over the period of 2008–2015. The Tier 4 standards require that emissions of PM and NO_x be further reduced by about 90 percent. All off-road, diesel-fueled construction equipment manufactured in 2015 or later will be manufactured to Tier 4 standards.

Table 3.3-7 identifies the construction-generated emissions with implementation of mitigation measure **MM 3.3.1a**.

TABLE 3.3-7
CONSTRUCTION-RELATED CRITERIA POLLUTANT AND PRECURSOR EMISSIONS – MITIGATED
(MAXIMUM POUNDS PER DAY)

Construction Year	ROG	NO_X	Exhaust PM_{10}	Exhaust $PM_{2.5}$	Fugitive Dust PM_{10}	Fugitive Dust $PM_{2.5}$
2018	13.30	53.45	0.63	0.64	19.57	10.33
2019	13.00	52.73	0.57	0.57	2.73	4.80
2020	12.74	51.73	0.50	0.50	19.57	10.33
2021	6.47	25.27	0.17	0.18	1.36	0.36
Maximum Daily Emissions of All Years of Construction	*13.30*	*53.45*	*0.63*	*0.64*	*19.57*	*10.33*
BAAQMD Potentially Significant Impact Threshold	54 pounds/day	54 pounds/day	82 pounds/day	54 pounds/day	Basic Construction Mitigation Measures	Basic Construction Mitigation Measures
Exceed BAAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

*Source: CalEEMod version 2016.3.1. See **Appendix AQ** for emission model outputs.*

Notes: Project construction activities are assumed to occur over a 39-month period in three phases. Phases 1 and 2 would take place in consecutive order; Phases 2 and 3 would overlap.

Implementation of mitigation measures **MM 3.3.1a** and **MM 3.3.1b** would reduce NO_X emissions to a level below the BAAQMD significance threshold, reducing the impact to **less than significant.**

Violate Air Quality Standard or Contribute Substantially to an Air Quality Violation: Long-Term Operational Emissions (Standard of Significance 1)

Impact 3.3.2 The project would not result in long-term operational emissions that could violate or substantially contribute to a violation of federal and state standards. This impact would be **less than significant.**

The project would result in a negligible to net-zero increase in long-term operational emissions of criteria air pollutants and ozone precursors (i.e., ROG and NO_X) beyond the existing baseline. No changes to enrollment or staffing are proposed as part of the project. Further, no additional activities or events are proposed beyond what currently occurs on the campus. The project would not represent a new type of land use on the site or a wholly new land use or air emissions generation source; the project is the modernization of an existing facility as opposed to the construction of a wholly new facility. The purpose and objective of this project is to provide for greater educational opportunities to accommodate an existing school. When complete, the project would not increase existing traffic; thus, it would not increase existing traffic-generated GHG emissions.

Long-term operational emissions are summarized in **Table 3.3-8.** The projected emissions associated with proposed operations are compared to the existing baseline, which includes several buildings constructed in the 1930s that are currently in operation but would be demolished with implementation of the proposed project. As shown, daily or annual emissions thresholds would not be exceeded.

TABLE 3.3-8
LONG-TERM OPERATIONAL EMISSIONS

Source	Emissions					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer Emissions (Pounds per Day)						
Proposed Project	9.01	27.41	54.39	0.16	11.74	3.34
Existing Baseline	9.02	27.52	54.48	0.16	11.75	3.35
Difference	*-0.01*	*-0.11*	*-0.09*	*-0.00*	*-0.01*	*-0.00*
BAAQMD Potentially Significant Impact Threshold (Daily Emissions)	54 pounds/day	54 pounds/day	None	None	82 pounds/day	54 pounds/day
Exceed BAAQMD Daily Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Winter Emissions (Pounds per Day)						
Proposed Project	8.43	28.75	55.27	0.15	11.75	3.34
Existing Baseline	8.44	28.86	55.36	0.15	11.76	3.35
Difference	*-0.01*	*-0.11*	*-0.09*	*-0.00*	*-0.01*	*-0.00*
BAAQMD Potentially Significant Impact Threshold (Daily Emissions)	54 pounds/day	54 pounds/day	None	None	82 pounds/day	54 pounds/day
Exceed BAAQMD Daily Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Annual Emissions (Tons per Year)						
Proposed Project	1.36	4.07	7.53	0.02	1.62	0.46
Existing Baseline	1.36	4.09	7.55	0.02	1.62	0.46
Difference	*0.00*	*-0.02*	*0.00*	*0.00*	*0.00*	*0.00*
BAAQMD Potentially Significant Impact Threshold (Annual Emissions)	10 tons/year	10 tons/year	None	None	15 tons/year	10 tons/year
Exceed BAAQMD Annual Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

*Source: CalEEMod version 2016.3.1. See **Appendix AQ** for emission model outputs.*

As identified in **Table 3.3-3**, the San Francisco Bay Area Air Basin is listed as federal nonattainment for ozone and $PM_{2.5}$, and state nonattainment for ozone, PM_{10}, and $PM_{2.5}$. Ozone is a health threat to persons who already suffer from respiratory diseases, can cause severe ear, nose, and throat irritation, and increases susceptibility to respiratory infections. Particulate matter can adversely affect the human respiratory system. As shown in **Table 3.3-8**, the proposed project would result in a net-zero increase of ROG and $PM_{2.5}$.

The overall strategy for reducing air pollution and related health effects in the air basin is contained in the BAAQMD Bay Area 2010 Clean Air Plan. The plan includes control measures that reduce emissions to attain federal ambient air quality standards by their applicable deadlines, such as the application of available cleaner technologies, best management practices, and incentive programs, as well as development and implementation of zero- and near-zero technologies and control methods. CEQA thresholds of significance established by the BAAQMD are designed to meet the objectives of the Clean Air Plan and in doing so achieve attainment status with state standards. As noted above, the project would not exceed the thresholds of significance established by the BAAQMD for purposes of reducing air pollution and its deleterious health effects. Additionally, the proposed project would result in a decrease in operational criteria air pollutant emissions compared with the existing baseline. Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

Conflict with the Bay Area 2010 Clean Air Plan (Standard of Significance 2)

Impact 3.3.3 The project would not conflict with implementation of the Bay Area 2010 Clean Air Plan. The project would have **no impact**.

As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan that demonstrates the means to attain the federal standards. Similarly, under state law, the California Clean Air Act requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously stated, the BAAQMD prepared the Bay Area 2010 Clean Air Plan as a multipollutant plan to address the air basin's nonattainment status related to the national 1-hour ozone standard and the CAAQS, as well as particulate matter, air toxics, and greenhouse gases. The plan establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The Clean Air Plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, updated emission inventory methodologies for various source categories, and the latest population growth projections and vehicle miles traveled (VMT) projections for the region.

Criteria for determining consistency with the Clean Air Plan are defined by the following indicators:

- Consistency Criterion No. 1: The project supports the primary goals of the Clean Air Plan.
- Consistency Criterion No. 2: The project conforms to applicable control measures from the Clean Air Plan and does not disrupt or hinder the implementation of any Clean Air Plan control measures.

The primary goals to which Consistency Criterion No. 1 refer are compliance with the California and national ambient air quality standards. As evaluated above, the project would not exceed the short-term construction standards and would not violate air quality standards during construction with mitigation incorporated. Similarly, the project would not exceed the long-term

operational standards and would not violate air quality standards during project operation. Thus, no impact would occur.

The applicable Bay Area 2010 Clean Air Plan control measures to which Consistency Criterion No. 2 refer include Transportation Control Measures (TCM) C-2 and D-3 as well as Energy and Climate Measures (ECM) 1 and 4. As previously stated, the BAAQMD's 2010 Clean Air Plan provides local guidance for the SIP, which provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards. TCM C-2, Safe Routes to Schools and Safe Routes to Transit Programs Brief, seeks to facilitate safe routes to schools and transit through implementation of safe access for pedestrians and cyclists, and TCM D-3, Local Land Use Strategies, promotes land use patterns and infrastructure investments that support mixed-use development to facilitate walking, bicycling, and transit use. ECM 1, Energy Efficiency, seeks to increase energy efficiency at schools, and ECM 4, Shade Tree Planting, attempts to increase shading in urban and suburban communities. No other Clean Air Plan control measures are applicable to the project, and even those measures listed above are more pertinent to plan-level actions, such as a general plan update, than to an individual development project.

In terms of conformance with Clean Air Plan Transportation Control Measures, the project would bring expanded educational use to the area by modernizing several existing buildings on the campus. Campus modernization would provide an educational facility in a built environment (infill development). These aspects of the project would result in the generation of a reduced amount of air pollutants compared with greenfield development, commonly defined as development on land that has never been used. According to the EPA, redevelopments produce 32 to 57 percent less air pollutant emissions per capita relative to conventional developments (EPA 2011). This is because the number of daily vehicle trips and daily VMT associated with redevelopments tend to be lower compared with development on vacant land (EPA 2011). Therefore, the project would be consistent with both applicable Transportation Control Measures from the Clean Air Plan (TCM C-2 and TCM D-3).

Regarding conformance with the BAAQMD 2010 Clean Air Plan Energy and Climate Measures (ECM 1 and ECM 4), the project would be required to adhere to the California Building Energy Efficiency Standards, which require the design of building shells and building components to conserve energy. The standards offer builders better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses. Energy-efficient buildings require less electricity; increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. Therefore, the project would be consistent with all applicable control measures from the Clean Air Plan and would have **no impact**.

Mitigation Measures

None required.

Expose Sensitive Receptors to Substantial Toxic Air Contaminant Concentrations During Construction (Standard of Significance 3)

Impact 3.3.4 The project would not result in increased exposure of existing or planned sensitive land uses to construction-source toxic air contaminant emissions (i.e., diesel PM). This impact is **less than significant**.

Sensitive land uses are defined as facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and

people with illnesses. Examples of sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65 years old, children under the age of 14, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

Sources of construction-related TACs potentially affecting sensitive receptors include off-road diesel-powered equipment. Construction would result in the generation of diesel PM emissions from the use of off-road diesel equipment required for grading and excavation, paving, and other construction activities. The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer.

Construction would take place during the school year; however, all efforts would be made to reduce disturbance to students. Though the proposed project could create a hazard to the student population, these impacts are anticipated to be temporary and short term. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazards Assessment (2012, p. 11-3), assessments of health risks posed by air toxics should be based on a 70- or 30-year exposure period. As described above, project construction is anticipated to last approximately 39 months (3.25 years).

Furthermore, the use of diesel-powered construction equipment would be temporary and episodic and would occur over several locations isolated from one another. Construction projects contained on a site of this size represent less than significant health risk impacts due to (1) limitations on the off-road diesel equipment able to operate and thus a reduced amount of generated diesel PM, (2) the reduced amount of dust-generating ground disturbance possible compared to larger construction sites, and (3) the reduced duration of construction activities compared to the development of larger sites. Diesel PM and fugitive dust emissions would be further reduced considering that campus modernization would require the use of fewer construction materials and less intense usage of construction equipment compared with conventional school construction, built from the ground up on a vacant site. Additionally, future development would be subject to and would comply with California regulations limiting vehicle idling to no more than 5 minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable diesel PM emissions. Also, mitigation measure **MM 3.3.1a** requires the use of Tier 4 construction equipment, which can reduce emissions of particulate matter and nitrogen oxide by about 90 percent.

For these reasons and because diesel fumes disperse rapidly over relatively short distances, diesel PM generated by construction activities, in and of itself, would not be expected to expose sensitive receptors to substantial amounts of air toxics. Therefore, impacts would be **less than significant**.

Mitigation Measures

None required.

Expose Sensitive Receptors to Substantial Toxic Air Contaminant Concentrations During Operations (Standard of Significance 3)

Impact 3.3.5 The project would result in the development of a school (sensitive land use) near stationary or mobile-source TACs. The project would have **no impact**.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs potentially affecting sensitive receptors include commercial operations, such as gasoline stations and dry cleaners. Mobile sources of air toxics include freeways and major roadways. These roadways are sources of diesel particulate matter, which CARB has listed as a toxic air contaminant.

Project implementation would not result in the development of any sources of TACs. In April 2005, CARB released the Air Quality and Land Use Handbook: A Community Health Perspective, which offers guidance on siting sensitive land uses in proximity to sources of air toxics. According to this guidance document, CARB does not consider schools to be sources of air toxics. Areas of high carbon monoxide concentrations, or "hot spots," are typically associated with idling vehicles. Since no changes to enrollment or staffing are proposed as part of the project, and since no additional activities or events are proposed beyond what currently occurs on the campus, there is no potential to expose additional students to stationary or mobile TAC sources.

The project would not result in any increased TAC exposure during operation and would have **no impact**.

Mitigation Measures

None required.

Create Objectionable Odors Affecting a Substantial Number of People (Standard of Significance 4)

Impact 3.3.6 The proposed project would not include sources that could create objectionable odors affecting a substantial number of people or expose residents to existing sources of odor. Thus, this impact would be **less than significant**.

The BAAQMD does not have a recommended odor threshold for construction activities. For purposes of this analysis, it is recognized that heavy-duty construction equipment would emit odors. However, construction activities would be short term and finite in nature. Furthermore, equipment exhaust odors would dissipate quickly and are common in an urban environment. For these reasons, the project is not anticipated to create objectionable odors affecting a substantial number of people.

With respect to operational impacts, the BAAQMD recommends screening criteria based on the distance between the receptor and the types of sources known to generate odor. The land uses identified by the BAAQMD as sources of odors include wastewater treatment plants, wastewater pumping facilities, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing and fiberglass manufacturing facilities, painting/coating operations, rendering plants, coffee roasters, food processing facilities, confined animal facilities, feedlots, dairies, green waste and recycling operations, and metal smelting plants. For purposes of CEQA analysis, if a source of odors is proposed to be located near existing or planned sensitive receptors, this could have the potential to cause operational-related odor impacts. The project involves modernization of a school site and would not include

any of the land uses that have been identified by the BAAQMD as odor sources. Therefore, the project would have a **less than significant** impact.

Mitigation Measures

None required.

3.3.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for air quality includes Oakland and the San Francisco Bay Area Air Basin. The SFBAAB is designated as a nonattainment area related to the state standards for ozone, PM_{10}, and $PM_{2.5}$ in addition to federal ozone and $PM_{2.5}$ standards. The basin is designated as being unclassified and/or attainment for all other pollutants. Cumulative growth in population, vehicle use, and industrial activity could inhibit efforts to improve regional air quality and attain the ambient air quality standards. Thus, the setting for this cumulative analysis consists of the SFBAAB and associated growth and development anticipated in the air basin.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulatively Considerable Net Increase in Nonattainment Criteria Pollutants (Standard of Significance 5)

Impact 3.3.7 The proposed project, in combination with cumulative development in the San Francisco Bay Area Air Basin, would not result in a cumulatively considerable net increase of criteria air pollutants for which the air basin is designated nonattainment. This impact would be **less than cumulatively considerable**.

By its very nature, air pollution is largely a cumulative impact. According to the BAAQMD, no single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. In developing thresholds of significance for air pollutants, the BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. According to the BAAQMD (2011), if a project exceeds its identified significance thresholds, the project's impacts would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered to have cumulatively considerable impacts. As described under Impact 3.3.1 and Impact 3.3.2, the project would not exceed BAAQMD thresholds for air pollutant emissions during construction, with the implementation of mitigation, or operation. Therefore, because the project would not exceed BAAQMD significance thresholds, its contribution would be **less than cumulatively considerable**.

Mitigation Measures

Implement mitigation measures **MM 3.3.1a** and **MM 3.3.1b.**

REFERENCES

BAAQMD (Bay Area Air Quality Management District). 2010. *Bay Area 2010 Clean Air Plan.*

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EPA (US Environmental Protection Agency). 2011. *Air and Water Quality Impacts of Brownfield Redevelopment.*

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This section considers and evaluates the proposed project's potential impacts on cultural and paleontological resources. Cultural resources include historic buildings and structures, historic districts, historic resource sites, prehistoric and historic archaeological sites, and other prehistoric and historic objects and artifacts. Paleontological resources include vertebrate, invertebrate, and plant fossils.

The following definitions are common terms used to discuss the regulatory requirements and treatment of cultural resources:

- *Cultural resources* is the term used to describe several different types of properties: prehistoric and historical archaeological sites; architectural properties such as buildings, bridges, and infrastructure; and resources of importance to Native Americans.

- *Historic properties* is a term defined by the National Historic Preservation Act (NHPA) as any prehistoric or historic district, site, building, structure, or object included on, or eligible for inclusion on, the National Register of Historic Places (NRHP), including artifacts, records, and material remains related to such property.

- *Historical resource* is a California Environmental Quality Act (CEQA) term that includes buildings, sites, structures, objects, or districts, each of which may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance and is eligible for listing or is listed in the California Register of Historical Resources (CRHR).

- *Paleontological resource* is defined as including fossilized remains of vertebrate and invertebrate organisms, fossil tracks and trackways, and plant fossils. A unique paleontological site would include a known area of fossil-bearing rock strata.

The technical information in this section is based on the historic resources evaluation (**Appendix CUL**) prepared for this project in 2016 for the Oakland Unified School District (OUSD, District) by Daniel Shoup and William Kostura, archaeological/historical consultants.

A summary of the impact conclusions for cultural and paleontological resources is provided below.

Impact Number	Impact Topic	Impact Significance
3.4.1	Demolition of Gymnasium Building	Significant and unavoidable
3.4.2	Library Renovations	Less than significant with mitigation
3.4.3	Archaeological and Paleontological Resources and Human Remains	Less than significant with mitigation
3.4.4	Cumulative Impacts on Cultural Resources, Human Remains, and Paleontological Resources	Cumulatively considerable

3.4.1 EXISTING SETTING

ENVIRONMENTAL SETTING

Fremont High School is located at Foothill Boulevard and 47th Avenue in the Melrose district of Oakland, California. The campus lies at 40 feet in elevation, approximately 1 mile east of the Oakland estuary. To the east, hills rise rapidly to an elevation of 200 feet in the Maxwell Park neighborhood. The nearest perennial freshwater source is Peralta Creek, 1 mile to the north, which

is partly culverted. Geologically, the campus lies at an interface between late Holocene alluvium, on the lower part of the campus, and older Pleistocene alluvium on the upper part of the campus.

HISTORIC CONTEXT

Fremont High School was founded in 1905 as Union High School for the Fruitvale, Lockwood, Allendale, Melrose, and Elmhurst school districts. The high school occupied the first floor of the Melrose Grammar School at 52nd Avenue near International Boulevard. Students in the 1905–1906 school year chose "The Flame" as the name of the school yearbook and yellow and green as school colors. Frank Stuart Rosseter was the first principal of the school, remaining in the post until 1915. The school was immediately overcrowded: 130 pupils enrolled in fall 1905, twice the number expected, with enrollment growing to 160 students in January 1906, with more on a waiting list.

After the 1906 San Francisco earthquake and fire, thousands of displaced people settled in Oakland. In 1907, enrollment at Fremont High grew to 260, swelled by the earthquake refugees. The resulting overcrowding crisis led to a bond election in the fall of 1906, in which Fruitvale voters approved $125,000 in bonds for the construction of a new high school. The new campus was located on the former site of the Talcott Dairy farm, which operated from 1880 to 1906. The new school building was designed by architect Thomas Smith. The construction contract was awarded on January 1, 1907, to builders Bailey and Simpson, and the new school campus was dedicated as John C. Fremont High School by ex-Governor Pardee on April 10, 1908. The new school joined the Oakland School District in 1909 after Fruitvale was annexed to the city of Oakland. Additions were constructed to the 1908 building in 1912 and 1922, the latter using funds from the bond issue of 1919, which funded dozens of new schools and facilities around Oakland. Further renovations took place in late 1929. On New Year's Eve 1930, however, a serial arsonist struck Fremont High School, completely destroying the campus.

Notable Oakland architect Charles W. McCall (1878–1948) was retained to design the new Fremont High campus by summer 1930. McCall had designed hundreds of East Bay buildings since the beginning of his career in 1901, including residential, public, and commercial buildings in Craftsman, Prairie, Romanesque, Spanish Revival, and Mediterranean styles. McCall's design for the Fremont High School Campus reflects perhaps the full expression of his Mediterranean phase, with its prominent bell tower, arcaded façade, and Romanesque detail.

The cornerstone for the new school was laid on August 23, with District Attorney Earl Warren, later governor of California, giving the keynote speech. In February 1931, Charles Vezey and Sons of Berkeley was selected to build the new Fremont High School campus at a cost of $398,848, which was mostly financed with the district's fire insurance payments of $300,000. Upon completion, the main classroom building was T-shaped, three stories in height, and had a monumental four-story tower located in the angle of the building's two wings. The auditorium was located on the east side of the building, while the two-story library was located on the west side and connected to the main classroom wing. Both buildings were highly ornate, decorated in a Romanesque Revival style with Mediterranean influences. The new Fremont High School opened in January 1932 with a capacity of 1,200 students and soon developed a reputation as a "tony" school.

In the fall of 1938, work began on a new gymnasium for Fremont High School. Designed by the Oakland School District's engineering department, ground was broken for construction of the $188,733 building on November 29, 1938. The Carl N. Swenson Company of San Jose was selected as builder. The building was 45 percent financed by the regional Public Works Administration, a New Deal infrastructure stimulus program. When it opened in October 1939, the gymnasium incorporated the latest technology, including built-in, collapsible bleachers (still extant), an automatic roll-away partition, and a sundeck for ill students.

While Fremont High School has produced a number of notable athletes and teams beginning in the 1910s, it was never as prominent in sports as Oakland Technical or Castlemont High. Notable Fremont High coaches included Harold "Hal" Berven (football, baseball, track, baseball, and wrestling, 1930–1965), Bill Rockwell (track and basketball, 1938–1953), and Leo Alamanno (baseball and basketball, 1954–1983). Notable alumni who became professional athletes in the period 1938 to 1978 included Ken Walters '51 (MLB 1960–1963), MacArthur Lane '61 (NFL 1968–1978), and Lester Conner '77 (NBA 1982–1995, currently assistant coach of the Atlanta Hawks).

Despite rapidly changing demographics in Oakland, Fremont High School remained almost all white until 1960. The population of students of color grew rapidly, and the color line in school activities was broken around 1963. By the end of the decade, students of color were 75 percent of the student body and were represented in proportion to their numbers in student government and activities. The rapid change in the student body was due to a combination of "white flight," the 1964 ban on racial discrimination in housing, and the opening of Skyline High School in the Oakland Hills.

The increasing challenges faced by the school district created unstable leadership in many schools: Fremont High School had nine principals in close succession between 1966 and 1976. In the fall of 1968, protests gripped the campus as students of color demanded the firing of administrators, hiring of more faculty of color, and the creation of a Black Studies curriculum. In response, OUSD's first African-American superintendent, Marcus A. Foster, led efforts to decentralize administration, recruit and promote black teachers, and introduce bilingual education until his assassination in 1973 by the Symbionese Liberation Army. Charles McCall's 1931 school building was demolished—except for the library and the entrance archway—in 1976 as part of a campus modernization effort.

KNOWN CULTURAL RESOURCES IN THE PROJECT AREA

In July 2016, a records search for previously recorded cultural resources in the project area and within a 1/8-mile radius was conducted at the Northwest Information Center, California Historical Resources Information System (NWIC File #15-1820). No cultural resources are recorded within the project area. The only recorded resource within the search radius was the Eastwood Apartments at 1715 High Street. An archaeological resources assessment of the Fremont High School campus was prepared in 2001 by Basin Research Associates. No indication of archaeological resources was found in archival research or during a surface survey.

Fremont High School was rated B2+ in the Oakland Cultural Heritage Survey (OCHS) and defined by the City of Oakland as an Area of Secondary Importance (ASI) for historical resources. Properties rated B are of major importance in the city's history and include especially fine architectural examples or structures of major historical importance. The City of Oakland's Local Register of Historical Resources includes properties rated A and B in the OCHS. Under CEQA, properties placed on local registers of historic resources by cities and counties are considered to be eligible for the CRHR. Therefore, its rating of B2+ in the OCHS makes the campus a historical resource under CEQA.

KNOWN PALEONTOLOGICAL RESOURCES IN THE PROJECT AREA

While there are no known paleontological resources in the project area, there are paleontological resources in Alameda County consisting mostly of plant, microfossil, and vertebrate fossil specimens.

3.4.2 REGULATORY FRAMEWORK

FEDERAL

Federal regulations for cultural resources are primarily governed by Section 106 of the National Historic Preservation Act of 1966, which applies to actions taken by federal agencies. The goal of the Section 106 review process is to offer a measure of protection to sites that are determined eligible for listing on the National Register of Historic Places. The criteria for determining NRHP eligibility are found in Title 36 Code of Federal Regulations (CFR) Part 60. Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and affords the federal Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The council's implementing regulations, "Protection of Historic Properties," are found in Title 36 CFR Part 800.

Archaeological site evaluation assesses the potential of each site to meet one or more of the criteria for NRHP eligibility based on visual surface and subsurface evidence (if available) at each site's location, information gathered during the literature and records searches, and the researcher's knowledge of and familiarity with the historic or prehistoric context associated with each site.

The American Indian Religious Freedom Act, Title 42 United States Code Section 1996, protects Native American religious practices, ethnic heritage sites, and land uses.

STATE

Under CEQA, local agencies must consider the effects of their actions on historical resources, which may include historic buildings, structures, landscapes, or unique archaeological resources. Under statute, "historical resource" is defined as a resource determined eligible for the National Register of Historic Places (NRHP), the California Register of Historic Resources (CRHR), or local registers by a lead agency (Public Resources Code Section 21084.1 and CEQA Guidelines Section 15064.5[a], [b]). The CRHR is administered through the California Office of Historic Preservation.

A property is eligible for the CRHR if it meets one of four significance criteria:

1. Association with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or

2. Association with the lives of persons important to local, California, or national history; or

3. Embodiment of the distinctive characteristics of a type, period, or method of construction, represents the work of a master, or possesses high artistic values; or

4. Potential to yield, information important to prehistory or history of the local area, California, or the nation. (Used largely with respect to archaeological sites.)

In addition to meeting at least one of these criteria, a resource must possess sufficient integrity to convey its significance. The CRHR defines integrity as "the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance" (OHP 1999, p. 2). Eligibility evaluations should consider integrity of setting, design, workmanship, materials, location, feeling, and association of the resource; if one or more of these is compromised the property may be unable to convey its significance and therefore be ineligible for the CRHR.

California State Landmarks, resources determined eligible for the NRHP, and many California Points of Historical Interest are automatically listed on the CRHR. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR, and are presumed to be historical resources for purposes of CEQA unless a preponderance of evidence indicates otherwise (Public Resources Code Section 5024.1 and California Code of Regulations, Title 14, Section 4850). Unless a resource listed in a survey has been demolished, lost substantial integrity, or there is a preponderance of evidence indicating that it is otherwise not eligible for listing, a lead agency should consider the resource to be potentially eligible for the CRHR.

Public Resources Code Section 21084.1 considers a "substantial adverse change in the significance of a historical resource" to be a significant effect on the environment. A "substantial adverse change" can include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings" that alters the significance of an historical resource in such a way as to impair its eligibility for federal, state, or local registers. In most cases, whenever a project adversely impacts historic resources, a mitigated negative declaration or an environmental impact report is required under CEQA Guidelines Section 15064.

For historic structures, CEQA Guidelines Section 15064.5(b)(3) indicates that a project which follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings is to mitigate impacts to a level of less than significant.

CEQA also requires lead agencies to consider whether projects will impact unique archaeological resources as outlined in Public Resources Code Section 21083.2(g). Treatment options under Section 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a unique archaeological resource).

California Health and Safety Code Section 7050.5 and CEQA Guidelines Section 15064.5(e) require that in the event of discovery of human remains in any location other than a dedicated cemetery, there must be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendant to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

In addition to the mitigation provisions pertaining to accidental discovery of human remains, the CEQA Guidelines require that a lead agency make provisions for the accidental discovery of previously discovered archaeological resources. Pursuant to Section 15064.5(f), these provisions should include a stop to work in the immediate area and an evaluation of the find by a qualified archaeologist. If the find is determined to be a historical or unique archaeological resource under CEQA, contingency funding and sufficient time should be made available to allow for implementation of avoidance measures or appropriate mitigation. Work outside of the archaeological area and any buffer zone imposed by the lead agency may continue while evaluation and/or mitigation takes place.

Paleontological resources are classified as nonrenewable scientific resources and are protected by state statute (Public Resources Code Chapter 1.7, Section 5097.5, Archeological, Paleontological, and Historical Sites, and Appendix G). If a project will have significant impacts to a paleontological resource, the CEQA Guidelines require feasible measures to minimize such impacts (Section 15126.4 [a][1]).

LOCAL

Although City of Oakland regulations do not apply to lands under the jurisdiction of the Oakland Unified School District, the District will consider the following local regulations during project implementation and apply them as best practices when deemed necessary.

City of Oakland Historic Preservation Guidelines

Historical and Architectural Rating System

The City of Oakland's General Plan Historic Preservation Element includes a rating system for properties over 50 years of age. The letters A to E are used to rate individual properties:

- A: Highest Importance: Outstanding architectural example or extreme historical importance
- B: Major Importance: Especially fine architectural example, major historical importance
- C: Secondary Importance: Superior or visually important example, or very early (pre-1906)
- D: Minor Importance: Representative example
- E: Of no particular interest
- F: Less than 45 years old or modernized

In addition, the rating system uses the numbers 1 to 3 to indicate district status. A rating of 1 indicates that the property is within an Area of Primary Importance (API) or National Register quality district, 2 indicates that the property is within an Area of Secondary Importance (ASI) or district of local interest, and 3 is applied for properties not in a historic district. For properties in districts, a plus sign (+) indicates contributing elements, a minus sign (-) noncontributing elements, and an asterisk (*) potential contributing elements. Fremont High School's ranking of B2+ therefore indicates that it is a property of major importance which is a contributing element to an Area of Secondary Importance.

Historic Property Designations

Landmarks, preservation districts, and heritage properties make up the City of Oakland's Designated Historic Properties (DHPs).

- **Landmarks** are the city's most prominent historic properties; they are nominated by the Landmarks Board, Planning Commission, and City Council.
- **Preservation Districts** include areas zoned S-7 and S-20 in the General Plan, and they are nominated in the same way as landmarks.

- **Heritage Property** is a new designation that will replace the Landmarks Board's current Preservation Study List, which includes properties that are candidates for landmark status. Other properties will be eligible for inscription as heritage properties if they are rated C or above and/or 1, 2, or + in the Historic and Architectural Rating System.

In addition to DHPs, Areas of Primary Importance (APIs) are areas that the City considers to be eligible for nomination to the NRHP as districts. Areas of Secondary Importance (ASIs) are areas that the City considers to be locally important (some of which may be CRHR-eligible). Note, however, that not all APIs and ASIs have actually been nominated or inscribed in either register and that some APIs and ASIs are also S-7 or S-20 zones.

Properties rated A, B, or C, and some D or E buildings in historic districts, are considered Potentially Designated Historic Properties (PDHPs). PDHP is not an official designation, but a category used by the City to guide planning and preservation efforts. PDHPs are subject to review to determine their eligibility to become Designated Historic Properties before major alterations are approved by the City. PDHPs may also qualify for City assistance or targeted acquisition by the City.

Local Register of Historic Resources

Oakland's Local Register of Historic Resources was created by amendment of the General Plan Historic Preservation Element in 1998, and includes city landmarks, properties on the Preservation Study List, Historic Districts, S-7 and S-20 zones, heritage properties, Areas of Primary Importance, and properties with survey ratings of A and B. These properties are considered historic resources for the purposes of CEQA (Public Resources Code Section 5024.1 and California Code of Regulations, Title 14, Section 4850).

3.4.3 IMPACTS AND MITIGATION MEASURES

Following Public Resources Code Sections 21083.2 and 21084.1, and Section 15064.5 and CEQA Guidelines Appendix G, cultural resource impacts are considered to be significant if project implementation would result in any of the following:

1) Cause a substantial adverse change in the significance of a historical resource as defined in Public Resources Code Section 21084.1 and CEQA Guidelines Section 15064.5, respectively.

2) Cause a substantial adverse change in the significance of an archaeological resource as defined in CEQA Guidelines Section 15064.5.

3) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

4) Disturb any human remains, including those interred outside of formal cemeteries.

CEQA Guidelines Section 15064.5 defines "substantial adverse change" as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource is materially impaired.

CEQA Guidelines Section 15064.5(b)(2) defines "materially impaired" for purposes of the definition of substantial adverse change as follows:

The significance of an historical resource is materially impaired when a project:

(A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

(B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

CEQA requires that if a project would result in an effect that may cause a substantial adverse change in the significance of a historical resource or would cause significant effects on a unique archaeological resource, then alternative plans or mitigation measures must be considered. Therefore, prior to assessing effects or developing mitigation measures, the significance of cultural resources must first be determined. The steps that are normally taken in a cultural resources investigation for CEQA compliance are as follows:

- Identify potential historical resources and unique archaeological resources;
- Evaluate the eligibility of historical resources; and
- Evaluate the effects of the project on eligible historical resources.

METHODOLOGY

The following impact analysis is based a historic resources evaluation prepared by historian Daniel Shoup and architectural historian William Kostura (**Appendix CUL**). The evaluation of the Fremont High School campus included historical research, architectural recording, and evaluation for eligibility to the CRHR. Dr. Shoup has over 15 years of experience in California history and archaeology. He has researched and prepared dozens of historic resources evaluations for residential, commercial, and industrial properties in California. Mr. Kostura has 23 years of experience as a professional architectural historian in private practice and for the California Department of Transportation. He has evaluated over 1,000 properties for eligibility under NRHP or CRHR criteria, is the author of 16 publications on architectural history, and is a former member of the San Francisco Landmarks Preservation Advisory Board.

The CRHR evaluates a resource's historic significance based on the following four criteria:

- Criterion 1 (Event): Resources associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
- Criterion 2 (Person): Resources associated with the lives of persons important to local, California, or national history.

- Criterion 3 (Design/Construction): Resources that embody the distinctive characteristics of a type, period, region, or method of construction or that represents the work of a master or possess high artistic values.

- Criterion 4 (Information Potential): Resources that have yielded or have the potential to yield information important to the prehistory or history of the local area, California, or the nation.

In addition to meeting one of the four criteria, a resource must be more than 50 years old, unless it can be demonstrated that sufficient time has passed to understand the building's historical importance.

Project Site Historical Evaluation

The evaluation of historic significance is a two-step process. First, the historic significance of the property must be established by using the CRHR evaluation criteria, as outlined above under the Methodology subsection. Second, if the property appears to possess historic significance per the CRHR criteria, a determination is made of its physical integrity. Physical integrity is defined as its authenticity as evidenced by the survival of characteristics that existed during the resource's period of significance. If the structure meets the integrity criteria additional to the CRHR criteria, the structure is deemed to be eligible for listing on the California Register or Historical Resources. As explained above, a determination of eligibility does not entail actual listing. The listing process is separate from the CEQA process.

PROJECT IMPACTS AND MITIGATION MEASURES

Demolition of Gymnasium Building

Impact 3.4.1 The 1938 gymnasium building is listed by the City of Oakland as a contributing element to an Area of Secondary Importance and was found eligible for the CRHR under Criterion 3. As such, the impact would be **significant and unavoidable.**

California Register Significance Evaluation

Criterion 1 (Events): The gymnasium is associated with events that made a significant contribution to the broad patterns of local history. It is one of many school gymnasiums constructed in California during the New Deal period, and it is not associated with important sporting events or teams. Accordingly, the gymnasium building does not appear to be eligible for the CRHR under this criterion.

Criterion 2 (People): The only persons who are known to be associated with this building are the school's basketball coaches, including Harold Berven, Bill Rockwell, and Leo Alamanno. While Bill Rockwell has some importance for his later career at Merritt College, none of these coaches attained historical significance under CRHR guidelines for their activities at Fremont High School. Accordingly, the gymnasium building does not appear to be eligible for the CRHR under this criterion.

Criterion 3 (Design/Construction): The gymnasium is an excellent example of a public building built in historical styles during the late Depression era. It exhibits restrained detailing combined with carefully conceived forms, proportions, and compositions that echo those of earlier, more richly detailed public buildings. This building possesses enough exterior detailing to highlight the

composition and fine proportions. The character-defining features are all exterior elements that are original, including the stucco surface, steel window sash, and moldings; the tile surface of the staircase leading up to the gymnasium space; and, in the gymnasium, the Medart collapsible bleachers.

Accordingly, the gymnasium building appears to be individually eligible for the CRHR at the local level as a fine late-Depression example of a public building with traditional form, proportions, and composition, and restrained ornament in historical and Art Deco styles. The Period of Significance is 1938–1939, when the gymnasium was built.

Integrity

The gymnasium building has been altered very little from its construction in 1938. It retains integrity of location, design, materials, workmanship, feeling, and association. Regarding integrity of setting, the closest building, the library, still stands, but the more distant classroom building of 1931 has been demolished. Thus, integrity of setting is only partially retained.

Because the project would demolish the gymnasium, a building that is individually eligible for the CRHR under Criterion 3, the project would have a **significant** impact on a historical resource. As such, mitigation measures **MM 3.4.1a**, **3.4.1b**, and **3.4.1c** would be required to mitigate this impact to the extent feasible.

Mitigation Measures

MM 3.4.1a The historic resources evaluation report noted that the character-defining features of the gymnasium are almost entirely found on its original exterior elements, including the stucco surface with its pilasters and parapets, its steel window sash, and its Art Deco panels. Interior features of interest include the tiled stairway leading to the upper gymnasium floor and the Medart collapsible bleachers. To mitigate the loss of these features, the District shall produce archival documentary photography that meets the Secretary of the Interior's standards for content and methodology for photographic documentation of historic features. The work shall include approximately 22 large-format film views of the gymnasium's exteriors and interiors. Prints, together with supporting documentation, shall be deposited at the California State Library and the Oakland History Room of the Oakland Public Library.

MM 3.4.1b The District shall prepare a historical exhibit that highlights the history of Fremont High School, with a particular focus on prominent teams, coaches, and players that used the gymnasium. Historical information shall be presented in a scale and format to be decided in consultation with OUSD, students, local stakeholders, and the architects of the new gymnasium. Final display decision shall be made by OUSD in consultation with architects and local stakeholders.

MM 3.4.1c Furnishings of the gymnasium building, like the original bleachers, shall be reused or displayed in the new gymnasium as feasible. Final reuse decisions shall be made by OUSD in consultation with architects and local stakeholders.

Because the project would demolish an existing historic structure, even with implementation of mitigation measures **MM 3.4.1a, 3.4.1b,** and **3.4.1c,** the project impacts would remain **significant and unavoidable**.

Library Renovations

Impact 3.4.2 The library is the major remaining part of the 1931 Fremont High School campus and appears to be eligible for the CRHR under Criterion 3. The project would renovate the interior and exterior of the library building. This impact would be **less than significant with mitigation**.

California Register Significance Evaluation

Criterion 1 (Events): No historical events or patterns of history that are associated with this library are known. Accordingly, the library does not appear to be eligible for the CRHR under this criterion.

Criterion 2 (People): No particular persons who are associated with this library are known. Accordingly, the library does not appear to be eligible for the CRHR under this criterion.

Criterion 3 (Design/Construction): Though the east side of the building was rehabilitated in 1976, two sides remain largely unchanged, and together these are a distinctive example of a Romanesque Revival style modified by Mediterranean influences. These façades are richly ornamented, and the arched second-story windows on the long façade are monumental in scale. The survival of the original steel window sash preserves additional texture in the composition. The second-floor interior (reading room) clearly relates to the design of the exterior, and although it is cluttered with additions from recent decades, it remains a good, and perhaps rare, example in Oakland of a school library from before World War II. In addition, this is a good example of the work of a very important Oakland architect, Charles McCall, at the height of his career. While the rehabilitation of the southeast side changes its feeling and association, what remains is substantial and adequately conveys the richness of the original design. The library therefore appears eligible for the CRHR under this criterion.

Accordingly, the library appears to be eligible for the CRHR at the local level as a good example of the work of architect Charles McCall, as a distinctive example of the Romanesque Revival style, and for its richly decorated library, a possibly rare example among Oakland schools that pre-date World War II. The Period of Significance is 1931, the year the building was built. The character-defining features are those on the northwest, southwest, and northeast façades that are original, including the stucco surface, steel sash windows, and decorative moldings, and all elements in the second-floor reading room that are original, including built-in bookshelves.

Integrity

The library retains full integrity of location and workmanship. Integrity of design, materials, workmanship, and feeling are all good, though slightly impacted by the replacement of the eastern façade. Integrity of setting has been lost, since the building was originally connected to the 1931 classroom building, which was demolished in 1976. However, the building retains sufficient integrity to convey its historical significance.

Renovations are proposed to the interior and exterior of the library building in the scope of the project. These activities would have a **potentially significant** impact on historical resources. Implementation of mitigation measure **MM 3.4.2** would mitigate potentially significant impacts on historical resources by ensuring that the library's character-defining features are preserved or enhanced. This mitigation would reduce the impact of the project to **less than significant**.

Mitigation Measures

MM 3.4.2 Renovations to the library shall follow the Secretary of the Interior's Standards for Rehabilitation as codified at 36 CFR 67. A qualified architectural historian shall review renovation plans to ensure that they conform to all 10 of the rehabilitation standards.

Archaeological and Paleontological Resources and Human Remains

Impact 3.4.3 Project implementation could indirectly result in the potential disturbance of undiscovered cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts and features), paleontological resources ((i.e., fossils and fossil formations), and unrecorded human remains. This impact would be **less than significant with mitigation.**

Though no archaeological sites are known in the area, it is possible that use of the project area in the prehistoric period (e.g., by the Ohlone people) or the historic period (the Talcott Dairy), have left subsurface archaeological deposits. Project construction therefore has the potential to impact undiscovered archaeological and paleontological resources and unrecorded human remains. As noted in the Regulatory Framework subsection above, Health and Safety Code Section 7050.5(b) specifies protocol when human remains are discovered. Implementation of the actions required under Section 7050.5(b) would ensure a less than significant impact on human remains. Project construction would have a **potentially significant** impact on undiscovered archaeological and paleontological resources, and mitigation measure **MM 3.4.3** would be required.

Mitigation Measures

MM 3.4.3 If during the course of grading or construction unknown archaeological and paleontological resources are discovered, the contractor shall halt work immediately within 50 feet of the discovery, the Oakland Unified School District shall be notified, and a professional archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology shall be retained to determine the significance of the discovery. A qualified archaeologist shall determine impacts, significance, and mitigation in consultation with recognized local Native American groups, if appropriate. In addition, prior to the commencement of project site preparation, all construction personnel shall be informed of the potential to inadvertently uncover cultural resources and the procedures to follow subsequent to an inadvertent discovery of cultural resources.

Implementation of mitigation measure **MM 3.4.3** would mitigate potentially significant impacts on archaeological and paleontological resources to a **less than significant** level.

3.4.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting of the project is the neighborhood surrounding Fremont High School and the existing stock of historical school buildings in Oakland. While most cultural resources impacts are site-specific and not cumulative in nature, CEQA Guidelines Section 15064(h) requires consideration of whether the "incremental effects of an individual project are significant when

viewed in connection with the effects of past projects, the effects of other current projects, and the effects off probable future projects."

In the case of Fremont High School, potential cumulative effects could include a change to the character of a historic neighborhood, contributions to the loss of a rare category of historic structure, or impacts to as yet unknown archaeological or paleontological resources.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts on Cultural Resources, Human Remains, and Paleontological Resources

Impact 3.4.4 Project implementation, in addition to existing, approved, proposed, and reasonably foreseeable development in the region, could result in cumulative impacts on cultural resources. This impact would be **cumulatively considerable**.

The Fremont High School campus is not architecturally related to surrounding residential and commercial developments. The proposed project would not alter the campus' spatial footprint, and proposed buildings are of similar function, height, and massing to existing structures. Therefore, this development is unlikely to affect the neighborhood setting.

However, the stock of historic school buildings in Oakland is highly limited. While no current or future projects that would affect such buildings are known, this category of cultural resource has been extensively affected by past projects. Many Oakland school buildings built prior to 1945 were demolished between 1960 and 1980 and replaced by international-style buildings. The project would demolish the 1938 Fremont High gymnasium building, which is eligible for the CRHR under Criterion 3. Because it is one of a limited number of historic gymnasiums in Oakland, the project would contribute to the cumulative loss of such resources. This impact would be **cumulatively considerable**.

In addition, discovery of previously unknown resources might also result in a cumulative loss of previously undiscovered cultural and paleontological resources in the region. Even with the implementation of mitigation measures **MM 3.4.1a**, **MM 3.4.1b**, **MM 3.4.1c**, **MM 3.4.2**, and **MM 3.4.3**, project impacts would remain **cumulatively considerable**.

Mitigation Measures

No additional mitigation measures feasible.

REFERENCES

OHP (California Office of Historic Preservation). 1999. Technical Assistance Series #6, California Register and National Register: A Comparison. http://ohp.parks.ca.gov/pages/1054/files/ts06ca.pdf.

Shoup, Daniel, and William Kostura. 2016. *Oakland Unified School District, Fremont High School Project, Historic Resources Evaluation.*

This section describes the geology, seismicity, and soils conditions in the project site as they relate to Fremont High School. Potential geologic and seismic hazards, such as ground shaking and liquefaction, and soil-related hazards, such as expansive soils, are analyzed and feasible mitigation measures are provided, where necessary.

The information in this section is based primarily on the Geotechnical Evaluation and Geological Hazards Assessment (**Appendix GEO**) prepared by Ninyo & Moore (2016) for this project.

A summary of the impact conclusions related to geology and soils is provided below.

Impact Number	Impact Topic	Impact Significance
3.5.1	Seismic Hazards	Less than significant with mitigation
3.5.2	Erosion and Loss of Topsoil	Less than significant with mitigation
3.5.3	Development on Unstable or Expansive Soils	Less than significant with mitigation
3.5.4	Cumulative Geologic, Seismic, and Soil Hazards	Less than cumulatively considerable
N/A	Soils Incapable of Supporting a Septic System	No impact

3.5.1 EXISTING SETTING

GEOLOGY AND TOPOGRAPHY

The project site is located east of the San Francisco Bay, in the Coast Ranges of the geomorphic province. Most of the project site is located on Pleistocene alluvial fan and fluvial deposits, while the northwestern portion of the site is underlain by Holocene-age deposits. Both the Pleistocene- and Holocene-age deposits consist of brown layers of gravelly sand or sandy gravel that grade upward to sandy or silty clay. The alluvial fan deposits are likely underlain by Cretaceous- to Jurassic-age bedrock of the Great Valley Sequence (Ninyo & Moore 2016).

The project site lies at a surface elevation that ranges from approximately 36 feet above mean sea level near the southeast corner of the project site to 77 feet above mean sea level near the northeast corner. The project site gently slopes toward the southwest (Ninyo & Moore 2016).

FAULTING AND SEISMICITY

The strength of an earthquake is generally represented in two ways: magnitude and intensity. The magnitude measures the energy radiated by the earthquake as recorded on seismographs. The intensity at a specific location measures the strength of shaking produced by an earthquake and its effects on people or buildings (USGS 2016; CGS 2002).

The Modified Mercalli Intensity (MMI) is most commonly used scale to measure the intensity of an earthquake's effects in a given locality. Values range from I to XII on the MMI scale. While an earthquake has only one magnitude, it can have various intensities, which decrease with distance from the epicenter and vary depending on the underlying soil conditions (CGS 2002). **Table 3.5-1, Effects of Magnitude and Modified Mercalli Intensity,** describes the effects of ground shaking intensities along with a range of magnitudes that are generally associated with those intensities.

TABLE 3.5-1
EFFECTS OF MAGNITUDE AND MODIFIED MERCALLI INTENSITY

Moment Magnitude	Modified Mercalli Scale	Effects of Intensity
1.0–3.0	I	I. Not felt except by a very few under especially favorable conditions.
3.0–3.9	II–III	II. Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing. III. Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
4.0–4.9	IV–V	IV. Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably. V. Felt by nearly everyone, many awakened. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
5.0–5.9	VI–VII	VI. Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight. VII. Everybody runs outdoors. Damage negligible in building of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.
6.0–6.9	VIII–IX	VIII. Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motor cars disturbed. IX. Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.
7.0 and higher	X or higher	X. Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks. XI. Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly. XII. Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted. Objects are thrown upward into the air.

Source: CGS 2002

Faults

Faults are classified as "active" or "potentially active." An active fault is one that has had recent seismic activity, defined as having moved one or more times in the last 10,000 years. A potentially active fault is one that has been active sometime in the last 1,600,000 years. These definitions are used in delineating Earthquake Fault Zones (prior to January 1, 1994, known as Special Studies Zones) as mandated by the Alquist-Priolo Earthquake Fault Zoning Act.

The project site is situated in the San Francisco Bay region, which is the most seismically active region in the United States (CalEMA 2016). The region has been historically susceptible to earthquake hazards such as ground shaking, ground rupture, and liquefaction.

Several active faults are located in proximity to the project site: the Hayward (3 miles east), the Calaveras (17 miles south), and the San Andreas (27 miles west). All three of these faults are capable of producing an earthquake of magnitude 6.9 or greater (Ninyo & Moore 2016). The most recent (2016) estimate developed by the Working Group on California Earthquake Probabilities is that there is a 72 percent likelihood of an earthquake of magnitude 6.7 or greater striking in the San Francisco Bay Area by 2043 (Aagaard et al. 2016).

The project site is not within an Alquist-Priolo Earthquake Fault Zone. The closest such zone is associated with the Hayward fault and is approximately 3 miles east of the project site (CGS 2016).

Ground Shaking

Ground shaking is the most widespread effect of an earthquake. The sudden release of energy in an earthquake causes waves to travel through the earth. These waves not only shake structures to the breaking point but can trigger secondary effects such as landslides or other types of ground failure. Based on the historic activity of the region, strong ground shaking on the campus is expected during moderate to severe earthquakes.

Liquefaction

Liquefaction occurs when loose sand and silt that is saturated with water behaves like a liquid when shaken by an earthquake. The soil can lose its ability to support structures, flow down even very gentle slopes, and erupt to the ground surface to form sand boils. Many of these phenomena are accompanied by settlement of the ground surface, usually in uneven patterns that damage buildings, roads, and pipelines. Most ground failure from earthquake shaking results in displacement at the surface due to the loss of strength of the underlying materials. The various types of ground failure include landsliding, liquefaction, lateral spreading, lurching, and differential settlement (USGS 2006).

A small portion of the northwest corner of the project site is in a liquefaction hazard zone, as designated by the state geologist (CGS 2003). Regional studies of liquefaction susceptibility indicate that the liquefaction susceptibility at the project site is low to moderate (Ninyo & Moore 2016).

Earthquake-Induced Landslides and Settlement

The most common types of earthquake-induced landslides are rockfalls and slides of rock fragments that form on steep slopes. Shallow debris slides forming on steep slopes and soil, and rock slumps and block slides forming on moderate to steep slopes, also take place, but they are less abundant. Reactivation of dormant slumps or block slides by earthquakes is rare (FEMA 1989). The landslide inventory in the Seismic Hazard Zone Report (CGS 2003) indicates that mapped landslides do not underlie the site or the vicinity. In addition, the ground surface is generally flat with some minor slopes that are less than 10 feet and no slopes would be constructed for the project.

Settlement of the ground surface can be accelerated and accentuated by earthquakes. During an earthquake, settlement can occur as a result of the relatively rapid compaction and settling of subsurface materials (particularly loose, non-compacted, and variable sandy sediments) due to the rearrangement of soil particles during prolonged ground shaking.

Settlement can occur both uniformly and differentially (i.e., where adjoining areas settle at different rates).

Based on subsurface investigation and analyses of soils, dynamic settlement following a large earthquake would be relatively minor at the project site (Ninyo & Moore 2016).

Ground Subsidence

Land subsidence results in a slow-to-rapid downward movement of the ground surface as a result of the vertical displacement of the ground surface, usually resulting from groundwater withdrawal. The amount of subsidence caused by groundwater withdrawal depends on several factors, including the extent of water level decline, the thickness and compressibility of silt-clay layers within the vertical sections where groundwater withdrawal occurs, the duration of maintained groundwater level decline, and the general geology and geologic structure of the groundwater basin.

The liquefiable layers at the project site are relatively thin; therefore, ground subsidence is not a significant consideration for the project (Ninyo & Moore 2016).

SOILS

The soil type underlying the project area is the Urban Land-Tierra complex, 2 to 5 percent slopes. This soil type is moderately well drained with a parent material of alluvium and a soil profile of loam, clay, clay loam, and sandy clay loam (USDA-NRCS 2016).

Erosion

Soil erosion is a process whereby soil materials are worn away and transported to another area, by either wind or water. Rates of erosion can vary depending on the soil material and structure, placement, and human activity. Soil erosion potential or susceptibility is partially defined by a soil's "K Factor," which is an indication of a soil's inherent susceptibility to erosion, without accounting for slope and ground cover factors. Values of K range from 0.02 to 0.69. The higher the value, the more susceptible the soil is to sheet erosion by water (Michigan State University 2015).

The soils on the project site have a moderate erosion potential with a K Factor of 0.37 (USDA-NRCS 2016).

Expansive Soils

Expansive soils possess a "shrink-swell" characteristic. Shrinking and swelling of soils can cause damage to building foundations, roads, underground utilities, and other structures. The classification of potentially expansive soils is expressed in terms of an expansion index, which measures the basis index property, per the American Society of Testing and Materials (ASTM) Standard D, 4829. The expansion index ranges from very low (0–20) to very high (>130).

Laboratory testing was performed on a sample of near-surface project soils to evaluate the expansion index. The test indicated that the project site soils have a medium expansion characteristic with an expansion index of 68 (Ninyo & Moore 2016).

3.5.2 REGULATORY FRAMEWORK

FEDERAL

International Building Code

The International Building Code (IBC) has been adopted throughout the United States and has been in use since 2007. The purpose of the IBC is to establish minimum regulations for building systems, including fire safety, building safety, foundation, wall and roof constructions, materials used in construction, elevators and escalators, and existing structures.

National Pollutant Discharge Elimination System

The State Water Resources Control Board has implemented a National Pollutant Discharge Elimination System (NPDES) general construction permit for Alameda County. For properties of 1 or more acres, a Notice of Intent (NOI) and a stormwater pollution prevention plan (SWPPP) must be prepared prior to commencement of construction. Construction activities subject to this permit include clearing, grading, and disturbances to the ground such as stockpiling or excavation. The San Francisco Bay Regional Water Quality Control Board (RWQCB) issued a Municipal Storm Water NPDES Permit to the San Francisco Bay Region, including the counties of Alameda, Contra Costa, Santa Clara, and San Mateo, and the cities of Fairfield, Suisun City and Vallejo (Permit Number CAS612008).

STATE

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The act's main purpose is to prevent the construction of buildings used for human occupancy on the surface of active faults. The act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Seismic Hazards Mapping Act addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 directs the California Geological Survey (CGS) to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of the act is to minimize loss of life and property through the identification, evaluation, and mitigation of seismic hazards.

Staff geologists in the Seismic Hazard Zonation Program gather existing geological, geophysical, and geotechnical data from numerous sources to produce the Seismic Hazard Zone Maps. They integrate and interpret these data regionally in order to evaluate the severity of the seismic hazards and designate as Zones of Required Investigation those areas prone to liquefaction and earthquake-induced landslides.

California Building Code

The State of California has minimum standards for building design through the California Code of Regulations, Title 24, also known as the California Building Standards Code or the California

Building Code (CBC). The CBC is based on the Uniform Building Code but modifies the regulations for specific conditions found in California and includes a large number of more detailed and/or more restrictive regulations.

For example, the CBC includes common engineering practices requiring special design and construction methods that reduce or eliminate potential expansive soil–related impacts. The CBC requires structures to be built to withstand ground shaking in areas of high earthquake hazards and the placement of strong motion instruments in larger buildings to monitor and record the response of the structure and the site of seismic activity. Compliance with CBC regulations ensures the adequate design and construction of building foundations to resist soil movement. In addition, the CBC contains drainage requirements in order to control surface drainage and to reduce seasonal fluctuations in soil moisture content.

California Geological Survey

The CGS operates within the California Department of Conservation. The CGS is responsible for assisting in the identification and proper utilization of mineral deposits, as well as the identification of fault locations and other geological hazards.

LOCAL

Although City of Oakland regulations do not apply to lands under the jurisdiction of the Oakland Unified School District (OUSD), the district will consider the following local regulations during project implementation and apply them as best practices when deemed necessary.

City of Oakland General Plan

The City's General Plan Safety Element addresses potential hazards in Oakland such as earthquakes, tsunamis, seiches, dam failure, mudslides and landslides, other geologic hazards, flooding, wildfires, and hazardous materials. The element analyzes hazards and outlines goals and policies to protect the health and safety of Oakland residents to minimize potential loss of life and injury caused by these hazards.

City of Oakland Municipal Code

Title 15, Buildings and Construction

Title 15 of the Oakland Municipal Code outlines the building and construction standards for the city. The City incorporated the CBC in Section 15.04.010 of the Municipal Code, with minor amendments relevant to Oakland.

Section 16.20.70, Grading Ordinance

Section 16.20.070 outlines the requirements for grading work, which include ensuring adequate measures have been taken to prevent erosion on the site and/or deposition of eroded material on the site or on lower or adjacent properties.

Hazard Mitigation Plans

In March 2005, the Association of Bay Area Governments (ABAG) adopted a multi-jurisdictional Hazard Mitigation Plan for the Bay Area. Participating local county and city governments in the Bay Area prepare an annex to this plan to explain how the Hazard Mitigation Plan specifically

applies to that agency. The Bay Area Hazard Mitigation Plan was updated most recently in 2010. The City of Oakland has established a Local Hazard Mitigation Plan as an annex to the Bay Area Hazard Mitigation Plan. The City's plan outlines the potential hazards that may impact Oakland and describes how the City will prepare for emergencies and disasters. The City's 2016–2021 Local Hazard Mitigation Plan was adopted on June 7, 2016.

3.5.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

This analysis evaluates the proposed project's impacts on geology and soils based on the standards identified in the California Environmental Quality Act (CEQA) Guidelines Appendix G. A geology and soils impact is considered significant if the project would:

1) 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 or other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42.

    ii) Strong seismic ground shaking.

    iii) Seismic-related ground failure, including liquefaction.

    iv) Landslides.

2) Result in substantial soil erosion or the loss of topsoil.

3) 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.

4) Be located on expansive soils, as defined in Table 18-1-B of the Uniform Building Code (1994) and in ASTM D4829-11, creating substantial risk to life or property.

5) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

As discussed under the Existing Setting subsection above, the project site is not in an Alquist-Priolo Earthquake Fault Zone and therefore would not be subject to hazards associated with significant fault surface rupture. Therefore, Standard of Significance 1(i) is not discussed further, as it would have **no impact**.

Also as discussed under the Existing Setting subsection above, the project site is not in a landslide hazard zone. Therefore, Standard of Significance 1(iv) is not discussed further, as it would have **no impact**.

The project site is currently connected to the City's sewer system, and the project would not require the installation of septic systems or an alternative wastewater disposal system. Therefore, Standard of Significance 5 is not discussed further, as the project would have **no impact**.

METHODOLOGY

The following impact analysis is based on a review of published information, surveys, and reports regarding regional geology and soils. Information was obtained from private and governmental agencies and Internet websites, including the US Department of Agriculture Natural Resources Conservation Service, the California Geological Survey, and the US Geological Survey.

PROJECT IMPACTS AND MITIGATION MEASURES

Seismic Hazards (Standard of Significance 1)

Impact 3.5.1 Because of the seismically active nature of the San Francisco Bay region, the project would inherently result in the exposure of people, structures, and infrastructure to adverse effects associated with seismic activity. This impact would be **less than significant with mitigation.**

As previously discussed, the project site is located in a seismically active area and could experience strong seismic ground shaking and seismic-related ground failure (i.e., liquefaction and settlement) from earthquakes on active faults located in proximity to the project site. This is a **potentially significant** impact. Mitigation measures **MM 3.5.1a** and **MM 3.5.1b** are required to reduce the potential impacts related to seismic ground shaking.

The existing structures on the project site were constructed as early as 1931. While the buildings have undergone exterior and interior modifications throughout the years, seismic upgrades are necessary to bring them up to current building standards, as outlined in the Fremont High School Master Plan (Cody Anderson Wasney Architects 2012). The project would include the recommended seismic upgrades to the existing structures to reduce any potential impacts from seismic shaking.

The current adopted CBC includes design criteria for seismic loading and other geologic hazards, including design criteria for geologically induced loading that govern sizing of structural members and provide calculation methods to assist in the design process. While shaking impacts could be potentially damaging, they would also be reduced in their structural effects due to CBC criteria that recognize this potential. The CBC includes provisions for buildings to structurally survive an earthquake without collapsing and includes measures such as anchoring to the foundation and structural frame design. The project would be constructed to meet CBC standards.

Thus, while the project would result in the exposure of people to dangers associated with earthquakes, the seismic upgrades in accordance with applicable building standards would minimize these dangers. The project would not increase the potential for seismic activity or the inherent risks that come with living in a seismically active region. With implementation of the standards in the CBC and mitigation measures **MM 3.5.1a** and **MM 3.5.1b**, the seismic hazards impact would be reduced to **less than significant**.

Mitigation Measures

MM 3.5.1a A qualified geotechnical engineer shall evaluate the response of existing structures to ground shaking in accordance with American Society of Civil Engineers (ASCE) Standards 41-13 and 41-06.

MM 3.5.1b The project engineer shall design foundations for the new buildings in accordance with the following structural considerations:

- Design spread footings using the criteria listed in Tables 12 and 13 of the Geotechnical Evaluation and Geologic Hazards Assessment for Fremont High School (**Appendix GEO**).
- Design building floor slabs based on anticipated loading conditions, and reinforce slabs with deformed steel bars.
- Design drilled piers for minor structures in accordance with the recommendations outlined in Section 9.3.3 of the Geotechnical Evaluation and Geologic Hazards Assessment for Fremont High School (**Appendix GEO**).

Erosion and Loss of Topsoil (Standard of Significance 2)

Impact 3.5.2 The project would require extensive grading, excavation, and trenching for the construction of new buildings and a sports field on the project site, which could expose site soils to erosion. This impact would be **less than significant with mitigation**.

The project would disturb a significant amount of soil during the construction of new buildings, the reconfiguration of the football/soccer field, and the demolition of one building on the project site. The project would require extensive clearing, grading, excavations, cut/fill, and trenching that could expose site soils to the erosive effects of wind and water. Landscaping activities could also result in soil exposure and soil erosion. The soils in the project site have a moderate erosion potential (K Factor of 0.37); therefore, they could be susceptible to erosion by wind, water, or other influences.

Any development involving clearing, grading, or excavation that causes soil disturbance of 1 or more acres, or any project involving less than 1 acre that is part of a larger development plan and includes clearing, grading, or excavation, would be subject to the State's General Construction Permit and would be required to prepare and implement an approved stormwater pollution prevention plan. SWPPPs provide a schedule for the implementation and maintenance of erosion control measures and a description of erosion control practices, including appropriate design details and a time schedule. Additionally, all construction activities would be required to comply with CBC Chapter 70 standards.

Nonetheless, because of the extensive amount of grading and earthwork and the potential for impacts due to soil erosion, this impact would be **potentially significant** and mitigation measure **MM 3.5.2** is required.

Compliance with the existing standards outlined above and with mitigation measure **MM 3.5.2** would reduce project impacts to a **less than significant** level.

Mitigation Measures

MM 3.5.2 Project construction shall comply with the City of Oakland's Grading Ordinance (Municipal Code Section 16.20.70) to ensure adequate measures have been taken during grading work to prevent erosion on the site and/or deposition of eroded material on the site or on lower or adjacent properties.

Development on Unstable or Expansive Soils (Standards of Significance 3 and 4)

Impact 3.5.3 The soils in the project area have the potential to expand and contract in response to soil moisture and cause building instability. This impact would be **less than significant with mitigation**.

As described previously, the project site contains soils with a medium expansion index. The soils have the potential to expand and contract in response to soil moisture. Soil expansion or instability could result in problems such as cracked foundations and pavements.

The project proposes to construct four new buildings and remodel several existing buildings on the project site. Building foundation footings and sidewalks would be designed to accept the estimated degree of soil contraction, expansion, and settlement potential according to applicable engineering standards in the CBC. The project soil's potential to expand and contract is a **potentially significant** impact and mitigation measure **MM 3.5.3** would be required to reduce the potential for impacts from expansive soils.

With implementation of the standards in the CBC and mitigation measure **MM 3.5.3,** impacts would be **less than significant**.

Mitigation Measures

MM 3.5.3 To reduce the shrink-swell potential of near-surface soils, the project engineer shall create a zone of material with low expansion potential below building slabs and exterior flatwork by removing existing soil and placing fill with low expansion characteristics. Alternatively, the on-site soil may be chemically treated to reduce the expansion characteristics and create a zone of low expansion material, if the project engineer deems it necessary.

3.5.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

Site-specific topography, soil conditions, and surrounding development determine geological and soil-related impacts, which generally are not considered cumulative in nature. However, erosion and sediment deposition can be cumulative in nature, depending on the type and amount of development proposed in a given geographical area. The cumulative setting for soil erosion consists of existing, planned, proposed, and reasonably foreseeable land use conditions in Alameda County.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Geologic, Seismic, and Soil Hazards

Impact 3.5.4 The project, in addition to other existing, planned, proposed, approved, and reasonably foreseeable development projects in Oakland, may result in cumulative soil erosion impacts. However, compliance with existing regulations intended to reduce soil erosion during construction would reduce this impact to **less than cumulatively considerable**.

Future development in Oakland has the potential to cumulatively disturb and erode significant amounts of soil. However, all future developments that cause soil disturbance of 1 or more acres, or any project involving less than 1 acre that is part of a larger development plan and includes clearing, grading, or excavation, would be subject to the State's General Construction Permit and would be required to prepare and implement an approved stormwater pollution prevention plan. SWPPPs provide a schedule for the implementation and maintenance of erosion control measures and a description of erosion control practices, including appropriate design details and a time schedule.

As described in Impact 3.5.2, the project would be required to comply with standards outlined in the CBC and would implement mitigation measure **MM 3.5.2** to reduce impacts related to soil erosion. Further, all future development would comply with City of Oakland, county, and state requirements regarding soil erosion and geological hazards.

Therefore, this impact would be **less than cumulatively considerable**.

Mitigation Measures

None required.

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This section discusses safety hazards in the project area, analyzes the potential for the proposed project to create hazards to public health or the environment related to hazardous materials, airport operations, emergency access, and wildland fire, and proposes feasible mitigation measures where appropriate.

The hazardous materials information in this section is based on the Phase I Environmental Site Assessment (ESA) prepared by ACC Environmental Consultants for this project in 2016 (**Appendix HAZ**).

A summary of the impact conclusions for hazards and hazardous materials is provided below.

Impact Number	Impact Topic	Impact Significance
3.6.1	Transport, Use, and Disposal of Hazardous Materials	Less than significant
3.6.2	Accidental Release of and Exposure to Hazardous Materials	Less than significant with mitigation
3.6.3	Hazardous Emissions and Materials in the Vicinity of a School Site	Less than significant with mitigation
3.6.4	Hazardous Materials Sites	Less than significant with mitigation
3.6.5	Emergency Response and Evacuation Plans	Less than significant
3.6.6	Cumulative Hazards Impacts	Less than cumulatively considerable
N/A	Public and Private Airport Hazards	No impact
N/A	Wildland Fire Hazards	No impact

3.6.1 EXISTING SETTING

SITE HISTORY

The project site history is outlined in the Phase I ESA and was established based on historical data found, aerial photographs, historic city directories, Sanborn fire insurance maps, and agency records. The recorded project site is as follows:

- 1897: The project site is mostly undeveloped; two structures are present on the southwestern portion of the site.
- 1912–1920: John C. Fremont High School was constructed. The buildings were located on the eastern side of the project site and included classrooms, a gymnasium, and an auditorium. Residential properties existed on the west side of the project site.
- 1933: School buildings were entirely redeveloped; an athletic field was located on the west side of the project site.
- 1968: The existing gymnasium was constructed in the center of the project site.
- 1974: Residential development to the north of the school campus was developed; Ygnacio Boulevard was closed between 46th and 47th avenues.
- 1974–1993: Current school buildings on the east side of the project site were constructed.

- 2014–2015: Buildings in the northern center portion of the project site were demolished.

HAZARDOUS AND CONTAMINATED SITES

Areas of Known Hazardous Contamination

A search of the available environmental records was conducted by Environmental Data Resources, Inc. (EDR) as part of the Phase I ESA. This included a search of the EnviroStor database, maintained by the California Department of Toxic Substances Control (DTSC), and the GeoTracker database, maintained by the State Water Resources Control Board (SWRCB), as well as other relevant records to meet the search requirements of the US Environmental Protection Agency's (EPA) Standards and Practice for All Appropriate Inquiries.

The following sites were identified within one-quarter mile of the project site. The facility name, location, and current status for each site are listed in **Table 3.6-1**. For a complete list of all sites within 1 mile of the project site, refer to the Phase I ESA in **Appendix HAZ**.

TABLE 3.6-1
KNOWN HAZARDOUS CONTAMINATION SITES WITHIN 1/4 MILE OF PROJECT SITE

Facility/Site Name	Address	Project Type[1]	Status
Fremont High School	4610 Foothill Blvd.	School Investigation	Inactive – Needs Evaluation
Chevron Station #90076	4625 Foothill Blvd.	LUST Cleanup Site; RCRA-SQG	Open – Site Assessment
Former Gas Station/Service Station	4647 Foothill Blvd.	Historic Auto Station	No information available
Shell Service Station #13-5686	4411 Foothill Blvd.	LUST Cleanup Site; RCRA-SQG	Open – Assessment & Interim Remedial Action
Former Gas Station/Service Station	1731 47th Avenue	EDR Historic Auto Station	No information available
Former Dry Cleaners	1760 High Street	EDR Historic Cleaner	No information available
Circle K Stores #11109 (formerly BP Oil Co #11109)	4280 Foothill Blvd.	LUST Cleanup Site; RCRA-SQG	Open - Remediation
Fremont Cleaners	4739 Foothill Blvd.	EDR Historic Cleaner	No information available
Former Dry Cleaners	1955 Courtland Avenue	EDR Historic Cleaner	No information available
BP	4250 Foothill Blvd.	Historic Cortese Site	No information available
Former Gas Station/Service Station	4725 Melrose Avenue	EDR Historic Auto Station	No information available
Former Gas Station/Service Station	2021 High Street	EDR Historic Auto Station	No information available
Former Gas Station/Service Station	4716 Melrose Avenue	EDR Historic Auto Station	No information available

Facility/Site Name	Address	Project Type[1]	Status
Wills Trucking	1624 45th Avenue	Non-Operating	No information available
Former Gas Station/Service Station	4825 Foothill Blvd.	EDR Historic Auto Station	No information available
Consumers Co-op Station	4155 Foothill Blvd.	EDR Historic Auto Station	No information available
West Coast Flooring (formerly Sanchez Cash for Cans)	1468 44th Avenue	LUST Cleanup Site	Completed – Case Closed
Bayview Federal Bank	1437 48th Avenue	LUST Cleanup Site	Completed – Case Closed
Stop N Go Market	4100 Foothill Blvd.	LUST Cleanup Site	Completed – Case Closed
Residential	1421 45th Avenue	LUST Cleanup Site	Completed – Case Closed
Herman's Transmission	1421 High Street	RCRA-SQG	In Operation
Family 1 Hour Cleaners	4330 E 14th Street	RCRA-SQG	In Operation
Fremont High School No. 02	1204 46th Avenue	School Investigation	Inactive – Needs Evaluation
Super Tire	4256 International Blvd.	EDR Historic Auto Station	No information available
Continental Body Shop	1231 45th Avenue	RCRA-SQG	In Operation
Grand Auto	4240 International Blvd.	Cleanup Program Site	Open – Monitoring

Source: ACC 2016
Notes:
Non-Operating: A Treatment, Storage, Disposal, or Transfer Facility (TSDTF) with no operating hazardous waste management unit(s).
RCRA-SQG: Sites which generate, transport, store, treat, and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).
LUST Cleanup Site: Site of a leaking underground storage tank (LUST) that has undergone site investigations and corrective actions.
Cleanup Program Site (previously Spills, Leaks, Investigation and Cleanups): Site investigations and corrective actions involving sites not overseen by the Underground Tank Program and the Well Investigation Program.

PROJECT SITE PHASE I REPORT

The Phase I ESA made findings regarding environmental concerns at the project site. The environmental concerns are potential issues that would be taken into consideration during project construction and operation, and would be mitigated as necessary. The report made findings discussed below.

Current Hazardous Materials Use

Hazardous materials use and storage at the project site are currently limited to janitorial supplies and laboratory supplies associated with high-school science classes (5 gallons or less). No releases or violations associated with current hazardous material use were observed during the assessment.

Hazardous Materials Records on the Project Site

Fremont High School is listed in the hazardous waste regulatory databases searched for the Phase I ESA. The project site is listed as manifesting polychlorinated biphenyls (PCBs) and material containing PCBs, unspecified hazardous waste, waste oil and mixed oil, unspecified oil-containing waste, other organic solids, asbestos-containing waste, other inorganic solid waste, and laboratory waste chemicals from the years 1994 to 2014. According to EDR, this site was listed as inactive in 2003 based on the EnviroStor website.

The following potentially hazardous materials sites were previously present on the project site:

Waste Oil Underground Storage Tank

A 350-gallon waste oil underground storage tank (UST) previously existed on the project site and was associated with a student auto repair shop. The UST was removed from the project site in 1998 under the observation of the Oakland Fire Services Agency.

Oil Tank

An oil tank previously existed on the project site in the current location of the auditorium/cafeteria building. No documentation regarding the removal of the oil tank is currently available.

Residential Properties

Residences were previously located on the northeastern and western portions of the project site. The properties on the western portion of the project site were demolished in 1933, while the properties on the northeastern portion were demolished in 1974. A permit from the Oakland Building Department confirmed the use of asbestos-containing roofing materials at one property and the use of dieldrin, a chlorinated pesticide, at another property (**Appendix HAZ**).

Adjacent and Nearby Properties of Potential Concern

The following sites are adjacent to and near the project site and are listed in the hazardous waste regulatory databases searched for the Phase I ESA. Refer to **Figure 3.6-1** for a map of the sites in relation to the project site.

Circle K Stores #11109/BP Oil Co #11109

This site is located at 4280 Foothill Boulevard and is adjacent to the northwest portion of the project site. Between 1972 and 1978, a 6,000-gallon, an 8,000-gallon, and a 10,000-gallon underground storage tank were installed. As of 2015, gasoline is present in groundwater at the site. Based on the most recent available groundwater monitoring report from 2015, total petroleum hydrocarbons-gasoline (TPH-g), benzene, and methyl tertiary-butyl ether (MTBE) were detected in one on the monitoring wells. The case is currently open.

Source: ACC Environmental Consultants

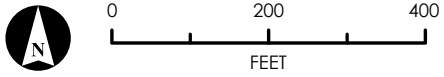

FIGURE 3.6-1
Hazardous Material Sites of Potential Concern

Michael Baker INTERNATIONAL

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Former Dry Cleaners

This site is located at 1955 Courtland Avenue, which is near the northwest portion of the project site. The site is listed on the EDR Historic Cleaner database as Park Boulevard Dry Cleaners from 2008 to 2009. However, 1955 Courtland Avenue has been a residential property since 1939 and no available information indicates that dry cleaning operations have been conducted there. The case is currently closed.

Chevron Station #90076

This site is located at 4625 Foothill Boulevard and is across the road from the southern portion of the project site. The site is listed as a Resource Conservation and Recovery Act small quantity generator (RCRA-SQG) and as a current gasoline station, currently manifests hazardous waste. A total of seven soil borings, six vapor probes, and eleven monitoring wells have been installed. Based on the most recent groundwater monitoring repot, MTBE was detected in one of the monitoring wells. The site remains open as of 2004.

Former Automobile Shop

This site is located at 4647 Foothill Boulevard and is across the road from the southern portion of the project site. The site is listed on the EDR Historic Auto Station database as BJ's Auto Shop from 2000 to 2010.

Shell Service Station #13-5686

This site is located at 4411 Foothill Boulevard and is across the road from the southern portion of the project site. This site was a gasoline service station from 1958 to the 1990s. Three 6,000-gallon gasoline USTs were removed in 1971 and replaced with three underground storage tanks of 10,000 gallons, 8,000 gallons, and 550 gallons respectively. Three additional 10,000-gallon gasoline USTs were installed in 1984. Based on the most recent groundwater monitoring report from 2014, diesel-range total petroleum hydrocarbons (TPH-d), TPH-g, benzene, and MTBE were detected in a monitoring well on the site. On- and off-site investigations are ongoing.

Former Dry Cleaners

This site is located at 1760 High Street, located near the southwest of the project site. This site is listed on the EDR Historic Cleaner database as High Street Coin Laundry from 2008 to 2012. No available data indicates that dry cleaning operations have been conducted at this site.

Asbestos in Soil

Based on data provided by the US Geological Survey (Graymer 2000), the project site is located within 10 miles of a geological unit potentially containing naturally occurring asbestos (NOA), serpentine. Although the probability of NOA on the project site is low, the potential for NOA soil cannot be ruled out.

Asbestos-Containing Materials

Asbestos exposure has been linked to health effects such as lung disease and lung cancer. Because of its strong fibers and natural fire resistance, asbestos has been used in a variety of building materials for insulation and as a fire retardant (EPA 2016).

The buildings on the project site were constructed prior to 1978 and may include asbestos-containing materials.

Lead-Based Paint

Lead-based paints are of concern both as a source of direct exposure through ingestion of paint chips and as a contributor to lead interior dust and exterior soil. Lead was widely used as a major ingredient in most interior and exterior oil-based paints prior to the 1950s.

The buildings on the project site were constructed prior to 1978 and should be assumed to contain lead-based paint based on current regulations.

Polychlorinated Biphenyls

PCBs are a group of chlorinated, aromatic hydrocarbons that are toxic to the liver and are linked to cancer. PCBs were manufactured in the United States from 1929 to 1979 for use in electrical products. Some principal uses of PCBs were in oil-insulated transformers, capacitors, and fluorescent light ballasts.

During site reconnaissance, concrete pad-mounted transformers, hydraulic-powered elevators, and historical hydraulic auto lifts were observed on the project site. PCBs associated with this equipment and potential releases at the project site could be present.

Radon

Radon is a naturally occurring radioactive gas that can cause lung cancer. Alameda County is in EPA Radon Zone 2. This zone has a predicted average indoor radon screening level between 2 and 4 picocuries per liter (pCi/L). The EPA recommends that individuals avoid long-term exposure to radon concentrations above 4 picocuries per liter. Based on California Department of Public Health data, predicted radon levels in area code 94601 do not exceed 1 pCi/L; therefore, there is a low potential that radon at the project site exceeds 4 pCi/L.

Vapor Intrusion

The project site was assessed for a potential vapor intrusion condition as part of the Phase I ESA. A potential vapor intrusion condition is defined by American Society of Testing and Materials (ASTM) E 2600 as "the presence or likely presence of any chemicals of concern in the indoor air environment of existing or planned structures on a property caused by the release of vapor from contaminated soil or groundwater on the property or within close proximity to the property, at a concentration that presents or may present an unacceptable health risk to occupants."

At this time, there is no evidence that documented releases of volatile contaminants are impacting the project site.

AIRPORT OPERATIONS HAZARDS

Airport-related hazards are generally associated with aircraft accidents, particularly during takeoffs and landings. Other airport operation hazards include incompatible land uses, power transmission lines, wildlife hazards (e.g., bird strikes), and tall structures surrounding an airport.

The project site is approximately 3 miles north of Oakland International Airport. The Alameda County Airport Land Use Commission (ALUC) has adopted an Airport Land Use Compatibility

Plan that addresses the areas in the vicinity of Oakland International Airport and designates noise, overflight, safety, and airspace protection zones. According to the Oakland Airport Land Use Compatibility Plan, the entire project site is outside of the Airport Influence Area and the designated noise and safety zones (Alameda County Airport Land Use Commission 2012). There are no private airports in the vicinity of the project site.

WILDLAND FIRES

A wildfire is an uncontrolled fire spreading through vegetative fuels, posing danger, and causing destruction to life and property. Wildfires can occur in undeveloped areas and spread to urban areas where structures and other human development are more concentrated. The project site is located in an urban area surrounded by urban development.

Wildfires have been an issue in Oakland in the past, particularly in the more vegetated areas in the eastern portion of the city, the Oakland Hills (Oakland 2012). According to the California Department of Forestry and Fire Protection (Cal Fire) (2007), the easternmost portion of the city, approximately 3 miles from the project site, is a Very High Fire Hazard Severity Zone. However, the project site is not within a State Responsibility Area for Fire Protection or a Fire Hazard Severity Zone.

EMERGENCY RESPONSE

The Alameda County Department of Environmental Health serves as the Certified Unified Program Agency (CUPA) for the City of Oakland (Oakland 2016). The department inspects hazardous materials facilities and reviews and certifies risk management plans to prevent accidental releases of hazardous materials.

The Oakland Fire Department has a Hazard Materials Response team that includes specially trained hazardous materials technicians. This team is capable of responding to hazardous materials emergencies in the city.

3.6.2 REGULATORY FRAMEWORK

HAZARDOUS MATERIALS AND WASTE DEFINED

Under Title 22 of the California Code of Regulations (CCR), the term *hazardous substance* refers to both hazardous materials and hazardous wastes, and both are classified according to four properties: toxicity, ignitability, corrosiveness, and reactivity (CCR Title 22, Chapter 11, Article 3). A hazardous material is defined as a substance or combination of substances that may cause or significantly contribute to an increase in serious, irreversible, or incapacitating illness or may pose a substantial presence or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

Hazardous wastes are hazardous substances that no longer have practical use, such as materials that have been discarded, discharged, spilled, or contaminated or are being stored until they can be disposed of properly (CCR Title 22, Chapter 11, Article 2, Section 66261.10). Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific CCR Title 22 criteria. While hazardous substances are regulated by multiple agencies, cleanup requirements of hazardous wastes are determined on a case-by-case basis according to the agency with lead jurisdiction over the project.

FEDERAL

Clean Water Act (33 USC Section 1251 et seq.)

The federal Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. Under the act, the EPA implements pollution control programs such as setting wastewater standards for industry and setting water quality standards for all contaminants in surface waters.

The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. Industrial, municipal, and other facilities must obtain permits through the EPA's National Pollutant Discharge Elimination System (NPDES) permit program if their discharges go directly to surface waters. In California, the EPA has authorized the State to administer the NPDES permit program.

Clean Air Act (42 USC Section 7401 et seq.)

The federal Clean Air Act regulates hazardous air pollutants from stationary and mobile sources via national ambient air quality standards (NAAQS). Clean Air Act Section 112 requires issuance of technology-based standards for major sources and certain area sources.

Major sources are defined as a stationary source or group of stationary sources that emit or have the potential to emit 10 tons per year or more of a hazardous air pollutant or 25 tons per year or more of a combination of hazardous air pollutants. An area source is any stationary source that is not a major source. For major sources, Section 112 requires that the EPA establish emission standards which require the maximum degree of reduction in emissions of hazardous air pollutants. These emission standards are commonly referred to as maximum achievable control technology, or MACT standards.

Resource Conservation and Recovery Act (42 USC Section 6901 et seq.)

The Resource Conservation and Recovery Act (RCRA) gives the EPA the authority to control hazardous waste from "cradle to grave," including the generation, transportation, treatment, storage, and disposal of hazardous waste. The RCRA also sets forth a framework for the management of nonhazardous solid wastes.

The Federal Hazardous and Solid Waste Amendments are the 1984 amendments to the RCRA that focus on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. Some of the other mandates of this law include increased enforcement authority for the EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.

Comprehensive Environmental Response, Compensation, and Liability Act (42 USC Section 9601 et seq.)

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) establishes a federal "Superfund" to clean uncontrolled or abandoned hazardous waste sites as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment. Through CERCLA, the EPA identifies parties responsible for any release and ensures their participation in the cleanup.

The EPA is authorized to implement CERCLA in all 50 states and in US territories, though Superfund site identification, monitoring, and response activities are coordinated through the state environmental protection or waste management agencies. The Superfund Amendments and Reauthorization Act of 1986 reauthorized CERCLA to continue cleanup activities around the country and included several site-specific amendments, definition clarifications, and technical requirements.

Occupational and Safety Health Act (29 USC Section 651 et seq.)

The Occupational and Safety Health Act is intended to ensure worker and workplace safety by requiring that employers provide their workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. The Occupational Safety and Health Administration (OSHA) is a division of the US Department of Labor that oversees the administration of the act and enforces standards in all 50 states.

Toxic Substances Control Act (15 USC Section 2601 et seq.)

The Toxic Substances Control Act provides the EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. The act addresses the production, importation, use, and disposal of specific chemicals, including PCBs, asbestos, radon, and lead-based paint.

Hazardous Materials Transportation Law and Hazardous Materials Regulations (49 USC Section 5101 et seq.)

The Hazardous Materials Transportation Law is the basic statute regulating hazardous materials transportation in the United States. Section 5101 of the federal hazmat law states that the purpose of the law is to protect against the risks to life, property, and the environment that are inherent in the transportation of hazardous material in intrastate, interstate, and foreign commerce.

The Hazardous Materials Regulations are administered by the Pipeline and Hazardous Material Safety Administration (PHMSA), part of the US Department of Transportation (US DOT), and implement the Hazardous Materials Transportation Law. The regulations govern the transportation of hazardous materials via highway, rail, vessel, and air by addressing hazardous materials classification, packaging, hazard communication, emergency response information, and training. They also issue procedural regulations, including provisions on registration and public sector training and planning grants (49 CFR Parts 105, 106, 107, and 110).

The Federal Motor Carrier Safety Administration issues regulations concerning highway routing of hazardous materials, hazardous materials endorsements for a commercial driver's license, highway hazardous material safety permits, and financial responsibility requirements for motor carriers of hazardous materials.

Federal Aviation Regulations

Development near airports and heliports can pose a potential hazard to people and property on the ground, as well as create obstructions and other hazards to flight. The Federal Aviation Regulations (FAR) include criteria for evaluating the potential effects of obstructions on the safe and efficient use of navigable airspace within approximately 1 mile of a heliport, approximately 2 to 3 miles of airport runways, and approximately 9.5 miles from the end of high-traffic runways

that have a precision instrument approach. According to the obstruction criteria in FAR Part 77, the Federal Aviation Administration (FAA) requires notification of any proposed construction or alteration projects.

Other airspace protection concerns identified by the FAA include avoiding land uses in the airport vicinity that would create hazards to flight such as electrical interference, lighting, glare, smoke, and bird strikes. Under the California State Aeronautics Act, local governments have the authority to protect airspace as defined by the criteria provided in FAR Part 77.

STATE

Unified Program

The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the following six environmental and emergency response programs:

- The Hazardous Waste Generator program and Hazardous Waste Onsite Treatment activities
- The Aboveground Storage Tank program Spill Prevention Control and Countermeasure Plan requirements
- The Underground Storage Tank program
- The Hazardous Materials Release Response Plans and Inventory program
- California Accidental Release Prevention program
- The Hazardous Materials Management Plans and the Hazardous Materials Inventory Statement requirements

The state agencies responsible for these programs set the standards, while local governments implement the standards. The California Environmental Protection Agency (CalEPA) oversees implementation of the Unified Program as a whole, and the local CUPA is required to consolidate, coordinate, and make consistent the administrative requirements, permits, fee structures, and inspection and enforcement activities for these six program elements. Most CUPAs have been established as a function of a local environmental health or fire department. The CUPA for the City of Oakland is the Alameda County Department of Environmental Health.

California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (Cal/OSHA) is responsible for implementing workplace regulations in the state. Cal/OSHA classifies any materials as having greater than 0.1 percent asbestos as asbestos-containing materials. A contractor certified by the California Contractors State License Board to conduct asbestos-related work must perform the removal or disturbance of 100 square feet or more of asbestos-containing materials. Requirements specifically addressing asbestos are found in Title 8 of the California Code of Regulations and in the California Health and Safety Code.

Hazardous Waste and Substances Site List (Cortese List)

The Cortese List is a planning document used by California and local government agencies to comply with the requirements of the California Environmental Quality Act (CEQA) regarding the location of hazardous materials release sites. CalEPA updates the Cortese List annually in accordance with Government Code Section 65962.5. The DTSC and other state and local government agencies are responsible for providing hazardous material release information for the Cortese List.

LOCAL

Although City of Oakland regulations do not apply to lands under the jurisdiction of the Oakland Unified School District (OUSD), the district will consider the following local regulations during project implementation and apply them as best practices when deemed necessary.

Oakland International Airport Land Use Compatibility Plan

Alameda County Airport Land Use Commission (ALUC) has adopted an Airport Land Use Compatibility Plan that addresses the areas within approximately two miles of the Oakland International Airport. The intent of the plan is to encourage compatibility between the Oakland International Airport and the land uses surrounding the airport. The plan designates noise, overflight, safety, and airspace protection zones surrounding the airport and establishes compatibility criteria applicable to new development.

City of Oakland Municipal Code

Chapter 8.12, Hazardous Materials

Chapter 8.12 of the Oakland Municipal Code contains hazardous material regulations for the storage, handling, and use of hazardous substances and materials in the city. The Municipal Code requires permits for certain hazardous activities and operations, and inspections to determine whether such activities or operations can be conducted in a manner that complies with the hazardous materials regulation standards.

Local Hazard Mitigation Plans

In March 2005, the Association of Bay Area Governments (ABAG) adopted a multi-jurisdictional Hazard Mitigation Plan for the Bay Area. Participating local county and city governments in the Bay Area prepare an annex to this plan to explain how the Hazard Mitigation Plan specifically applies to that agency. The Bay Area Hazard Mitigation Plan was updated most recently in 2010. The City of Oakland has established a Local Hazard Mitigation Plan as an annex to the Bay Area Hazard Mitigation Plan. The City's plan outlines the potential hazards that may impact Oakland and describes how the City will prepare for emergencies and disasters. The 2016–2021 Local Hazard Mitigation Plan was adopted on June 7, 2016.

3.6.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

This analysis evaluates the project's impacts from hazards and hazardous materials based on the standards identified in CEQA Guidelines Appendix G. A hazards and hazardous materials impact is considered significant if the project would:

1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

2) 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.

3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

4) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.

5) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.

6) For a project in the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.

7) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

8) 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.

The project site is outside of the Airport Influence Area of Oakland International Airport, and the project would not result in a safety hazard for students on the project site. There are no private airports in the vicinity of the project site. Standards of Significance 5 and 6 are not discussed further, as the project would have **no impact**.

As discussed in the Existing Setting subsection above, the project site is not located within a State Responsibility Area for Fire Protection or a Fire Hazard Severity Zone. Standard of Significance 8 is not discussed further, as the project would have **no impact**.

METHODOLOGY

The following impact analysis is based primarily on information from the Phase I ESA prepared for the project in 2016 (**Appendix HAZ**). A database search was performed to identify federal, state, and local records of hazardous materials activities within a quarter mile of the project site which may impact conditions on-site. The impact analysis focuses on whether hazard impacts would have a significant effect on the physical environment and/or the health and safety of the public.

IMPACTS AND MITIGATION MEASURES

Transport, Use, and Disposal of Hazardous Materials (Standard of Significance 1)

Impact 3.6.1 The project would involve the transport, use, and disposal of hazardous materials during construction and operation. Such activities would continue to be regulated under existing law in order to protect public health. This impact would be **less than significant.**

Construction

Project construction activities such as construction, remodeling, demolition, landscaping, and paving activities could result in the transport, use, and disposal of hazardous materials such as gasoline, fuels, asphalt, lubricants, toxic solvents, pesticides, and herbicides. The transport, use, and disposal of these materials could pose a potential hazard to the public and the environment. Given that the project area borders residential neighborhoods, there is a potential for exposure to hazardous materials transported via the adjacent roadways during construction.

Transportation of hazardous materials during construction would comply with EPA and US Department of Transportation regulations for the transport of hazardous waste and materials, including transport via highway. The Alameda County Department of Environmental Health is the CUPA for the City of Oakland and is responsible for consolidating, coordinating, and making consistent the administrative requirements, permits, inspections, and enforcement activities of state standards regarding the transportation, use, and disposal of hazardous materials in the city.

Operation

Hazardous materials use and storage at the project site are currently limited to janitorial supplies and laboratory supplies associated with high-school science classes (5 gallons or less). No releases or violations associated with current hazardous material use were observed during the Phase I ESA. The school would not routinely transport, use, or dispose of hazardous materials or present a reasonably foreseeable release of hazardous materials. The use and handling of hazardous materials such as janitorial and laboratory supplies during operation would comply with applicable federal, state, and local laws, including RCRA and Cal/OSHA requirements.

With continued compliance with all federal, state, and local regulations related to the transport, use, and disposal of hazardous materials, this impact would be **less than significant**.

Mitigation Measures

None required.

Accidental Release of and Exposure to Hazardous Materials (Standard of Significance 2)

Impact 3.6.2 The project site is listed in the hazardous waste regulatory databases as manifesting PCBs, waste oil, asbestos, and other hazardous waste. Additionally, the project site has the potential to contain soils with naturally occurring asbestos. The project would include the remodel of structures that were found to potentially contain asbestos and lead-based materials. As such, the project could 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. This impact would be **less than significant with mitigation**.

Unknown Contamination

As described above, Fremont High School is listed in the hazardous waste regulatory databases searched for the Phase I ESA. The project site is listed as manifesting PCBs and materials containing PCBs, unspecified hazardous waste, waste oil and mixed oil, unspecified oil-containing waste, other organic solids, asbestos-containing waste, other inorganic solid waste, and laboratory waste chemicals from the years 1994 to 2014.

Additionally, based on data provided by the US Geological Survey (Graymer 2000), the project site is located within 10 miles of a geological unit potentially containing NOA. Although the probability of naturally occurring asbestos on the project site is low, the potential for NOA in the soil cannot be ruled out.

Although no visible hazardous materials contamination was observed, there is potential for undocumented contamination to be discovered during construction. This impact would be **potentially significant** and mitigation measures **MM 3.6.2a** and **MM 3.6.2b** are required.

Asbestos-Containing Materials

The Phase I ESA found that asbestos-containing materials could be present in the buildings on the project site. Although materials were not tested to determine asbestos levels, due to the structures' ages, it is assumed that asbestos-containing materials are present. OSHA requires training and that precautions be taken when working with asbestos (29 CFR 1926). Due to the structures' ages and their proximity to students and residential uses, impacts from asbestos-containing materials would be **potentially significant** and mitigation measures **MM 3.6.2c** and **MM 3.6.2d** are required.

Lead-Based Paint

The Phase I ESA found that lead-based paints could be present in the buildings on the project site. Although materials were not tested for lead levels, due to the structures' ages, it is assumed that lead-based paints are present on-site. Construction activities that disturb materials or paints containing any amount of lead are subject to certain OSHA requirements of the lead standard contained in 29 CFR 1910.1025 and 1926.62. Due to the structures' ages and their proximity to students and residential uses, project impacts would be **potentially significant** and mitigation measures **MM 3.6.2d** and **MM 3.6.2e** are required.

Vapor Intrusion

Based on the ongoing remedial/investigation activities at the hazardous materials sites adjacent and near the project site, and the identification of a responsible party, it is unlikely that the project site would experience contamination from these nearby sites.

As previously discussed, the project site was assessed for a potential vapor intrusion condition as defined by ASTM E 2600, and it was determined that there is no evidence that documented releases of volatile contaminants are impacting the project site. This impact would be **less than significant**.

Transportation of Hazardous Materials

As discussed under Impact 3.6.1, the project would involve the transportation of hazardous materials. These activities could result in the accidental release of hazardous materials into the environment and exposure of the public to hazardous materials. In addition, construction activities could increase exposure to persistent residual chemicals, including pesticides, herbicides, and fertilizers, that have the potential to pose a health and safety risk via accidental release, misuse, or historic use. Project activities could also result in exposure to hazardous materials by disturbing and thus releasing asbestos and/or lead during demolition and remodeling activities.

As discussed under Impact 3.6.1, the transport, storage, and use of hazardous materials by developers, contractors, and others are required to be in compliance with local, state, and federal regulations during project construction and operation.

Continued compliance with all federal, state, and local regulations regarding hazardous materials and discovered contamination would reduce this impact to **less than significant**.

Mitigation Measures

MM 3.6.2a If hazardous materials are encountered during construction or accidentally released as a result of construction activities, the District and/or its contractor shall implement the following procedures:

- Stop all work in the vicinity of any discovered contamination or release.
- Identify the scope and immediacy of the problem.
- Coordinate with responsible agencies including the DTSC, the San Francisco Bay Regional Water Quality Control Board, or the EPA.
- Conduct the necessary investigation and remediation activities to resolve the situation before continuing construction work.

MM 3.6.2b Prior to construction, the District shall conduct a soil assessment pursuant to the DTSC guidance on naturally occurring asbestos to determine whether NOA is present on the project site. The results of the soil assessment shall be provided to the DTSC. If NOA is found to be present at the project site, measures included in the soil assessment shall be implemented as part of project design and construction.

MM 3.6.2c Prior to construction, the District shall implement an Operations and Maintenance Plan. The plan shall include measures which would ensure that the assessment, repair, and maintenance of damaged materials within the buildings are completed in a manner that protects the health and safety of workers and building occupants as described in applicable state and local regulations. If necessary, the District shall retain a Cal/OSHA-registered asbestos contractor to remove asbestos-containing materials to ensure safety to the surrounding neighborhoods.

MM 3.6.2d Because of the potential exposure to hazardous materials (asbestos and lead-based paint) during demolition, building demolition shall not take place when school is in session.

MM 3.6.2e Prior to construction, the District shall consult with a certified lead risk assessor to determine options for control and correction of lead-based paint hazards. If lead-based paints are found to be present, to prevent the accidental release of lead-based paint, the District and/or its contractor shall use the following techniques during construction:

- Stabilize loose and flaky paint prior to construction activities.
- Require all workers to wear OSHA-level protective material for handling lead-based paint per OSHA requirements for lead in construction.
- Remove all lead-based paint materials to a scrap yard or landfill that can accept such materials.

Implementation of mitigation measures **MM 3.6.2a** through **MM 3.6.2e** would prevent accidental release of hazardous materials within the project area, so as to not pose a safety hazard. With these measures and compliance with applicable regulations pertaining to hazardous materials, this impact would be reduced to **less than significant**.

Hazardous Emissions and Materials in the Vicinity of a School Site (Standard of Significance 3)

Impact 3.6.3 The project would involve the use, transport, disposal, and/or release of hazardous materials in the vicinity of an existing school site. This impact would be **less than significant with mitigation**.

There are two public schools located within a quarter mile of the project site: Aspire Eres Academy located approximate 300 feet northwest and Oakland Charter Academy located approximately 800 feet west of the project site. The project site itself is also a school campus.

As discussed under Impacts 3.6.1 and 3.6.2, the project could involve transport of hazardous materials in the project area during construction and operation. However, as previously determined, continued compliance with all federal, state, and local regulations related to the transport, use, and disposal of hazardous materials would minimize the potential for public exposure to hazardous materials. In addition, implementation of mitigation measures **MM 3.6.2a** through **MM 3.6.2e** would ensure that construction and operation activities pose no risk to surrounding properties as a result of site disturbance. Therefore, this impact would be **less than significant**.

Mitigation Measures

Implement mitigation measures **MM 3.6.2a** through **MM 3.6.2e**.

Hazardous Materials Sites (Standard of Significance 4)

Impact 3.6.4 The proposed project would be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As such, project implementation could create a significant hazard to the public or the environment. This impact would be **less than significant with mitigation**.

Fremont High School, the project site, is included on the list of sites compiled pursuant to Government Code Section 65962.5, the Cortese List. There are several potentially hazardous material sites located adjacent to or near the project site. Further, the Phase I ESA showed that the structures potentially contain known hazardous materials (asbestos and lead-based paint), which could present a hazard to the public or the environment during project construction. Implementation of mitigation measures **MM 3.6.2a** through **MM 3.6.2e** would ensure worker protection, reducing this impact to **less than significant**.

Mitigation Measures

Implement mitigation measures **MM 3.6.2a** through **MM 3.6.2e**.

Emergency Response and Evacuation Plans (Standard of Significance 7)

Impact 3.6.5 The project would not interfere with adopted emergency response and evacuation plans that apply to the project area. This impact would be **less than significant**.

The City of Oakland has established a Local Hazard Mitigation Plan as an annex to the Bay Area Hazard Mitigation Plan. The City's plan outlines the potential hazards that may impact Oakland and describes how the City will prepare for emergencies and disasters. The project would not alter the project area's land use patterns or land use designations to such an extent that they would conflict with this plan.

Efficient circulation is vital for the evacuation of residents and the mobility of fire suppression, emergency response, and law enforcement vehicles during an emergency. The project would increase access for emergency vehicles and fire suppression equipment through changes to on-site traffic circulation and access points.

The project would not conflict with an adopted emergency response plan. In fact, the project would improve project site conditions, allowing better emergency vehicle access to the school. Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

3.6.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for hazards and hazardous materials risks is Oakland as a whole. Most hazardous materials, human health, and safety impacts as described in CEQA Appendix G are generally site-specific and not cumulative in nature, as impacts generally vary by land use, site characteristics, and site history.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Hazards Impacts

Impact 3.6.6 The project, along with increased urban development in Oakland, would not result in cumulative hazards impacts. This impact would be **less than cumulatively considerable**.

Potential exposure to or generation of hazardous conditions in the project area is site-specific rather than associated with the combination of other hazards in the region resulting in a significant effect. Adherence to existing federal, state, and local regulations regarding the handling, transport, and disposal of hazardous materials, as well as implementation of mitigation measures **MM 3.6.2a** through **MM 3.6.2e,** would minimize the potential risks associated with accidental release and exposure to hazardous materials. Therefore, this impact would be **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

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This section describes the existing noise environment in the project area and the potential for the project to result in noise impacts exceeding applicable noise level criteria. A summary of the impact conclusions related to noise is provided below.

Impact Number	Impact Topic	Impact Significance
3.7.1	Exposure to Noise Levels in Excess of Standards	Less than significant with mitigation
3.7.2	Exposure to Groundborne Vibration	Less than significant with mitigation
3.7.3	Exposure to Noise from Airport Operations	No impact
3.7.4	Cumulative Noise Impacts	Less than cumulatively considerable

3.7.1 FUNDAMENTALS OF SOUND AND ENVIRONMENTAL NOISE

Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations which 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 a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise, on the other hand, is typically defined as unwanted sound because of its potential to disrupt sleep, interfere with speech communication, and damage hearing. A typical noise environment consists of a base of steady "background" noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These can vary from an occasional aircraft or train passing by to virtually continuous noise from, for example, traffic on a major highway.

AMPLITUDE

Amplitude is the difference between ambient air pressure and the peak pressure of the sound wave. Amplitude is measured in decibels on a logarithmic scale. Laboratory measurements correlate a 10 dB increase in amplitude with a perceived doubling of loudness and establish a 3 dB change in amplitude as the minimum audible difference perceptible to the average person.

FREQUENCY

Frequency is the number of fluctuations of the pressure wave per second. The unit of frequency is the hertz. One hertz equals one cycle per second. The human ear is not equally sensitive to sound of different frequencies. To approximate this sensitivity, environmental sound is usually measured in A-weighted decibels. On this scale, the normal range of human hearing extends from about 10 dBA to about 140 dBA. Common community noise sources and associated noise levels, in dBA, are depicted in **Figure 3.7-1**.

ADDITION OF DECIBELS

Because decibels are logarithmic units, sound levels cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dB increase. In other words, when two identical sources are each producing sound of the same

loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. Under the decibel scale, three sources of equal loudness together would produce an increase of 5 dB.

SOUND PROPAGATION AND ATTENUATION

Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (FHWA 2011). No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. For line sources, an overall attenuation rate of 3 dB per doubling of distance is assumed (FHWA 2011).

Noise levels may also be reduced by intervening structures. Generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA (FHWA 2006b). The manner in which older homes in California were constructed generally reduces exterior-to-interior noise levels by about 20 to 25 dBA with closed windows. The exterior-to-interior reduction in newer residential units is generally 30 dBA or more.

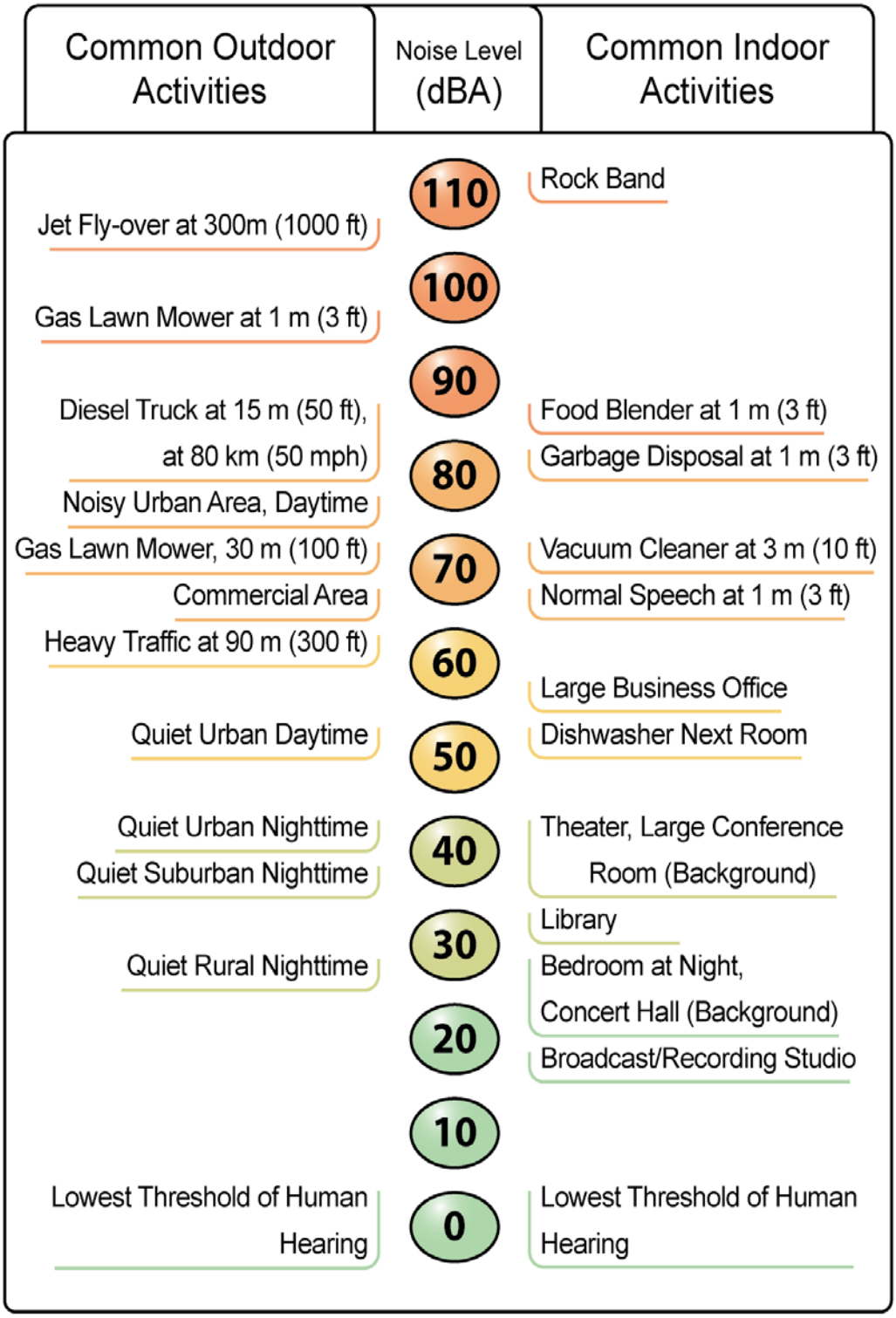
NOISE DESCRIPTORS

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL are measures of community noise. Each is applicable to this analysis and defined in **Table 3.7-1**.

The A-weighted decibel sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. These meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

FIGURE 3.7-1
TYPICAL COMMUNITY NOISE LEVELS



Source: Caltrans 2012

TABLE 3.7-1
DEFINITIONS OF ACOUSTICAL TERMS

Term	Definitions
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or 20 micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micropascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average acoustic energy content of noise for a stated period of time. 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. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	A 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
Community Noise Equivalent Level, CNEL	A 24-hour average L_{eq} with a 5 dBA "weighting" during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA "weighting" 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, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

HUMAN RESPONSE TO NOISE

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the

community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the range between 60 to 70 dBA, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with more noisy urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in A-weighted noise levels (dBA), the following relationships should be noted for understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference.
- A change in level of at least 5 dBA is required before any noticeable change in community response would be expected. An increase of 5 dBA is typically considered substantial.
- A 10 dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

EFFECTS OF NOISE ON PEOPLE

The Occupational Safety and Health Administration (OSHA) has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposure. The maximum allowable level is 90 dBA averaged over 8 hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. For ground vehicles, a noise level of about 55 dBA L_{dn} is the threshold at which a substantial percentage of people begin to report annoyance.

FUNDAMENTALS OF ENVIRONMENTAL GROUNDBORNE VIBRATION

Sources of earthborne vibrations include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or man-made causes (explosions, machinery, traffic, trains,

construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions).

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

For the purposes of this analysis, a PPV descriptor with units of inches per section is used to evaluate construction-generated vibration for building damage and human complaints. **Table 3.7-2** displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those shown, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

TABLE 3.7-2
HUMAN REACTION AND DAMAGE TO BUILDINGS FOR CONTINUOUS OR FREQUENT INTERMITTENT VIBRATION LEVELS

Peak Particle Velocity (inches per second)	Human Reaction	Effect on Buildings
0.006–0.019	Range of threshold of perception	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level to which ruins and ancient monuments should be subjected
0.1	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities	Virtually no risk of architectural damage to normal buildings
0.2	Vibrations may begin to annoy people in buildings	Threshold at which there is a risk of architectural damage to normal dwellings
0.4–0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Architectural damage and possibly minor structural damage

Source: Caltrans 2004

3.7.2 EXISTING SETTING

The Fremont High School campus is located in an urban area and is surrounded by single- and multi-family residential development and commercial land uses. Development along 46th, 47th, and Ygnacio avenues consists of single-family residences as well as one multi-family residential building. High Street adjacent to the project site is lined with single-family residences, as well as a church and a gas station. On the corner of High Street and Foothill Boulevard, across the street

from the project site, is a large commercial development that includes both retail uses and fast-food eateries. Continuing down Foothill Boulevard adjacent to the project site, there is another fast-food eatery, the Fremont Community Pool, an auto body shop, and a small number of undeveloped lots.

NOISE-SENSITIVE RECEPTORS

Noise-sensitive land uses are those that may be subject to stress and/or interference from excessive noise. Noise-sensitive land uses in the project vicinity include the high school campus itself and the residences along 46th, 47th, and Ygnacio avenues.

EXISTING AMBIENT NOISE LEVELS

Regional noise sources include traffic-related noise on roadways and highways, airplanes flying overhead, and noise associated with typical urban development (e.g., people talking, barking dogs, vehicles, yard maintenance equipment). Sound is affected by distance from the source, surrounding obstacles, and atmospheric properties. Thus, regional noise sources would not typically interfere or combine with noise sources within or in close proximity to the project site. The sound levels in most communities fluctuate, depending on the activity of nearby and distant noise sources, the time of the day, or the season of the year. According to the Oakland General Plan Noise Element (2005), the noise environment in the project region is predominantly influenced by automobile traffic and generally experiences noise levels of 60 dBA L_{dn} from traffic noise.

3.7.3 REGULATORY FRAMEWORK

LOCAL

Although City of Oakland regulations do not apply to lands under the jurisdiction of the Oakland Unified School District (OUSD), the District will consider the following local regulations during project implementation and apply them as best practices when deemed necessary.

City of Oakland General Plan

The City's General Plan contains noise and land use compatibility guidelines for various land uses. Schools and residences are considered "normally acceptable" when exposed to a CNEL of 60 dBA or less and "conditionally acceptable" when exposed to a CNEL of 61 to 70 dBA.

City of Oakland Municipal and Planning Codes

Municipal Code Section 8.18.020

Per Municipal Code Section 8.18.20, the City specifies that the persistent maintenance or emission of any noise or sound produced by human, animal, or mechanical means, between the hours of 9:00 p.m. and 7:00 a.m., which disturbs a person's peace or comfort, or is injurious to health, constitutes a nuisance. The section also indicates that failure to comply with various specified provisions constitutes a nuisance.

Planning Code Section 17.120.050, Noise

Section 17.120.050 of the Planning Code regulates the daytime noise level received by any residential, commercial, or industrial land use within its jurisdiction which is produced by any

repetitively scheduled and relatively long-term construction or demolition operation (10 days or more). Specifically, the section states that noise levels are not to exceed the maximum allowable receiving noise levels described in Table 17.120.04 of the Planning Code, part of is included as **Table 3.7-3**.

TABLE 3.7-3
CITY OF OAKLAND CONSTRUCTION NOISE STANDARDS AT RECEIVING PROPERTY LINE

Receiving Land Use	Maximum Allowable Noise Level (dBA)	
	Weekdays 7:00 a.m.–7:00 p.m.	Weekends 9:00 a.m.–8:00 p.m.
Residential	65	55
Commercial, Industrial	70	60

Source: Oakland 2016

City of Oakland Standard Conditions of Approval

The City established its Standard Conditions of Approval and Uniformly Applied Development Standards (SCAs) in 2008 for all development projects within its jurisdiction, and they have since been amended and revised several times. The City's SCAs are incorporated into new and changed projects, for which the City is the lead agency, as conditions of approval regardless of a project's environmental determination. The SCAs incorporate policies and standards from various adopted plans, policies, and ordinances (such as the Oakland Planning and Municipal Codes, Housing Element–related mitigation measures, the California Building Code and Uniform Fire Code, among others), which have been found to substantially mitigate environmental effects.

National Institute for Occupational Safety and Health

In addition to the construction noise standards promulgated by the City of Oakland, construction-generated noise can be compare to the construction-related noise level threshold established by the National Institute for Occupational Safety and Health (NIOSH). A division of the US Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The construction-related noise level threshold starts at 85 dBA for more than 8 hours per day, and for every 3 dBA increase, the exposure time is cut in half. This results in noise level thresholds of 88 dBA for more than 4 hours per day, 92 dBA for more than 1 hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. Generally, the lowest, more conservative construction noise level threshold of 85 dBA L_{eq} is used as an acceptable threshold for construction noise at nearby sensitive receiver locations since that is the duration of a typical workday.

Vibration Criteria

The City of Oakland does not have specific policies pertaining to vibration levels. However, various agencies, such as the California Department of Transportation (Caltrans), have developed recommended criteria for the evaluation of groundborne vibration levels with regard to potential human annoyance and building structural damage. The effects of groundborne vibration levels, with regard to human annoyance and structural damage, are influenced by various factors, including ground type, distance between source and receptor, duration, and the type of vibration events (i.e., continuous or transient). The threshold at which there is a risk to normal structures is 0.2 inches per second PPV. This same threshold is typically considered the level at which increased levels of annoyance may begin to occur to occupants of nearby buildings (Caltrans 2004).

3.7.4 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

According to California Environmental Quality Act (CEQA) Guidelines Appendix G, impacts related to noise are considered significant if the project would result in any of the following conditions:

1) Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or of applicable standards of other agencies.

2) Exposure of persons to or generation of an excessive groundborne vibration or groundborne noise level.

3) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

4) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

5) For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport, exposure of people residing or working in the project area to excessive noise levels.

6) For a project within the vicinity of a private airstrip, exposure of people residing or working in the project area to excessive noise levels.

METHODOLOGY

This analysis of project-generated noise is based on information and guidance provided by the Federal Transit Administration (2006), the Federal Highway Administration (2006a, 2006b), and Caltrans (2004). Occupied classrooms on the school campus and the residential uses in the project vicinity are considered noise-sensitive receptors.

PROJECT IMPACTS AND MITIGATION MEASURES

Exposure of Persons to or Generation of Noise Levels in Excess of Standards (Standards of Significance 1, 3, and 4)

Impact 3.7.1 The proposed project would not result in the exposure of persons to or generation of noise levels in excess of local noise standards with mitigation measures implementation. This impact would be **less than significant with mitigation**.

Construction Noise

Construction noise impacts depend on the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between noise sources and noise-sensitive receptors. Construction noise impacts primarily result when activities occur during noise-sensitive times of the day (early morning, evening, or nighttime

hours), when construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction lasts over extended periods of time.

Major noise-generating construction activities include removing existing structures, site grading and excavation, utility installation, laying foundations, cores, and shells, paving, and landscaping. The highest noise levels would be generated during the demolition of existing structures when impact tools are used (e.g., jackhammers, hoe rams) and during the construction of building foundations if impact pile driving is required to support the structure. Site grading and excavation activities would also generate high noise levels, as these phases often require the simultaneous use of multiple pieces of heavy equipment such as dozers, excavators, scrapers, and loaders. Lower noise levels result from building construction activities when these activities move indoors and less heavy equipment is required to complete the tasks. Construction equipment would typically include, but would not be limited to, earth-moving equipment and trucks, pile driving rigs, mobile cranes, compressors, pumps, generators, paving equipment, and pneumatic, hydraulic, and electric tools. Noise levels associated with individual construction equipment are summarized in **Table 3.7-4.** Operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings. Other primary sources of acoustical disturbance would be due to random incidents, which would last less than 1 minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts).

TABLE 3.7-4
MAXIMUM NOISE LEVELS GENERATED BY CONSTRUCTION EQUIPMENT

Type of Equipment	Acoustical Use Factor[1] (percent)	Maximum Noise (L_{max}) at 50 Feet (dBA)	Maximum 8-Hour Noise (L_{eq}) at 50 Feet (dBA)
Blasting	1	94	74.0
Crane	16	81	72.6
Dozer	40	82	77.7
Excavator	40	81	76.7
Generator	50	81	77.6
Grader	40	85	81.0
Other Equipment (greater than 5 horsepower)	50	85	82.0
Paver	50	77	74.2
Roller	20	80	73.0
Tractor	40	84	80.0
Truck	40	75	71.0
Concrete Pump Truck	40	81	74.4
Welder	40	74	70.0

Source: FHWA 2006a

[1] Acoustical use factor (percent): Estimates the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.

As depicted in **Table 3.7-4**, noise levels associated with individual construction equipment used for typical construction projects (excludes blasting) can reach levels of up to approximately 82 dBA L_{eq} over an 8-hour period and 85 dBA L_{max} (FTA 2006a). This noise level is below the NIOSH

standard of 85 dBA for more than 8 hours per day, yet above the City of Oakland's noise limit of 65 dBA for construction activities lasting more than 10 days. While these significance thresholds are not binding on OUSD, they are instructive for comparison purposes. Furthermore, the residential neighborhoods in the vicinity of the construction site that would potentially be impacted by the proposed project are located in Oakland and thus protected by City of Oakland noise standards. During project construction, noise levels could negatively affect the residential neighborhoods in the vicinity of the construction site since noise levels at these neighborhoods would exceed Oakland noise standards. Additionally, occupied classrooms on the project site could be negatively impacted. Assuming a minimum average exterior-to-interior noise reduction of 25 dBA (FHWA 2006a), predicted interior construction noise levels could reach levels of approximately 65 dBA L_{eq} in the nearest classrooms. Since project construction noise levels could reach levels exceeding the City of Oakland's noise limit at residences protected by City standards, construction-generated noise impacts would be **potentially significant,** requiring the imposition of noise-reducing mitigation measures.

As previously described, the City of Oakland established Standard Conditions of Approval and Uniformly Applied Development Standards for all development projects within its jurisdiction. The SCAs are adopted as requirements of an individual project when it is approved by the City and are designed to substantially mitigate environmental effects. The City considers construction projects that implement the construction-related Standard Conditions of Approval to be less than significant. Therefore, mitigation measures **MM 3.7.1a** through **MM 3.7.1e**, which mandate the implementation of City of Oakland construction-related Standard Conditions of Approval, are required of the OUSD during project construction in order to protect nearby residences from project construction noise. Additionally, mitigation measure **MM 3.7.1f** is required in order to prohibit the most noise-intensive construction activities to the hours when school is not in session.

Operational Noise

The proposed project would result in the modernization of a school campus. The project's purpose and objective is to provide greater educational opportunities to accommodate an existing school. The proposed new buildings would serve the same function as the existing structures. Furthermore, there would be no increase in student attendance or staffing as a result of this project. No additional activities or events are proposed beyond what currently occurs on the campus. For these reasons, the on-site operational noise sources would remain the same as current conditions and there is not a new or substantially more severe significant impact compared with the existing condition. Additionally, since no changes to enrollment or staffing are proposed as a result of this project, the project would not increase existing traffic; thus, it would not increase existing traffic-generated noise. The proposed project would not result in an increase in noise compared with the existing condition.

Mitigation Measures

MM 3.7.1a **Standard Condition of Approval 58 – Construction Days/Hours**. OUSD shall comply with the following restrictions concerning construction days and hours:

a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise-generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m.

b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturdays. In residential zones and within 300 feet of a residential zone,

construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise-generating activities greater than 90 dBA are allowed on Saturdays.

c. No construction is allowed on Sundays or federal holidays.

Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area. Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City of Oakland, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. OUSD shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, OUSD shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.

MM 3.7.1b **Standard Condition of Approval 59 – Construction Noise**. OUSD shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following:

a. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) wherever feasible.

b. Except as provided herein, impact tools (e.g., jackhammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.

c. OUSD shall use temporary power poles instead of generators where feasible.

d. Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction.

e. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.

MM 3.7.1c **Standard Condition of Approval 60 – Extreme Construction Noise.** Prior to any extreme noise-generating construction activities (e.g., pier drilling, pile driving, and other activities generating greater than 90 dBA), the project construction manager shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for OUSD review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise-generating activities. OUSD shall require the implementation of the approved plan during construction. Potential attenuation measures include, but are not limited to, the following:

a. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings.

b. Implement "quiet" pile driving technology (such as predrilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;.

c. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site.

d. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts.

e. Monitor the effectiveness of noise attenuation measures by taking noise measurements.

OUSD shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.

MM 3.7.1d **Standard Condition of Approval 61 – Project-Specific Construction Noise Reduction Measures.** The project construction manager shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for OUSD review and approval that contains a set of site-specific noise attenuation measures to further reduce construction noise impacts. OUSD shall implement the approved plan during construction.

MM 3.7.1e **Standard Condition of Approval 62 – Construction Noise Complaints**. OUSD shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise and shall implement the procedures during construction. At a minimum, the procedures shall include:

a. Designation of an on-site construction complaint and enforcement manager for the project.

b. A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit.

c. Protocols for receiving, responding to, and tracking received complaints.

d. Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.

MM 3.7.1f All pier drilling and/or other extreme noise-generating activities greater than 90 dBA shall be restricted to hours when school is not in session.

Implementation of mitigation measures **MM 3.7.1a** through **MM 3.7.1e** would ensure that the City of Oakland's construction-related, noise-reducing Standard Conditions of Approval would be employed during project construction in a manner that protects nearby residences from project construction noise. Mitigation measure **MM 3.7.1f** would prohibit the most noise-intensive construction activities to the hours when school is not in session. Impacts would be reduced to a **less than significant** level.

Exposure to Groundborne Vibration (Standard of Significance 2)

Impact 3.7.2 The proposed project would not involve the long-term use of any equipment or processes that would result in potentially significant levels of groundborne vibration. Predicted groundborne vibration levels associated with short-term construction activities would not be anticipated to exceed applicable thresholds with adequate mitigation. This impact would be **less than significant with mitigation**.

This analysis of the proposed project uses the Caltrans vibration impact threshold for sensitive buildings and residences. Increases in groundborne vibration levels attributable to the proposed project would be primarily associated with short-term construction-related activities. Construction activities associated with the proposed project would likely require the use of various equipment, such as tractors and haul trucks. For structural damage, Caltrans uses a vibration limit of 0.2 inches per second PPV for older residential buildings (see **Table 3.7-2**). If this groundborne vibration level threshold is exceeded, the result may be "architectural" damage to normal dwellings. However, as described in Section 2.0, Project Description, there are existing buildings on campus, such as Building C, that were part of the original academic building built in 1931, and are thus older buildings potentially more susceptible to groundborne vibration impacts compared with "older residential buildings." A vibration limit of 0.12 inches per second PPV is employed for these types of buildings (FTA 2006).

Construction activities would require the use of off-road equipment such as tractors, jackhammers, and haul trucks. Groundborne vibration levels associated with representative construction equipment are summarized in **Table 3.7-5**.

TABLE 3.7-5
REPRESENTATIVE VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Peak Particle Velocity at 25 Feet (inches per second)	Peak Particle Velocity at 50 Feet (inches per second)	Peak Particle Velocity at 100 Feet (inches per second)
Pile Driver (impact) upper range	1.518	0.536	0.379
Pile Driver (typical)	0.644	0.227	0.161
Sonic Pile Driver upper range	0.734	0.259	0.183
Sonic Pile Driver (typical)	0.170	0.060	0.042
Large Bulldozer	0.089	0.031	0.011
Caisson Drilling	0.089	0.031	0.011
Loaded Trucks	0.076	0.026	0.009
Rock Breaker	0.059	0.020	0.007
Jackhammer	0.035	0.012	0.004
Small Bulldozer/Tractors	0.003	0.001	0.000

Source: FTA 2006; Caltrans 2004

The nearest residential structures to the project site are located to the north along 46th, 47th, and Ygnacio avenues. The nearest residence is adjacent to the construction site boundary. Also, there are existing older buildings on campus, such as Building C, that were part of the original academic building built in 1931 and may be more susceptible to vibration damage due to their age. However, it is acknowledged that construction activities would occur throughout the project site and would not be concentrated at the point closest to the sensitive receptors. Based on the vibration levels presented in **Table 3.7-5**, the potential use of pile drivers would result in a groundborne vibration velocity level above 0.12 and 0.2 inches per second PPV. Therefore, mitigation is required to reduce potential groundborne vibration impacts to a level that is less than significant.

Mitigation Measures

MM 3.7.2 The following measures shall be required during construction of the proposed project:

- To reduce pile-driving ground vibration impacts, holes shall be predrilled to the maximum feasible depth to reduce the number of blows required to seat the pile.
- All construction equipment on the project site shall be operated as far away from vibration-sensitive sites as reasonably possible.

With the implementation of mitigation measure **MM 3.7.2**, impacts from construction-generated groundborne vibration would be **less than significant**.

Exposure to Noise from Airport Operations (Standard of Significance 5)

Impact 3.7.3 The proposed project would not increase the exposure of people to airport noise impacts. The project would have **no impact**.

Since no changes to enrollment or staffing are proposed as part of the project, and since no additional activities or events are proposed beyond what currently occurs on the campus site, there is no potential to expose additional people to airport noise. **No impact** would occur.

Mitigation Measures

None required.

3.7.5 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for the analysis of noise impacts includes the project site and vicinity.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Traffic Noise Impacts

Impact 3.7.4 Project operation would not result in a substantial contribution to cumulative noise levels. This impact would be considered **less than cumulatively considerable.**

Cumulative noise impacts associated with land use development projects occur primarily as a result of the cumulative increase of traffic on local roadways. Since no changes to enrollment or staffing are proposed as part of the project, there would not be an increase in traffic and traffic-generated noise. Further, no additional activities or events are proposed beyond what currently occurs on the campus. When complete, the project would result in a less than significant increase in cumulative noise levels. This impact would be **less than cumulatively considerable**.

Mitigation Measures

None required.

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4.1 INTRODUCTION

California Environmental Quality Act (CEQA) Guidelines Section 15126.6(a) states that an environmental impact report (EIR) must describe and analyze a range of reasonable alternatives to a project. These alternatives should feasibly attain most of the basic objectives of the project, while avoiding or substantially lessening one or more of the significant environmental impacts of the project. An EIR need not consider every conceivable alternative to a project, nor is it required to consider alternatives that are infeasible. The discussion of alternatives focuses on those alternatives that are capable of avoiding or substantially lessening any significant effects of the project, even if they impede the attainment of the project objectives to some degree or would be more costly (CEQA Guidelines Section 15126.6[b]).

According to the CEQA Guidelines, an EIR need only examine in detail those alternatives that could feasibly meet most of the project objectives. When addressing feasibility, CEQA Guidelines Section 15126.6 states that "among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, jurisdictional boundaries, and whether the applicant can reasonably acquire, control or otherwise have access to alternative sites." The CEQA Guidelines also specify that the alternatives discussion should not be remote or speculative; however, the alternatives need not be presented in the same level of detail as the assessment of the proposed project.

The CEQA Guidelines indicate that several factors need to be considered in determining the range of alternatives to be analyzed and the level of analytical detail that should be provided for each alternative. These factors include (1) the nature of the significant impacts of the proposed project; (2) the ability of alternatives to avoid or lessen the significant impacts associated with the project; (3) the ability of the alternatives to meet the project objectives; and (4) the feasibility of the alternatives. These factors would be unique for each project.

The significant environmental impacts of the project that the alternatives will seek to eliminate or reduce were determined and based on the findings contained in each technical section (Sections 3.2 through 3.7) of this Draft EIR.

In this section, "proposed project" refers to the Fremont High School Redevelopment project as described in Section 2.0, Project Description.

4.2 ALTERNATIVES UNDER CONSIDERATION

Two alternatives were identified for examination and analysis in this Draft EIR:

- Alternative 1 – No Project Alternative
- Alternative 2 – Gymnasium Preservation Alternative

These alternatives constitute an adequate range of reasonable alternatives as required under CEQA Guidelines Section 15126.6.

4.3 ALTERNATIVES CONSIDERED BUT NOT SELECTED FOR ANALYSIS

The following possible alternatives were raised during the scoping process. They were rejected as infeasible for the reasons listed below.

MOVE GYMNASIUM ALTERNATIVE

This alternative would construct the project as outlined in Section 2.0 but would not include demolition of the historic gymnasium. Instead, the gymnasium would be moved to another site. This alternative would avoid the project's significant environmental impact, which is the demolition of a historic property. The effort to move the gymnasium would be price prohibitive to the Oakland Unified School District (OUSD, District). Additionally, in order to preserve the historic context of the building, the gymnasium would have to be relocated on a different OUSD school site. This would not be possible, as all school sites require updated facilities to accommodate OUSD student needs. This alternative was found to not be a feasible CEQA alternative and is not discussed further in this section.

MOVE PROJECT ALTERNATIVE

This alternative would abandon the existing lot and move the entire school to another site in Oakland. The City of Oakland could opt to transform the project site into a park or a museum. This alternative would have construction impacts, as it would entail the complete demolition of the existing structures. This alternative does not avoid or lessen the project's significant environmental impact, which is the demolition of a historic property. Demolition would result in impacts related to hazards and hazardous materials due to the age of the structures and the potential for hazardous materials to be present. The move project alternative would not meet the project objectives, which are to update and modernize the school on the existing project site. This alternative is not discussed further in this section.

4.4 ALTERNATIVE 1 – NO PROJECT ALTERNATIVE

DESCRIPTION OF ALTERNATIVE

Under Alternative 1, the project would not be approved. The existing buildings at Fremont High School would not be remodeled and the new buildings would not be constructed as proposed by OUSD. The proposed site improvements, such as the football/soccer field reconfiguration and safety upgrades, would also not be implemented. This alternative would not meet any of the project objectives, but is analyzed as required by CEQA.

ENVIRONMENTAL ANALYSIS

The following analysis is based on the significant environmental impacts identified in Sections 3.2 through 3.7 of this Draft EIR. Each subsection below presents a brief discussion of the potential impacts of Alternative 1 on the respective resource area as compared to the proposed project. The analysis is based on a qualitative method and where available, approximate data is presented.

Aesthetics

Under Alternative 1, there would be no change to the project site's aesthetics and visual character. Changes would not occur to the existing structure's exterior, landscaping improvements would not take place, and site amenities would not be added. The project site would retain its visual character as school buildings, while the area surrounding the site would retain its visual character as a residential neighborhood. Although there would be no impacts to aesthetics under Alternative 1, there would also be no improvements to the project site's visual character.

As discussed in Section 3.2, Aesthetics, the proposed project would improve the project site's visual character and would not degrade the project site's visual character or quality. Although improvements would not take place under Alternative 1, the project site would maintain its existing character, and the alternative would have no impacts compared to the proposed project.

Draft EIR Impact Number	Impact Topic	Alternative 1 Impact Significance	Proposed Project Impact Significance
3.2.1	Degrade Visual Character or Quality	No impact	Less than significant with mitigation
3.2.2	Nighttime Light and Increased Overall Lighting and Glare	No impact	Less than significant with mitigation
3.2.3	Cumulative Impacts to Visual Resources and Aesthetics	No impact	Less than cumulatively considerable

Air Quality

Under Alternative 1, there would be no change to the project site and site improvements would not take place. As discussed in Section 3.3, Air Quality, the proposed project would have a less than significant impact with mitigation on air quality from short-term construction emissions and would otherwise have a less than significant impact. As such, Alternative 1 would have fewer impacts on air quality as compared with the proposed project.

Draft EIR Impact Number	Impact Topic	Alternative 1 Impact Significance	Proposed Project Impact Significance
3.3.1	Violate Air Quality Standards – Short-Term Construction Emissions	No impact	Less than significant with mitigation
3.3.2	Violate Air Quality Standards – Long-Term Operational Emissions	No impact	Less than significant
3.3.3	Conflict with the Bay Area 2010 Clean Air Plan	No impact	No impact
3.3.4	Exposure to Toxic Air Contaminants During Construction	No impact	Less than significant
3.3.5	Exposure to Toxic Air Contaminants During Operations	No impact	No impact
3.3.6	Creation of Odors	No impact	Less than significant
3.3.7	Cumulatively Considerable Increase in Nonattainment Criteria Pollutants	No impact	Less than cumulatively considerable

Cultural Resources

Under Alternative 1, the project site would remain as is and the existing structures would not be renovated. Alternative 1 would have no impact on historic resources because the historic buildings—the gymnasium and the academic building—on campus would not be disturbed. Further, there would be no soil disturbance; thus, there would be no potential to impact archaeological and paleontological resources and human remains. As discussed in Section 3.4, Cultural Resources, the proposed project could impact archaeological and paleontological resources and human remains due to soil disturbance and would require mitigation. As such,

Alternative 1 would have fewer impacts to historic resources and cultural resources compared with the proposed project.

Draft EIR Impact Number	Impact Topic	Alternative 1 Impact Significance	Proposed Project Impact Significance
3.4.1	Demolition of Gymnasium Building	No impact	Significant and unavoidable
3.4.2	Library Renovations	No impact	Less than significant with mitigation
3.4.3	Archaeological and Paleontological Resources and Human Remains	No impact	Less than significant with mitigation
3.4.4	Cumulative Impacts on Cultural Resources, Human Remains, and Paleontological Resources	No impact	Cumulatively considerable

Geology and Soils

Alternative 1 would not include any site improvements and no site disturbance would take place. As such, Alternative 1 would have no impacts on soils and soils erosion. However, the existing buildings would not undergo seismic upgrades, the site would remain occupied, and people would continue to remain in a seismically active zone. As discussed in Section 3.5, Geology and Soils, the proposed project would have impacts related to seismic hazards and expansive soils, and mitigation would be required. Because buildings would not be upgraded to the most recent standards, Alternative 1 would create greater exposure of people to seismic hazards.

Draft EIR Impact Number	Impact Topic	Alternative 1 Impact Significance	Proposed Project Impact Significance
3.5.1	Seismic Hazards	Potentially significant	Less than significant with mitigation
3.5.2	Erosion and Loss of Topsoil	No impact	Less than significant with mitigation
3.5.3	Development on Unstable or Expansive Soils	No impact	Less than significant with mitigation
3.5.4	Cumulative Geologic, Seismic, and Soil Hazards	No impact	Less than cumulatively considerable

Hazards and Hazardous Materials

Under Alternative 1, the existing buildings would not be renovated and no parts of the structures that contain hazardous materials would be removed or remediated. As such, there is potential that hazardous materials could be accidentally released into the environment, potentially harming adjacent residents and campus users. Alternative 1 would not include any mitigation measures and would have significant impacts due to accidental release of hazardous materials. As discussed in Section 3.6, Hazards and Hazardous Materials, the proposed project would have impacts related to release and exposure to hazardous materials and would require mitigation. Nonetheless, the mitigation would help remediate existing site conditions and properly handle asbestos, lead, and other hazardous materials. As such, Alternative 1 would have greater impacts from hazards and hazardous materials compared with the proposed project.

Draft EIR Impact Number	Impact Topic	Alternative 1 Impact Significance	Proposed Project Impact Significance
3.6.1	Transportation, Use, and Disposal of Hazardous Materials	No impact	Less than significant
3.6.2	Accidental Release of and Exposure to Hazardous Materials	Potentially significant	Less than significant with mitigation
3.6.3	Hazardous Emissions and Materials in the Vicinity of a School Site	Potentially significant	Less than significant with mitigation
3.6.4	Hazardous Materials Sites	No impact	Less than significant with mitigation
3.6.5	Emergency Response and Evacuation Plans	No impact	Less than significant
3.6.6	Cumulative Hazards Impacts	Less than cumulatively considerable	Less than cumulatively considerable

Noise

Under Alternative 1, the project site would remain unchanged. There would be no construction on the site and Alternative 1 would have no impacts due to construction noise. The site would continue to be used as a school. It is expected that there would be no increase in operational noise under Alternative 1.

As described in Section 3.7, Noise, the proposed project would introduce new noise sources on the project site during construction. The project would not increase traffic or operational noise in comparison with existing noise levels. The proposed project's impacts from construction would be less than significant with mitigation.

Because there would be a slight increase in noise levels over existing conditions from construction activities associated with the proposed project, Alternative 1 would have fewer impacts related to noise compared with the proposed project.

Draft EIR Impact Number	Impact Topic	Alternative 1 Impact Significance	Proposed Project Impact Significance
3.7.1	Exposure to Noise Levels in Excess of Standards	No impact	Less than significant with mitigation
3.7.2	Exposure to Groundborne Vibration	No impact	Less than significant with mitigation
3.7.3	Exposure to Noise from Airport Operations	No impact	No impact
3.7.4	Cumulative Noise Impacts	No impact	Less than cumulatively considerable

4.5 ALTERNATIVE 2 – GYMNASIUM PRESERVATION ALTERNATIVE

DESCRIPTION OF ALTERNATIVE

Alternative 2 would include all project site improvements as described in Section 2.0, Project Description, but would not include the demolition of Building D, the historic gymnasium. Instead, the existing gymnasium would be remodeled to meet structural safety requirements. Due to space restrictions, the athletic fields would not be reconfigured to fit a regulation-size football field, bleachers, or nighttime lighting. As a result, construction would be shortened by approximately 4 to 6 months. In summary, the project under Alternative 2 would include:

- Construction of a new academic building at the corner of Foothill Boulevard and 47th Avenue. The building would be connected to Building B with internal corridors on floors 1 and 2.
- Minor renovations of Building B, the existing academic building, to improve structural safety and building systems.
- Minor renovations of Building C, including the library on the second floor, which would remain as the school administrative building. The renovation would aim to preserve the historic significance of the building.
- Renovation of Building D, the gymnasium, to upgrade facilities and improve structural safety. The renovation would aim to preserve the historic significance of the building.
- Reconfiguration of the athletic field to fit a regulation-size football field, bleachers for game spectators, and nighttime lighting to accommodate evening practices and games.
- Construction of a wellness center to provide additional services for students and the community.
- Upgrades to campus utility systems to serve the new campus, including a sanitary system and a domestic water system.
- Reconfiguration of the campus circulation system to allow for more open lines of sight and to facilitate pedestrian and emergency access. The area between the existing athletic field and the auditorium would be improved with a new visitor parking lot, student drop-off area, accessible parking, and establishment of a school entry plaza in front of the library.

Alternative 2, Gymnasium Preservation Alternative, was chosen because it would reduce the significant and unavoidable impact of the demolition of a historic building. In addition, Alternative 2 would meet most of the project objectives, except it would not provide a new gymnasium to facilitate school gathering nor a regulation-size sports field for competitive play on campus.

ENVIRONMENTAL ANALYSIS

The following analysis is based on the significant environmental impacts identified in Sections 3.2 through 3.7 of this Draft EIR. Each subsection below presents Alternative 2's potential impacts on the respective resource area and compares it with the proposed project. The analysis is based on a qualitative method and where available, approximate data is presented.

Aesthetics

Under Alternative 2, the project would be implemented similar to the proposed project but would not include the demolition of the historic gymnasium or the reconfiguration of the athletic field. Instead, the gymnasium would be renovated to meet structural safety requirements. All other project site improvements would take place as described in Section 2.0, Project Description, similar to the proposed project. Improvements to the project site's aesthetics would take place in a similar manner to what is described in Section 3.1, Aesthetics. The existing buildings would be renovated to improve their visual appearance and bring them up to current building standards. Alternative 2 would also implement additional improvements, including updating landscaping and reconfiguring outdoor areas, which would generally improve the visual appearance of the project site.

The project site would retain its visual character as school buildings, while the area surrounding the project site would retain its visual character as a residential neighborhood. Alternative 2 would also include the installation of outdoor lighting. However, since the athletic field would not be reconfigured, no nighttime field lighting would be installed. Alternative 2 would improve the project site's visual quality and would maintain the project site's visual character.

As discussed in Section 3.2, Aesthetics, the proposed project would improve the project site's visual quality and would not degrade the project site's visual character or quality. The project would introduce new sources of nighttime lighting and would require mitigation. As such, Alternative 2 would have similar impacts on aesthetic resources compared with the proposed project.

Draft EIR Impact Number	Impact Topic	Alternative 2 Impact Significance	Proposed Project Impact Significance
3.2.1	Degrade Visual Character or Quality	Less than significant with mitigation	Less than significant with mitigation
3.2.2	Nighttime Light and Increased Overall Lighting and Glare	Less than significant with mitigation	Less than significant with mitigation
3.2.3	Cumulative Impacts to Visual Resources and Aesthetics	Less than cumulatively considerable	Less than cumulatively considerable

Air Quality

Under Alternative 2, the project would be implemented similar to the proposed project, but would not include the demolition of the historic gymnasium or reconfiguration of the athletic field. Instead, the gymnasium would be renovated to meet structural safety requirements. As a result, construction would be shorted by approximately 4 to 6 months. All other project site improvements would take place as described in Section 2.0, Project Description, similar to the proposed project. As such, construction emissions under Alternative 2 would be less than to those for the proposed project as shown in **Table 3.3-6** in Section 3.2, Air Quality. The reduced construction time period would reduce the amount of dust-generating ground disturbance and reduce the time in which off-road diesel equipment would operate, thus reducing tailpipe emissions. The proposed project would have a less than significant impact with mitigation on air quality due to short-term construction emissions. Mitigation measures **MM 3.3.1a** and **MM 3.3.1b** would be required for both the proposed project and Alternative 2.

Alternative 2 would continue the operation of the project site as a school and would not increase operational air quality impacts as compared with existing conditions. As discussed in Section 3.2, the proposed project would have no impact from operational emissions. Alternative 2 would also have no impact from operational emissions.

Draft EIR Impact Number	Impact Topic	Alternative 2 Impact Significance	Proposed Project Impact Significance
3.3.1	Violate Air Quality Standards – Short-Term Construction Emissions	Less than significant with mitigation	Less than significant with mitigation
3.3.2	Violate Air Quality Standards – Long-Term Operational Emissions	Less than significant	Less than significant
3.3.3	Conflict with the Bay Area 2010 Clean Air Plan	No impact	No impact
3.3.4	Exposure to Toxic Air Contaminants During Construction	Less than significant	Less than significant
3.3.5	Exposure to Toxic Air Contaminants During Operations	No impact	No impact
3.3.6	Creation of Odors	Less than significant	Less than significant
3.3.7	Cumulatively Considerable Increase in Nonattainment Criteria Pollutants	Less than cumulatively considerable	Less than cumulatively considerable

Cultural Resources

Under Alternative 2, the project would be implemented similar to the proposed project but would not include the demolition of the historic gymnasium or reconfiguration of the athletic field. All project site improvements would take place as described in Section 2.0, Project Description, similar to the proposed project. Mitigation measure **MM 3.4.2** requires that renovations to the library follow the Secretary of the Interior's Standards for Rehabilitation as codified at 36 CFR 67. Additionally, a qualified architectural historian must review renovation plans to ensure they conform to all 10 of the rehabilitation standards. This mitigation measure would apply to Alternative 2 for the gymnasium renovations. As such, and with implementation of this mitigation measure, Alternative 2 would have a less than significant impact on cultural resources with mitigation incorporated.

As discussed in Section 3.4, Cultural Resources, the proposed project would impact archaeological and paleontological resources and human remains due to soil disturbance; impacts would be less than significant with mitigation measure **MM 3.4.3,** which would also apply to Alternative 2. As such, Alternative 2 would have lower impacts compared to the proposed project on cultural resources.

Draft EIR Impact Number	Impact Topic	Alternative 2 Impact Significance	Proposed Project Impact Significance
3.4.1	Demolition of Gymnasium Building	Less than significant with mitigation	Significant and unavoidable
3.4.2	Library Renovations	Less than significant with mitigation	Less than significant with mitigation
3.4.3	Archaeological and Paleontological Resources and Human Remains	Less than significant with mitigation	Less than significant with mitigation
3.4.4	Cumulative Impacts on Cultural Resources, Human Remains, and Paleontological Resources	Less than cumulatively considerable with mitigation	Cumulatively considerable

Geology and Soils

Under Alternative 2, the project would be implemented similar to the proposed project but would not include the demolition of the historic gymnasium or the reconfiguration of the athletic field. Instead, the gymnasium would be renovated to meet structural safety requirements. All other project site improvements would take place as described in Section 2.0, Project Description, similar to the proposed project. As such, the project under Alternative 2 would require soil disturbance activities; soil erosion would take place similar to the proposed project. Alternative 2 would also result in the exposure of people to dangers associated with earthquakes. Similar to the proposed project, the proposed seismic upgrades in accordance with applicable building standards would minimize these dangers.

As discussed in Section 3.5, Geology and Soils, the proposed project would have impacts related to seismic hazards and expansive soils, and mitigation would be required. Alternative 2 would have similar impacts compared to the proposed project.

Draft EIR Impact Number	Impact Topic	Alternative 2 Impact Significance	Proposed Project Impact Significance
3.5.1	Seismic Hazards	Less than significant with mitigation	Less than significant with mitigation
3.5.2	Erosion and Loss of Topsoil	Less than significant	Less than significant with mitigation
3.5.3	Development on Unstable or Expansive Soils	Less than significant with mitigation	Less than significant with mitigation
3.5.4	Cumulative Geologic, Seismic, and Soil Hazards	Less than cumulatively considerable	Less than cumulatively considerable

Hazards and Hazardous Materials

Under Alternative 2, the project would be implemented similar to the proposed project but would not include the demolition of the historic gymnasium or the reconfiguration of the athletic field. Instead, the gymnasium would be renovated to meet structural safety requirements. All other project site improvements would take place as described in Section 2.0, Project Description, similar to the proposed project. The project would renovate the existing buildings, construct new buildings, and improve site circulation. Alternative 2 would disturb asbestos-containing materials, lead-based paints, and potentially contaminated soils. As such, mitigation measures **MM 3.6.2a**, **MM 3.6.2b**, **MM 3.6.2c**, **MM 3.6.2d**, and **MM 3.6.2e** would be required, similar to the proposed project.

As discussed in Section 3.5, Hazards and Hazardous Materials, the proposed project would have impacts related to the release and exposure to hazardous materials and would require mitigation measures **MM 3.6.2a**, **MM 3.6.2b**, **MM 3.6.2c**, **MM 3.6.2d**, and **MM 3.6.2e**. The mitigation measures would help remediate existing site conditions and properly handle asbestos, lead, and other hazardous materials, and the project would have a less than significant impact.

Therefore, Alternative 2 would have similar impacts related to hazards and hazardous materials as the proposed project.

Draft EIR Impact Number	Impact Topic	Alternative 2 Impact Significance	Proposed Project Impact Significance
3.6.1	Transportation, Use, and Disposal of Hazardous Materials	Less than significant	Less than significant
3.6.2	Accidental Release of and Exposure to Hazardous Materials	Less than significant with mitigation	Less than significant with mitigation
3.6.3	Hazardous Emissions and Materials in the Vicinity of a School Site	Less than significant with mitigation	Less than significant with mitigation
3.6.4	Hazardous Materials Sites	Less than significant with mitigation	Less than significant with mitigation
3.6.5	Emergency Response and Evacuation Plans	Less than significant	Less than significant
3.6.6	Cumulative Hazards Impacts	Less than cumulatively considerable	Less than cumulatively considerable

Noise

Under Alternative 2, the project would be implemented similar to the proposed project but would not include the demolition of the historic gymnasium or the reconfiguration of the athletic field. Instead, the gymnasium would be renovated to meet structural safety requirements. As a result, construction would be shorted by approximately 4 to 6 months. All other project site improvements would take place as described in Section 2.0, Project Description, similar to the proposed project. Under Alternative 2, the project would result in the same peak level of noise during construction, but for a shorter duration of time. Alternative 2 would result in similar operational noise as the proposed project.

As described in Section 3.7, Noise, the proposed project would introduce new noise sources on the project site during construction. The project would not increase traffic or operational noise in comparison with existing noise levels. The proposed project's impacts from construction would be less than significant with mitigation. Alternative 2 would have fewer impacts to noise compared with the proposed project.

Draft EIR Impact Number	Impact Topic	Alternative 2 Impact Significance	Proposed Project Impact Significance
3.7.1	Exposure to Noise Levels in Excess of Standards	Less than significant with mitigation	Less than significant with mitigation
3.7.2	Exposure to Groundborne Vibration	Less than significant with mitigation	Less than significant with mitigation
3.7.3	Exposure to Noise from Airport Operations	No impact	No impact
3.7.4	Cumulative Noise Impacts	Less than cumulatively considerable	Less than cumulatively considerable

4.6 COMPARISON OF ALTERNATIVES/ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table 4.0-1 summarizes the potential impacts of the alternatives evaluated in this section, as compared with the proposed project's impacts. Pursuant to CEQA Guidelines Section 15126.6(e)(2), an environmentally superior alternative must be identified from among the other alternatives if the "no project" alternative would otherwise be the environmentally superior alternative. The environmentally superior alternative is the alternative that would result in the fewest or least significant environmental impacts.

As described above, under the no project alternative, there could be significant impacts related to hazards and hazardous materials due to a lack of mitigation measures for removal of asbestos- and lead-contaminated materials. Additionally, under the no project alternative, the buildings would not be updated for structural safety and could lead to a significant impacts related to seismic activity. Therefore, while the project's significant and unavoidable impact would be avoided under the no project alternative, since a historic building would not be demolished, significant environmental impacts could occur due to lack of hazardous materials mitigation and lack of structural upgrades.

Alternative 2 would reduce the project's one significant and unavoidable impact resulting from the demolition of the historic gymnasium to less than significant. Alternative 2 would also result in fewer impacts to air quality and noise and similar impacts to aesthetics, geology and soils, and hazards and hazardous materials compared with the proposed project. Overall, Alternative 2 would result in fewer environmental impacts than the proposed project. However, Alternative 2 would not meet two of the project's objectives: provide a new gymnasium to facilitate school gathering and provide a regulation-size sports field for competitive play on campus. Because Alternative 2 would avoid the project's significant and unavoidable impacts and would meet most project objectives it is considered the environmentally superior alternative.

TABLE 4.0-1
SUMMARY COMPARISON OF PROJECT OBJECTIVES

Project Objective	Proposed Project	Alternative 1 No Project	Alternative 2 Gymnasium Preservation
1. Provide a more secure campus perimeter with controlled access on Ygnacio Avenue.	✓	X	✓
2. Create a strong center for the academic pathways.	✓	X	✓
3. Strengthen the unity of the campus, and allow for future growth.	✓	X	✓
4. Maintain and expand health services to the students and community.	✓	X	✓
5. Provide a new gymnasium that can facilitate all-school gatherings.	✓	X	X
6. Provide a regulation-size sports field for competitive play on campus.	✓	X	X

✓ *Meets project objective*

X *Does not meet project objective*

TABLE 4.0-2
SUMMARY COMPARISON OF ALTERNATIVES

Resource Category	Proposed Project	Alternative 1 No Project	Alternative 2 Gymnasium Preservation
Aesthetics	LTSM	NI	LTSM
Air Quality	LTSM	NI	LTSM (-)
Cultural Resources	SU	NI	LTS
Geology and Soils	LTSM	PS	LTSM
Hazards and Hazardous Materials	LTSM	PS	LTSM
Noise	LTSM	NI	LTSM (-)

Notes:
SU: Significant and Unavoidable with Mitigation
PS: Potentially Significant
LTSM: Less Than Significant with Mitigation
LTS: Less Than Significant
NI: No Impact
(+) Level of impact is more severe than the proposed project.
(-) Level of impact is less severe than the proposed project.

This section discusses significant unavoidable impacts, growth-inducing impacts, and significant irreversible changes associated with the project.

5.1 SIGNIFICANT AND UNAVOIDABLE IMPACTS

California Environmental Quality Act (CEQA) Guidelines Section 15126.2(b) requires an environmental impact report (EIR) to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. In addition, CEQA Guidelines Section 15093(a) allows the decision-making agency to determine whether the benefits of a project outweigh its unavoidable adverse environmental impacts. The District can approve a project with unavoidable adverse impacts if it prepares a Statement of Overriding Considerations setting forth the specific reasons for making such a judgment.

The following impacts of the project, which have been recognized as significant and unavoidable in either the project or cumulative context, are specifically identified in Section 3.4, Cultural Resources, of this Draft EIR. All other impacts have been identified as either no impact, less than significant, or less than significant with mitigation.

Demolition of Gymnasium Building

Impact 3.4.1 The 1938 gymnasium building is listed by the City of Oakland as a contributing element to an Area of Secondary Importance, and was found eligible for the CRHR under Criterion 3. As such, the project would have a **significant and unavoidable** impact.

5.2 GROWTH-INDUCING IMPACTS

CEQA Guidelines Section 15126.2(d) requires an EIR to evaluate the growth-inducing impacts of a proposed project. A growth-inducing impact is defined by the CEQA Guidelines as:

> The way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth.

A project can have direct and/or indirect growth inducement potential. For example, direct growth inducement potential would result if a project involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities or if it involved a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand (*Napa Citizens for Honest Government v. Napa County Board of Supervisors*). Similarly, a project would indirectly induce growth if it removed an obstacle to additional growth and development, such as removing a constraint on a required public service. A project providing an increased water supply in an area where water service historically limited growth could be considered growth-inducing.

The CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of a project. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

Growth inducement may constitute an adverse impact if the growth is not consistent with, or accommodated by, the land use plans and growth management plans and policies for the area affected. Local land use plans establish land use development patterns and provide growth policies that allow the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service.

GROWTH EFFECTS OF THE PROJECT

Direct Growth Effects

The project proposes to demolish and renovate existing buildings and to construct new buildings. The existing high school on the project site would continue to operate. The project would not result in the development of any new housing. Therefore, the project would not result in any direct growth effects in Oakland.

Indirect Growth Effects

While the project would renovate existing buildings and construct new buildings, the project would not increase the current student capacity at the school. As a result, operation of the school would not create additional space for new students or substantial new employment opportunities. Further, any new employment opportunities created by the project would likely be filled by existing area residents.

The renovation, demolition, and construction activities would require a substantial number of workers to complete. Project construction would take place over approximately 3 years, from 2018 to 2021. Each phase of project construction would take approximately 18 months to complete. Phases 1 and 2 would overlap; however, Phase 3 would not start until construction of Phase 1 is complete. Construction would be temporary and would not indirectly induce substantial growth in the city.

The project would not construct any new roadways or other infrastructure that could support substantial growth elsewhere in the city. Thus, the renovation of the school campus would not remove any obstacles to growth, and the project would not indirectly induce substantial growth in the city.

5.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA Guidelines Section 15126.2(c) describes irreversible environmental changes in the following manner:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Renovation of the existing buildings and construction of new buildings on the project site would irretrievably commit building materials and energy to the repair, improvement, and maintenance of buildings and infrastructure. Renewable, nonrenewable, and limited resources

that would likely be consumed as part of the proposed renovation would include but are not limited to oil, gasoline, lumber, sand and gravel, asphalt, water, steel, and similar materials.

The renovated facility would be required by law to comply with the California Building Code, Title 24, and would not be expected to use energy or any other resources in a wasteful manner. On the contrary, the project proposes to upgrade windows, doors, walls, building heating and cooling systems, plumbing, and bathroom fixtures, which would significantly increase the energy and water efficiency of the buildings.

5.4 ENERGY CONSUMPTION

Energy consumption is analyzed in this EIR due to the potential direct and indirect environmental impacts associated with the project. Such impacts include the depletion of nonrenewable resources (oil, natural gas, coal, etc.) and emissions of pollutants during both the construction and long-term operational phases.

A summary of the impact conclusions related to energy is provided below.

Impact Number	Impact Topic	Impact Significance
5.4.1	Develop Land Uses that Cause Wasteful, Inefficient, and Unnecessary Consumption of Energy	Less than significant
5.4.2	Cumulative Wasteful, Inefficient, and Unnecessary Consumption of Energy	Less than significant

ELECTRICITY/NATURAL GAS SERVICES

The Pacific Gas and Electric Company (PG&E) provides electrical and natural gas services to the Oakland area and Fremont High School through state-regulated public utility contracts. PG&E's ability to provide its services concurrently for each project is evaluated during the development review process. The utility company is bound by contract to update its systems to meet any additional demand. PG&E's Electric and Gas Rules 15 and 16 establish guidelines for the extension of distribution lines necessary to furnish permanent services to customers. PG&E also outlines responsibilities for installation and extension allowances, as well as financial contributions by project applicants.

ENERGY USAGE

Energy usage is typically quantified using the British thermal unit (BTU). Total energy usage in California was 7,684 trillion BTUs in 2013 (the most recent year for which this specific data is available), which equates to an average of 201 million BTUs per capita. Of California's total energy usage, the breakdown by sector is 38 percent transportation, 24 percent industrial, 19 percent commercial, and 19 percent residential. Electricity and natural gas in California are generally consumed by stationary users such as residences and commercial and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use (EIA 2015). In 2014, taxable gasoline sales (including aviation gasoline) in California accounted for 14,921,441,859 gallons of gasoline (BOE 2016).

The electricity consumption attributable to nonresidential land uses in Alameda County from 2010 to 2014 is shown in **Table 5.4-1**. As indicated, the demand has remained relatively constant, with no substantial increase, even as the population has increased.

TABLE 5.4-1
NONRESIDENTIAL ELECTRICITY CONSUMPTION IN ALAMEDA COUNTY 2010–2014

Year	Nonresidential Electricity Consumption (in millions of kilowatt hours)
2015	7,291
2014	7,412
2013	7,630
2012	7,583
2011	7,945
2010	7,691

Source: ECDMS 2016

The natural gas consumption attributable to nonresidential land uses in Alameda County from 2010 to 2014 is shown in **Table 5.4-2**. The nonresidential demand has decreased, even with an increase in population.

TABLE 5.4-2
NONRESIDENTIAL NATURAL GAS CONSUMPTION IN ALAMEDA COUNTY 2010–2014

Year	Nonresidential Natural Gas Consumption (in millions of therms)
2015	162
2014	170
2013	185
2012	176
2011	175
2010	184

Source: ECDMS 2016

Construction equipment fuel consumption in Alameda County from 2010 to 2015 is shown in **Table 5.4-3**. Projections for the year 2016 are also shown. As shown, construction-related fuel consumption has remained relatively constant.

TABLE 5.4-3
DAILY CONSTRUCTION EQUIPMENT FUEL CONSUMPTION IN ALAMEDA COUNTY 2010–2016

Year	Construction Equipment Fuel Consumption (gallons)
2016 (projected)	41,999,820
2015	41,542,110
2014	42,430,885
2013	43,560,195
2012	44,678,190
2011	43,105,770
2010	38,615,540

Source: California Air Resources Board, EMFAC2014

REGULATORY SETTING

The following is a description of state and local environmental laws and policies that are relevant to the CEQA review process.

State of California Framework

California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24)

Title 24, California's energy efficiency standards for residential and nonresidential buildings, was established by the California Energy Commission (CEC) in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and nonresidential buildings. In 2013, the CEC updated Title 24 standards with more stringent requirements. The 2013 standards are expected to substantially reduce the growth in electricity and natural gas use. Additional savings result from the application of the standards to building alterations. For example, requirements for cool roofs, lighting, and air distribution ducts are expected to save additional electricity. These savings are cumulative, doubling as years go by. The 2016 standards have been approved and will go into effect on January 1, 2017. California's energy efficiency standards are updated on an approximate three-year cycle.

California Green Building Standards

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. CALGreen also has voluntary tiers and measures that local governments may adopt which encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code was adopted in 2013 and went into effect July 1, 2014.

Recent CEQA Litigation

In *California Clean Energy Committee v. City of Woodland* (2014) 225 Cal.App.4th 173, the court observed that CEQA Guidelines Appendix F lists environmental impacts and mitigation measures that an EIR may include. Potential impacts requiring EIR discussion include:

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.

2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.

3. The effects of the project on peak and base period demands for electricity and other forms of energy.

4. The degree to which the project complies with existing energy standards.

5. The effects of the project on energy resources.

6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

STANDARDS OF SIGNIFICANCE

Significance Criteria

In accordance with the CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. According to Appendix F of the CEQA Guidelines, the proposed project would have a significant impact related to energy, if it would:

1) Develop land uses and patterns that cause wasteful, inefficient, and unnecessary consumption of energy or construct new or retrofitted buildings that would have excessive energy requirements for daily operation.

The impact analysis focuses on the three sources of energy that are relevant to the proposed project: electricity, natural gas, and the fuel necessary for project construction.

The analysis of electricity/natural gas usage is based on California Emissions Estimator Model (CalEEMod) greenhouse gas emissions modeling, which quantifies energy use for occupancy. The results of the CalEEMod modeling are included in **Appendix GHG** of this EIR. The amount of total construction-related fuel use was estimated using ratios in the Climate Registry (2015) General Reporting Protocol for the Voluntary Reporting Program, Version 2.1. The total construction-related fuel use was amortized over the construction period (3.25 years).

IMPACTS AND MITIGATION MEASURES

Impact 5.4.1 The project would not use fuel or energy in a wasteful manner. The impact would be **less than significant**.

Operational Energy

The existing energy consumption of the project site includes several 1930s buildings that would be demolished with project implementation. As a result, the proposed project would result in a decrease in operational energy consumption compared with the existing energy consumption. The reduction in energy consumption is attributable to the replacement of older, less energy-efficient buildings with new energy-efficient buildings constructed under the requirements of the California Green Building Standards Code (Part 11, Title 24). A comparison of the electricity and natural gas consumption between existing conditions and the proposed project is summarized in **Table 5.4-4**.

TABLE 5.4-4
ANNUAL ENERGY CONSUMPTION

Energy Type	Existing Baseline	Proposed Project	Difference
Electricity Consumption	834,172 kilowatt-hours	722,737 kilowatt-hours	-111,435 kilowatt-hours
Natural Gas Consumption	30,445 therms	26,353 therms	-4,092 therms

*Source: CalEEMod version 2016.3.1. See **Appendix GHG** for emission model outputs.*

As shown in **Table 5.4-4**, electricity consumption would decrease by 111,435 kilowatt-hours annually and natural gas consumption would decrease 4,092 therms annually as a result of the proposed project. This would be a **less than significant** impact.

Construction Energy

During construction, the project would consume two forms of energy: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Fossil fuels used for construction vehicles and other energy-consuming equipment would be used during site clearing, grading, and construction. Fuel energy consumed during construction would be temporary in nature and would not represent a significant demand on energy resources. Project construction equipment would be required to comply with the latest US Environmental Protection Agency (EPA) and California Air Resources Board (CARB) engine emissions standards. These standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. Additionally, due to increasing transportation costs and fuel prices, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction. There is growing recognition among developers and retailers that sustainable construction is not prohibitively expensive and that there is a significant cost-savings potential in green building practices and materials.

The incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes, and manufactured or processed materials (e.g., lumber and gas) would not substantially increase demand for energy compared to overall local and regional demand for construction materials. Substantial reductions in energy inputs for construction materials can be achieved by selecting building materials composed of recycled materials that require substantially less energy to produce than non-recycled materials. It is reasonable to assume that the production of building materials such as concrete, steel, etc., would employ all reasonable energy conservation practices in the interest of minimizing the cost of doing business.

As indicated in **Table 5.4-5,** the project's fuel use during construction would be 375,764 gallons, which would increase fuel use in the county by less than 1 percent.

TABLE 5.4-5
PROPOSED PROJECT'S ENERGY CONSUMPTION

Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Project Construction	375,764 gallons	0.89%

Sources: California Emissions Estimator Model (CalEEMod v. 2013.2.2); California Air Resources Board, EMFAC2014. See ***Appendix Energy*** *for model results.*

As such, project construction would have a nominal effect on local and regional energy supplies. It should be noted that construction fuel use is temporary and would cease upon completion of construction. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or the state. Therefore, it is expected that construction fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. This would be a **less than significant** impact.

Mitigation Measures

None required.

CUMULATIVE IMPACTS

Impact 5.4.2 The proposed project, combined with other related cumulative projects, would not develop land uses and patterns that cause wasteful, inefficient, and unnecessary consumption of energy or construct new or retrofitted buildings that would have excessive energy requirements for daily operation. The impact would be **less than cumulatively considerable**.

Quantifying and/or analyzing energy consumption by cumulative projects in the area would be speculative in nature, as the proposed land use types, intensities, and sizes of projects are unknown at this time. However, each cumulative project would require separate discretionary approval and CEQA assessment, which would address potential energy consumption impacts and identify necessary mitigation measures, where appropriate.

As noted in Impact 5.4.1, the proposed project would not result in significant energy consumption impacts and would not be considered inefficient, wasteful, or unnecessary with regard to energy. Thus, the proposed project's contribution would be **less than cumulatively considerable.**

Mitigation Measures

None required.

REFERENCES

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